

European business

Facts and figures

Data 1995-2005



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**European business - Facts and figures,
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Introduction

OBJECTIVES, SCOPE AND STRUCTURE OF THE PUBLICATION

This publication gives a comprehensive picture of the structure, development and characteristics of European business and its different activities: from energy and the extractive industries to communications, information services and media. It presents the latest available statistics from a wide selection of statistical sources describing for each activity: production and employment; country specialisation and regional distribution; cost structures, productivity and profitability; the importance of small and medium sized enterprises (SMEs); workforce characteristics; external trade etc.

The accompanying CD-ROM presents the paper publication in an easily accessible electronic format, including all the data, graphs and tables in Excel format. It also contains more complete, detailed datasets on which the publication is based, a means of easily accessing the most up-to-date live data, as well as a large amount of background information.

The publication covers what is referred to here as the 'business economy', which is the sum of industry, construction and services. It does not cover agriculture, forestry and fishing, nor the public administration and largely non-market services such as education and health.

The 'business economy' is divided into 23 main sectors, which are analysed in detail in separate chapters. These sectoral chapters consist of an overview of the activity in question, followed by a number of subchapters that analyse each of its component activities.

The chapters and subchapters present a standard set of information complemented by available sector specific information, highlighting aspects of specific concern and distinguishing features for each activity. Each chapter concludes with a statistical annex presenting a selection of the most important indicators. Note that because of data availability, financial services is kept separate from the other sectors, which means that comparisons are made with the total non-financial business economy or the non-financial services sector. The analyses focus on the EU-25, but available data for Bulgaria, Romania, Iceland, Norway, and Switzerland are included in the statistical annexes.

The first chapter provides a general overview of the EU-25's business economy, with comparisons across the main sectors. In addition, some information of a horizontal nature is presented, such as research and development, business demography, the importance of foreign controlled enterprises, etc.

DATA SOURCES

The main part of the analysis contained within European business is derived from structural business statistics (SBS): both the traditional business statistics which are disseminated regularly, but also specific information compiled on a multi-yearly basis and the latest results from development projects on topics of key political interest.

Other data sources which are used regularly include short-term statistics, the labour force survey, Prodcom (statistics by product) and external trade (the last two only in the industrial chapters). In addition, use has also been made of specialist sources for particular areas, notably transport, energy, research and development, environmental, audiovisual, tourism and information society statistics, as well as national accounts.

This edition of European business has also benefited from the co-operation of a wide variety of professional trade associations (representative organisations of various activities) and other non-official bodies. Tables and figures presenting data from these non-official sources are easily recognised as they appear in a shaded box.

TIME FRAME

The majority of the data presented within this edition of European business was extracted from Eurostat databases during June and July 2006. The text was written during the third and final quarters of 2006. Data are generally available for 2003 for structural business statistics (SBS), for 2004 for industrial product (PRODCOM) statistics, and for 2005 for external trade (Comext) statistics, the Labour Force Survey (LFS) and short-term business statistics (STS).

MORE STATISTICS AVAILABLE ON-LINE

The publication presents only a selection of the most important data available. Readers who are interested in knowing more about a certain topic or sector, or who would like to download the freshest data are encouraged to consult the detailed data available in Eurostat's databases. These are available free of charge from Eurostat's web-site at:
<http://epp.eurostat.ec.europa.eu>.

The detailed structural business statistics (SBS) data sets are available under the theme 'Industry, trade and services' (select 'Data' / 'Industry, trade and services' / 'Horizontal view' / 'Structural Business Statistics').

Users of the CD-ROM that accompanies this publication may also access Eurostat data in a variety of formats through the DATA component.

EUROPEAN BUSINESS DEDICATED WEBSITE

Within Eurostat's website several dedicated sections are available which provide more information on a certain topic. The European business dedicated section provides access to a selection of publications, data and background information describing European business and associated topics, compiled by Eurostat's structural business statistics unit. This dedicated section has been redesigned to coincide with the release of the 2006 edition of the European business - Facts and figures publication.

One new feature is a presentation of statistics by topic (including special topics such as globalisation, SMEs, foreign controlled enterprises, etc), with specific links to publications, data, methodology, policy documents, etc.

The European business dedicated section is located directly under the theme 'Industry, trade and services' on the Eurostat website or by using the following link:

http://epp.eurostat.ec.europa.eu/pls/portal/url/page/PGP_DS_EUROBUS/PGE_DS_EUROBUS_01.

STRUCTURAL CHANGES COMPARED WITH THE PREVIOUS EDITION

A number of changes in the structure and organisation of the chapters have been made when compared with the 2005 edition, essentially to try to follow more closely the statistical classification of economic activities in the European Community (NACE Rev. 1.1), which is the basis for most statistical sources.

1. The non-energy mining and quarrying and energy chapters have moved from the beginning of the second section to the third section, and transport via pipelines has been moved from the energy chapter to the transport services chapter;
2. Construction and real estate services have been separated with the latter moving into the section on services;
3. The chapter on tourism has been replaced by a chapter more focused on hotels and restaurants, while the services offered by travel agents have been moved into the chapter on transport services;
4. Two chapters on business services and communications, information services and media have been re-organised and separated into new chapters on communications and media, business services, and real estate, renting and R&D.

Business economy overview

1.1: A MACRO-ECONOMIC OUTLOOK

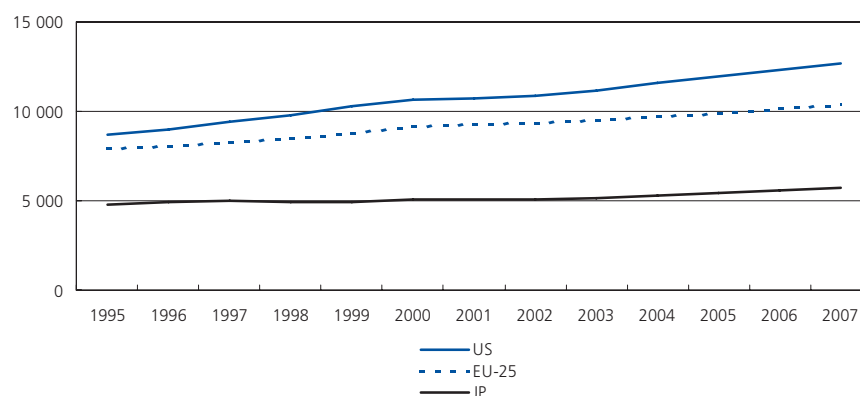
GROSS DOMESTIC PRODUCT (GDP)

The most often used measure of economic performance on the macro-level is gross domestic product (GDP) - the final result of the production activity of resident producers, which is defined as the sum of gross value added of all activities/industries of the economy (the so-called output approach).

Figure 1.1 shows the evolution of constant price GDP (at fixed 2000 exchange rates) between 1995 and 2007 (including forecasts for 2006 and 2007) in the three Triad economies of the EU-25, Japan and the United States. For the whole of this period, it is projected that GDP will rise on average by 2.3 % per annum in the EU-25, below the 3.2 % per annum rate projected for the United States but above the 1.4 % growth per annum for Japan.

GDP in the EU-25 rose at a relatively fast pace during the period 1997 to 2000, as annual rates of change ranged between 2.7 % (1997) and 3.9 % (2000), after which there was a slowdown in the pace at which economic activity expanded, as 2.0 % growth in 2001 was followed by increases of just over 1 % in both 2002 and 2003. The rate of annual GDP growth for the period 2004 to 2007 (which includes forecasts made by the European Commission) is projected to subsequently return to similar levels to those experienced on average between 1995 and 2007.

Figure 1.1
GDP at market prices in constant prices (EUR billion) (1)



(1) Including forecasts for 2006 and 2007.
Source: Eurostat (Economy and finance)

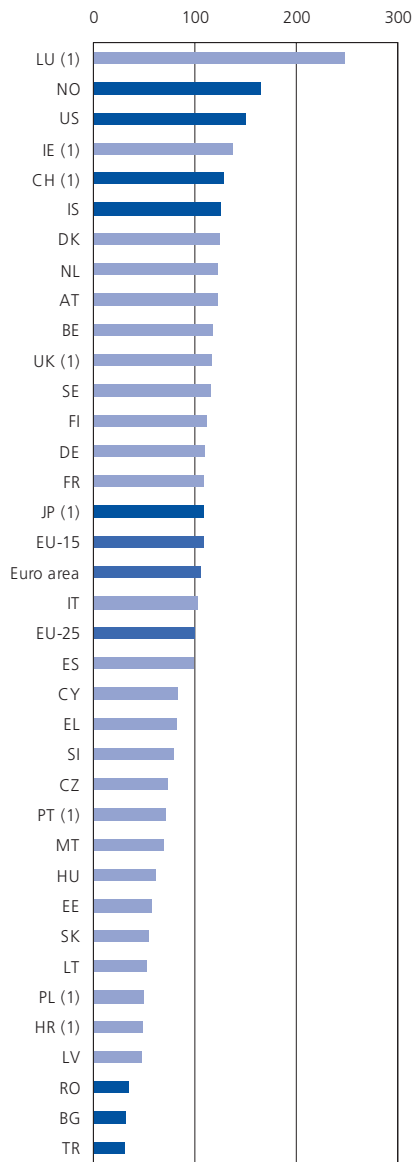
It is important to bear in mind these cyclical changes in EU-25 economic output when reading the sectoral chapters that follow, as the evolution of output or sales in many activities follows closely the economic cycle for the whole economy.

The level of GDP, per se, says little about the economic performance of a country. One of the most commonly used indicators for this purpose is GDP per capita, which is obtained by dividing total GDP by the number of inhabitants; this indicator is often used as a measure of living standards/competitiveness and is ideally calculated in terms of purchasing power standards (PPS) ⁽¹⁾.

Luxembourg stood out as having by far the highest GDP per capita in 2005, almost 2.5 times the EU-25 average (see Figure 1.2), while the next Member State in the ranking was Ireland, where GDP per capita was slightly more than 37 % above the EU-25 average; none of the remaining Member States reported GDP per capita more than 25 % above the EU-25 average. At the other end of the range, all of the Member States that joined the EU in 2004 as well as Greece, Spain and Portugal reported that their GDP per capita was below the EU-25 average.

⁽¹⁾ 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-25 values are unchanged in euro and PPS terms).

Figure 1.2
GDP per capita at market prices, 2005
(EU-25 = 100, based on PPS)



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

RESEARCH AND DEVELOPMENT (R&D)

One of the specific targets set at the Lisbon European Council in spring 2000 was to increase R&D expenditure in the EU to 3% of GDP. Knowledge is seen as a key factor if Europe is to maintain a competitive advantage, with the Seventh Framework Programme (FP7) for research, technological development and demonstration one of the main pillars of European policy in this area.

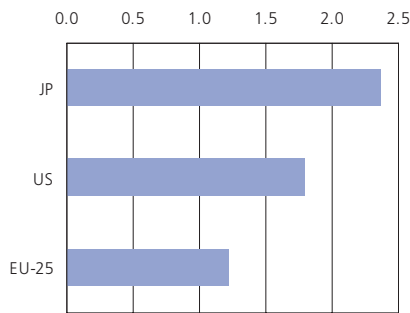
One of the main reasons given for the relatively low levels of R&D expenditure in the EU-25 (compared with Japan or the United States) is a low level of business enterprise expenditure. R&D expenditure made by the business enterprise sector stood at 1.22 % of GDP in 2004 in the EU-25, compared with 2.36 % in Japan and 1.79 % in the United States (see Figure 1.3). While the business enterprise sector

Table 1.1
Human resources in science and technology (HRST), EU-25, 2005 (thousands)

	HRST	HRST - core (1)	HRST - education (2)	HRST - occupation (3)	Scientists and engineers (4)
Manufacturing	10 096	3 353	6 163	7 286	1 783
Elec., gas, water supply and construction	3 425	992	2 299	2 119	677
Services	60 681	28 558	40 815	48 424	7 406
Total (NACE Sections A to Q)	75 543	33 206	50 255	58 494	10 015

(1) Those people who have successfully completed the third level of a science and technology field of study and who are employed in a science and technology occupation.
(2) Those people who have successfully completed the third level of a science and technology field of study.
(3) Those people who are employed in a science and technology occupation.
(4) Those people who work in physical, mathematical and engineering occupations or in life science and health occupations.
Source: Eurostat (Human resources in science & technology)

Figure 1.3
Research and development expenditure in the business enterprise sector, 2004
(% of GDP)



Source: Eurostat (Research and development)

contributed approximately 65 % of total R&D expenditure in the EU-25 this proportion rose to almost 75 % in Japan.

HUMAN RESOURCES IN SCIENCE AND TECHNOLOGY (HRST)

Education and training initiatives are also central to the Lisbon objectives of creating a dynamic and competitive, knowledge-based economy; human resources are often viewed as one of the EU-25's main competitive assets. 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.

Table 1.1 shows that EU-25 human resources in science and technology (HRST) totalled 75.5 million persons in 2005 (note that there is some overlap as regards the breakdown of this total figure between persons with a science or technology education and persons working in a science or technology occupation). Of these, some 80 % worked in the services sector (as defined by NACE Sections G to Q), while just over 13 % worked in manufacturing (NACE Section D) and just over 4 % in electricity, gas, water supply and construction (NACE Sections E and F).

Although the number of science and engineering graduates in the EU-25 is higher than in the United States, there appear to be retention problems in European labour markets. For example, a relatively high proportion of graduates in these fields leave the European labour market (for alternative occupations or to emigrate to non-member countries - the so-called 'brain drain').

EXCHANGE RATES

Business is particularly affected by the uncertainty of not knowing how much goods and services will cost or how much they could be sold for when dealing with suppliers or customers abroad. 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. 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 eleven 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 more stable business environment, in particular because the majority of exports made by Member States are destined for other Member States.

Exchange rate movements are inherent within all the monetary indicators that are presented in this publication, as these are shown in the euro 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 31.5 % overall against the American dollar between 1995 and 2001, leading to more expensive imports, but lower prices for those trying to export to the United States. Between 2001 and 2005 this trend was reversed as the euro appreciated by 38.9 % overall against the dollar. Table 1 in the background information at the back of the publication presents exchange rates against the euro for the period 1995 to 2005.

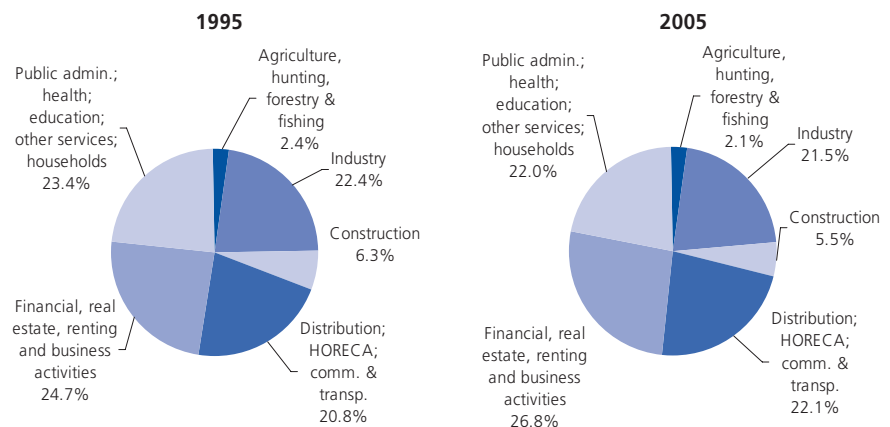
STRUCTURE OF THE EU ECONOMY – AN OVERVIEW

The sectoral chapters of European business only cover the business economy as defined by NACE Sections C to K. Together this group of activities accounted for 75.8 % of the total value added generated in the EU-25 in 2005 (see Figure 1.4). The highest share of value added was recorded for financial, real estate, renting and business activities (NACE Sections J and K, 26.8 %), 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 around 22 % of economic output; while construction (NACE Section F) registered a 5.5 % share. Of the activities not covered in European business, the lion's share of the remaining added value (also 22 %) was created by public administration, health, education, other services, and households (NACE Sections L to P), while the remaining 2.1 % of value added was attributed to agriculture, hunting, forestry and fishing (NACE Sections A and B).

In employment terms (see Figure 1.5) the situation was quite different, as the business economy accounted for just under two thirds (65.1 %) of the EU-25's workforce in 2005, some 10.7 percentage points lower than its corresponding share of value added. The largest employer in 2005 was public administration, health, education, other services, and households, where three out of ten persons were employed, while just over one in four worked within the activities of distribution, hotels, restaurants and catering (HORECA), communications and transport services.

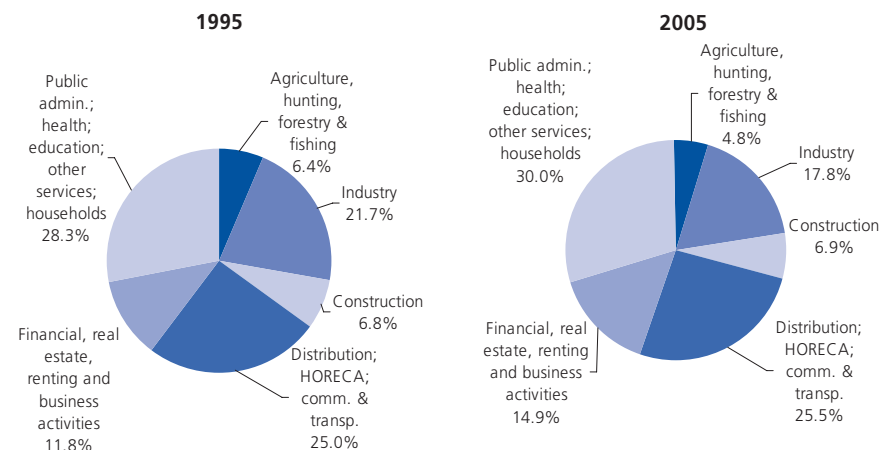
Differences between relative shares of total value added and employment provide a measure of labour productivity: industry and financial, real estate, renting and business activities were the most productive (or capital

Figure 1.4
Breakdown of value added in constant prices, EU-25 (% of total value added) (1)



(1) Chain-linked volumes at 2000 exchange rates.
Source: Eurostat (Economy and finance)

Figure 1.5
Breakdown of employment, EU-25 (% of total employment)



Source: Eurostat (Economy and finance)

intensive) activities of the EU economy (see Figure 1.14 for a more detailed breakdown), while all remaining activities tended to be labour intensive (in particular, public administration, health, education, other services, and households).

Value added rose (in real terms) over the period 1995 to 2005 for each of the activities presented in Figure 1.4, with average growth of 2.3 % per annum in the EU-25. The lowest growth rates were recorded for construction (see Chapter 15) and agriculture, hunting, forestry and fishing (on average by about 1 % per annum). The highest growth rates were registered for financial, real estate, renting and business activities (3.1 % per annum), while the only other activity to report above average growth was distribution; hotels, restaurants and catering (HORECA); communications and transport services (2.9 % per annum).

During the same period (1995 to 2005) the number of persons working in financial, real estate, renting and business activities rose, on average, by 3.4 % per annum, or some 8.5 million persons overall. The net increase in the number of persons employed within public administration, health, education, other services, and households was slightly higher at 8.8 million persons, while there was a net increase of 5.9 million persons working in distribution, hotels, restaurants and catering (HORECA), communications and transport services. There were only two activities that reported a net decline in their employment levels between 1995 and 2005, with 3.8 million fewer persons employed in industrial activities and 1.9 million fewer in agriculture, hunting, forestry and fishing.

As such, the two activities with the highest levels of labour productivity had completely diverging employment trends: as industry

registered the largest absolute and relative declines in employment between 1995 and 2005, while financial, real estate, renting and business activities recorded the second largest absolute increase and the largest relative increase.

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.

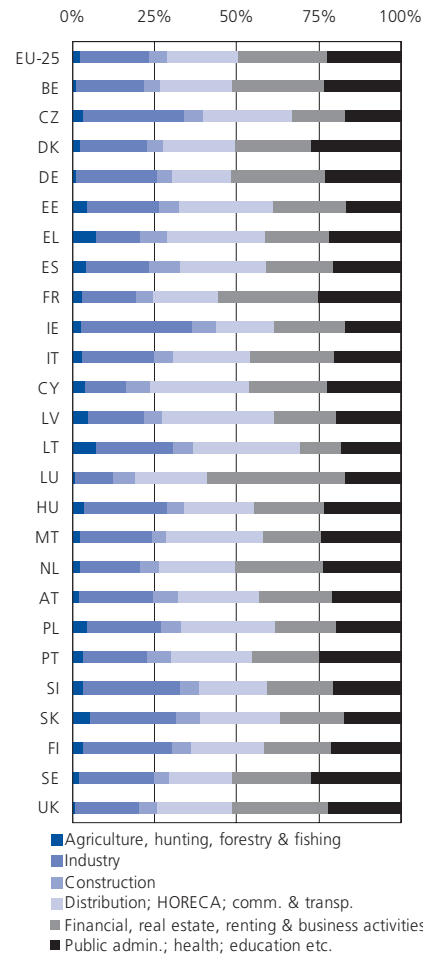
There has also been a shift in the structure of economic output within Member States resulting from an outsourcing phenomenon, as supporting and ancillary operations which were previously done in-house are awarded to outside contractors (for example, transport and logistics, information technology, accounts, industrial cleaning).

STRUCTURAL DIFFERENCES BETWEEN THE MEMBER STATES

Figure 1.6 shows the relative contribution of the six aggregate activities to total value added in 2005. Ireland, the Czech Republic and Slovenia had relatively large, industrial sectors, accounting for between 30 % and 33 % of their total economic output (more than 40 % higher than the EU-25 average). France, Luxembourg and the United Kingdom were relatively specialised in financial, real estate, renting and business activities, while the tourism-rich economies of Cyprus and Malta, as well as Latvia and Lithuania were relatively specialised in distribution, hotels, restaurants and catering (HORECA), communications and transport services – each of these activities accounting for 30 % or more of national value added. The most specialised Member States within the construction sector were Spain and Greece, where this activity contributed more than 8 % of total value added.

These structural differences should be borne in mind when reviewing the differences in economic development between the Member States and when reading the sectoral chapters, as ratios such as the importance of a particular activity in the industrial or non-financial services economy will, to some degree, depend on the size of the higher aggregates (which form the denominator of any ratio that is calculated).

Figure 1.6
Breakdown of gross value added at basic prices, 2005
(% share of total gross value added)

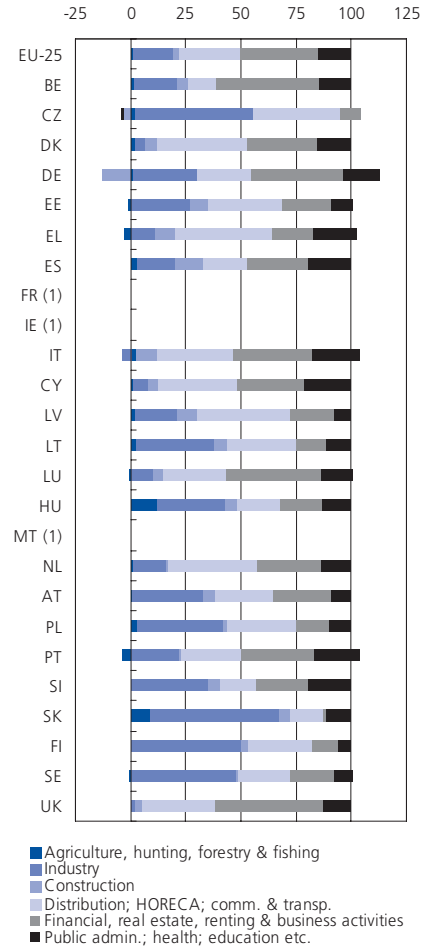


Source: Eurostat (Economy and finance)

It is also important to consider the restricted coverage of this publication, as those activities that do not form part of the business economy may account for a relatively high share of total value added. Agriculture, hunting, forestry and fishing accounted for a relatively high share of national value added in Greece, Latvia, Lithuania, Poland and Slovakia, while the highest specialisation ratios for public administration, health, education, other services, and households were recorded for Denmark, France, Portugal and Sweden. The weight of the activities not covered in European business ranged from 17.4 % of total value added in Luxembourg and 19.4 % in Ireland, to upwards of 28 % of the total in Denmark, Greece, Portugal and Sweden.

Figure 1.7 shows the contribution of each of the main national accounts headings to constant price growth of value added between 1995 and 2005 (including the two headings that are excluded from the remainder of the

Figure 1.7
Overall change of value added at constant prices, 1995-2005
(% contribution to total change)



(1) Not available.

Source: Eurostat (Economy and finance)

analysis in European business). The largest contributions to the growth of value added were recorded within the financial, real estate, renting & business activities; the distribution, hotels, restaurants and catering (HORECA), communications and transport services sector, as well as the industrial sector. Indeed, industry accounted for at least 30 % of the total growth in value added in the Czech Republic, Lithuania, Hungary, Austria, Poland, Slovenia, Slovakia, Finland and Sweden. The contribution of financial, real estate, renting & business activities was largely a result of developments in the largest EU economies, as Germany, Spain, Italy and the United Kingdom (as well as Belgium and Portugal) reported that the largest contribution to value added growth was from this sector. None of the remaining three sectors (agriculture, hunting, forestry & fishing; construction; and public admin.; health; education etc.) accounted for the highest contribution to value added growth.

1.2: STRUCTURAL PROFILE OF THE BUSINESS ECONOMY

Structural business statistics (SBS) constitute the principal source of information for this publication. The main SBS aggregates that are often referred to during the course of this publication are defined as follows (using the NACE classification):

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

Financial services (NACE Section J) is kept separate from the other sectors (see Chapter 24) because of the specific nature of the sector and the limited availability of standard business statistics.

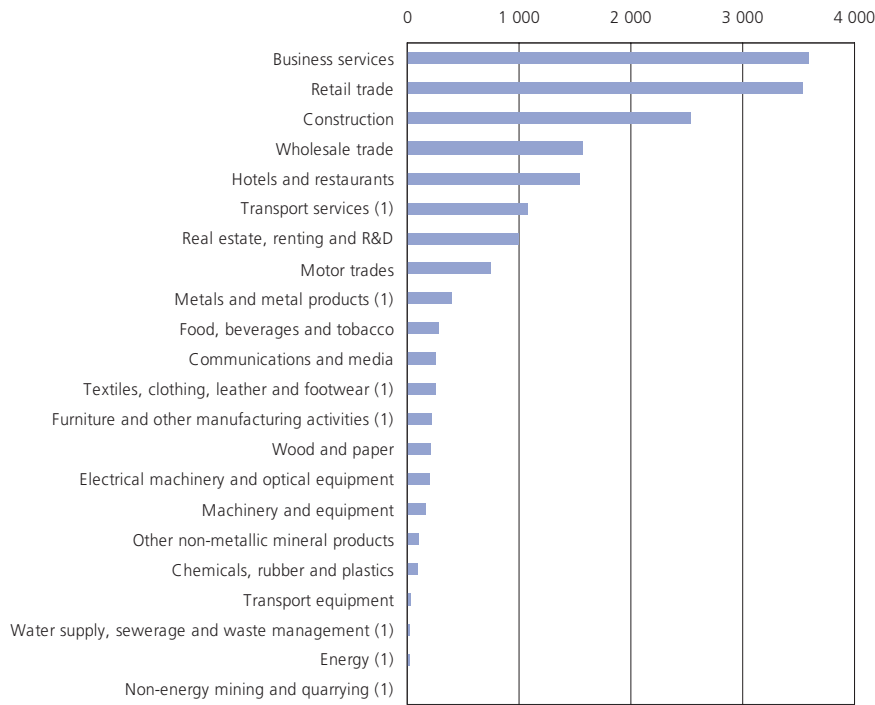
EU-25

There were 3.5 million enterprises within business services (NACE Division 72 and 74, see Chapter 22) and within retail trade (NACE Division 52, see Chapter 18) in the EU-25 in 2003 - see Figure 1.8. On the basis of the sectoral chapters that follow, these were the activities in which there were the largest number of enterprises in the EU-25, reflecting, to some degree, relatively low barriers to entry, large markets and a diverse range of products. The construction sector (see Chapter 15) comprised 2.5 million enterprises in 2003, with most of these enterprises engaged in specialist work (in particular activities such as plastering, painting, plumbing, electrical installations, etc).

At the other end of the scale, there were relatively few enterprises within a number of activities that are characterised by high barriers to entry, in particular, considerable start-up costs to reach a minimum efficient scale of production; these included the capital-intensive water supply, sewerage and waste management sector (see Chapter 14), the energy sector (see Chapter 13) and the non-energy mining and quarrying sector (see Chapter 12).

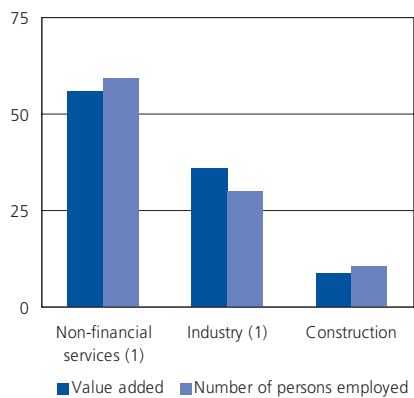
Within the EU-25's non-financial business economy, non-financial services accounted for the largest proportion of value added (55.6 %) and persons employed (59.2 %) in 2003, see Figure 1.9.

Figure 1.8
Number of enterprises, EU-25, 2003 (thousands)



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

Figure 1.9
Breakdown of value added and employment, EU-25, 2003 (% share of total)



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

Business services (see Chapter 22) accounted for 14.6 % of the total value added generated in the non-financial business economy of the EU-25 in 2003 and 15.5 % of its employment, by far the highest shares among the sectors (as classified according to the sectoral chapters within this publication). The next largest contributions came from wholesale trade (see Chapter 17), the construction sector (see Chapter 15), retail trade (see Chapter 18) and transport services (see Chapter 20). These four activities together accounted for a little under one third (31.9 %) of the total value added generated within the EU-25's non-financial business economy but a much higher proportion of the non-financial business economy workforce (38.6%) - see Table 1.2.

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 (75.7 %) of the added value generated within the EU-25's non-financial business economy in 2003, while employing nearly two thirds (66.0 %) of the EU-25's workforce. By way of comparison, the ten Member States that joined the European Union in 2004 generated 6.3 % of the EU-25's value added in 2003, but employed 18.9 % of its workforce. The differences in these shares highlight the wide range of labour productivity levels between the Member States.

Table 1.4 presents the largest activities in each of the Member States (on the basis of value added). It shows that in a majority of the Member States, the wholesale trade sector (see Chapter 17) or the energy sector (see Chapter 13) was the largest activity. Indeed, the wholesale trade sector featured as one of the three largest activities for each of the Member States, except Ireland, Cyprus, Luxembourg, Malta and Austria. The principal activities (in terms of value added) among the Member States that joined the EU in 2004 often closely resembled those of the EU-15 Member States, although a few countries continued to report relatively high levels of output for more traditional, manufacturing sectors such as textiles, wood processing and food processing. A number of activities (as covered by the sectoral chapters) were never among the five largest sectors in terms of value added in any of the Member States, for example, other non-metallic mineral products (see Chapter 6) or machinery and equipment (see Chapter 8).

Table 1.2
Value added and employment, EU-25, 2003

	Value added		Number of persons employed	
	(EUR million)	(% of non-financial business economy)	(thousands)	(% of non-financial business economy)
Food, beverages and tobacco (1)	192 000	4.0	4 490	3.8
Textiles, clothing, leather and footwear (1)	66 000	1.4	3 000	2.6
Wood and paper (1)	75 000	1.6	1 910	1.6
Chemicals, rubber and plastics (1)	241 000	5.0	3 560	3.0
Other non-metallic mineral products (1)	69 100	1.4	1 520	1.3
Metals and metal products (1)	190 000	4.0	4 800	4.1
Machinery and equipment	163 515	3.4	3 475	3.0
Electrical machinery and optical equipment	180 396	3.8	3 611	3.1
Transport equipment	172 088	3.6	2 998	2.6
Furniture & other manufacturing activities (2)	48 984	1.0	1 760	1.5
Non-energy mining and quarrying (3)	13 000	0.3	248	0.2
Energy (2)	215 067	4.5	1 600	1.4
Water supply, sewerage & waste management (1)	24 000	0.5	400	0.3
Construction	414 489	8.6	12 377	10.6
Motor trades	141 175	2.9	3 812	3.3
Wholesale trade	423 792	8.8	8 788	7.5
Retail trade	366 852	7.6	16 021	13.7
Hotels and restaurants	154 171	3.2	8 228	7.0
Transport services (1)	334 000	6.9	8 000	6.8
Communications and media (1)	321 000	6.7	4 810	4.1
Business services (1)	703 000	14.6	18 100	15.5
Real estate, renting and R&D (1)	290 000	6.0	3 300	2.8

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

(2) Number of persons employed and related share, rounded estimates based on non-confidential data.

(3) Value added and related share, rounded estimates based on non-confidential data.

Source: Eurostat (SBS)

Table 1.3
Value added and employment, non-financial business economy, 2003

	Value added		Number of persons employed	
	(EUR million)	(% share of EU-25)	(thousands)	(% share of EU-25)
BE	50 659	3.0	658	1.9
CZ	22 488	1.3	1 489	4.2
DK	31 741	1.9	457	1.3
DE	454 050	26.7	7 661	21.8
EE	1 594	0.1	144	0.4
EL	:	:	:	:
ES	127 170	7.5	2 724	7.7
FR	233 873	13.8	4 175	11.9
IE	:	:	:	:
IT	222 387	13.1	4 934	14.0
CY	1 252	0.1	42	0.1
LV	1 578	0.1	182	0.5
LT	2 394	0.1	303	0.9
LU	2 719	0.2	39	0.1
HU	16 149	0.9	920	2.6
MT (1)	900	0.1	35	0.1
NL	64 203	3.8	834	2.4
AT	43 269	2.5	662	1.9
PL	47 353	2.8	2 796	7.9
PT	22 085	1.3	926	2.6
SI	6 152	0.4	260	0.7
SK	6 411	0.4	467	1.3
FI	32 354	1.9	441	1.3
SE (2)	49 024	2.9	800	2.3
UK	249 783	14.7	3 726	10.6

(1) 2002.

(2) Value added and related share, 2002; number of persons employed and related share, provisional.

Source: Eurostat (SBS)

Table 1.4

Largest activities (on the basis of value added for sectoral chapter headings), 2003

	Largest	Second largest	Third largest	Fourth largest	Fifth largest
EU-25 (1)	Business services	Wholesale trade	Construction	Retail trade	Transport services
BE	Business services	Wholesale trade	Chemicals, rubber and plastics	Transport services	Communications and media
CZ	Business services	Wholesale trade	Construction	Transport services	Energy
DK (2)	Business services	Real estate, renting and R&D	Wholesale trade	Transport services	Construction
DE	Business services	Wholesale trade	Real estate, renting and R&D	Retail trade	Transport equipment
EE	Wholesale trade	Transport services	Construction	Communications and media	Business services
EL	:	:	:	:	:
ES	Construction	Business services	Wholesale trade	Retail trade	Transport services
FR	Business services	Retail trade	Wholesale trade	Construction	Transport services
IE (3)	Chemicals, rubber and plastics	Communications and media	Business services	Food, beverages & tobacco	Electrical mach. & optical equip.
IT	Business services	Wholesale trade	Construction	Retail trade	Transport services
CY (4)	Construction	Hotels and restaurants	Retail trade	Wholesale trade	Transport services
LV (4)	Wholesale trade	Transport services	Communications and media	Construction	Retail trade
LT (5)	Energy	Wholesale trade	Transport services	Construction	Retail trade
LU (6)	Business services	Construction	Transport services	Wholesale trade	Retail trade
HU (7)	Electrical mach. & optical equip.	Wholesale trade	Business services	Communications and media	Energy
MT (8)	Transport services	Hotels and restaurants	Communications and media	Electrical mach. & optical equip.	Business services
NL (9)	Business services	Wholesale trade	Construction	Transport services	Communications and media
AT (4)	Business services	Construction	Wholesale trade	Transport services	Retail trade
PL	Energy	Wholesale trade	Food, beverages & tobacco	Communications and media	Retail trade
PT (10)	Wholesale trade	Construction	Retail trade	Business services	Communications and media
SI	Chemicals, rubber and plastics	Business services	Wholesale trade	Construction	Metals & metal products
SK (11)	Wholesale trade	Communications and media	Metals & metal products	Business services	Transport services
FI	Electrical mach. & optical equip.	Business services	Transport services	Wholesale trade	Construction
SE (12)	Business services	Real estate, renting and R&D	Wholesale trade	Construction	Transport services
UK	Business services	Retail trade	Construction	Wholesale trade	Communications and media

(1) Rounded estimates based on non-confidential data, except for machinery and equipment, electrical machinery and optical equipment, and transport equipment.

(2) Energy, textiles, clothing, leather and footwear, not available; furniture and other manufacturing activities, 2002.

(3) Energy, textiles, clothing, leather and footwear, not available; non-energy mining and quarrying, 2002.

(4) Energy, textiles, clothing, leather and footwear, not available.

(5) Transport services, 2002.

(6) Communications and media, not available; wood and paper, 2002.

(7) Metals and metal products, textiles, clothing, leather and footwear, 2002.

(8) Energy, wood and paper, not available; all data for 2002.

(9) Energy, non-energy mining and quarrying, 2002.

(10) Energy, non-energy mining and quarrying, not available.

(11) Energy, not available; textiles, clothing, leather and footwear, 2002.

(12) 2002.

Source: Eurostat (SBS)

This analysis may be extended, as relative specialisation ratios go a step further by looking at the contribution of each activity to value added in the non-financial business economy in each Member State and comparing this to the same ratio for the EU-25 as a whole. Table 1.5 shows those activities in which each Member State ⁽²⁾ was relatively specialised. These specialisation ratios confirm some regional patterns: as several Baltic, Scandinavian and Alpine Member States were relatively specialised in the manufacture of wood and wood products (see Chapter 4), while mining for energy-related products was concentrated within several Eastern European countries (the Czech Republic, Poland and Hungary).

These first two examples of trends in specialisation are clearly related to endowments of natural resources (for example, forests or coal). However, socio-economic endowments also play an important role in determining specialisation, for example, skills, costs, infrastructure and legislation, among other factors. These factors may help explain why the transport equipment manufacturing sector (see Chapter 10) has an historical cluster of manufacturers principally in Germany and France, while more recent developments have seen an expansion in activity in a few of the Member States that joined the EU in 2004, such as the Czech Republic, Slovakia and Hungary. In a similar vein, the textiles and textile products

manufacturing sector (see Chapter 3) is no longer an activity dominated only by the Mediterranean Member States of Italy, Portugal and Spain, as production is also increasingly moved to Eastern Europe (and beyond) in the search for lower labour costs.

⁽²⁾ Greece, Lithuania and Malta, not available.

Table 1.5

Most specialised activities (on the basis of value added specialisation ratios relative to the EU-25 for sectoral chapter headings), 2003

	Most specialised	Second most specialised	Third most specialised	Fourth most specialised	Fifth most specialised
BE	Chemicals, rubber & plastics	Water supply, sewerage & waste	Wholesale trade	Text., clothing, leather, footwear	Other non-metallic mineral prod.
CZ	Other non-metallic mineral prod.	Water supply, sewerage & waste	Metals & metal products	Energy	Furniture & other manufacturing
DK (1)	Real estate, renting and R&D	Transport services	Food, beverages & tobacco	Wholesale trade	Machinery & equipment
DE	Transport equipment	Machinery & equipment	Electrical mach. & optical equip.	Metals & metal products	Real estate, renting and R&D
EE	Wood & paper	Text., clothing, leather, footwear	Furniture & other manufacturing	Water supply, sewerage & waste	Transport services
EL	:	:	:	:	:
ES	Construction	Other non-metallic mineral prod.	Hotels & restaurants	Non-energy mining & quarrying	Text., clothing, leather, footwear
FR	Retail trade	Transport equipment	Hotels & restaurants	Water supply, sewerage & waste	Transport services
IE (2)	Chemicals, rubber & plastics	Food, beverages & tobacco	Electrical mach. & optical equip.	Communications & media	Hotels & restaurants
IT	Text., clothing, leather, footwear	Furniture & other manufacturing	Other non-metallic mineral prod.	Metals & metal products	Machinery & equipment
CY	:	:	:	:	:
LV (3)	Wood & paper	Transport services	Food, beverages & tobacco	Wholesale trade	Communications & media
LT	:	:	:	:	:
LU	Transport services	Metals & metal products	Other non-metallic mineral prod.	Text., clothing, leather, footwear	Construction
HU (4)	Electrical mach. & optical equip.	Water supply, sewerage & waste	Energy	Food, beverages & tobacco	Transport equipment
MT	:	:	:	:	:
NL (5)	Wholesale trade	Transport services	Real estate, renting and R&D	Food, beverages & tobacco	Construction
AT (3)	Wood & paper	Hotels & restaurants	Other non-metallic mineral prod.	Furniture & other manufacturing	Non-energy mining & quarrying
PL	Non-energy mining & quarrying	Energy	Food, beverages & tobacco	Water supply, sewerage & waste	Furniture & other manufacturing
PT (5)	Text., clothing, leather, footwear	Other non-metallic mineral prod.	Water supply, sewerage & waste	Wood & paper	Wholesale trade
SI	Text., clothing, leather, footwear	Water supply, sewerage & waste	Furniture & other manufacturing	Chemicals, rubber & plastics	Metals & metal products
SK (3)	Water supply, sewerage & waste	Metals & metal products	Other non-metallic mineral prod.	Transport equipment	Wood & paper
FI	Wood & paper	Electrical mach. & optical equip.	Machinery & equipment	Transport services	Metals & metal products
SE	:	:	:	:	:
UK	Business services	Motor trades	Hotels & restaurants	Retail trade	Communications & media

(1) Energy, furniture & other manufacturing, water supply, sewerage & waste and textiles, clothing, leather, footwear, not available.

(2) Energy, furniture & other manufacturing and non-energy mining and quarrying, not available.

(3) Energy and textiles, clothing, leather, footwear, not available.

(4) Textiles, clothing, leather, footwear and metals & metal products, not available.

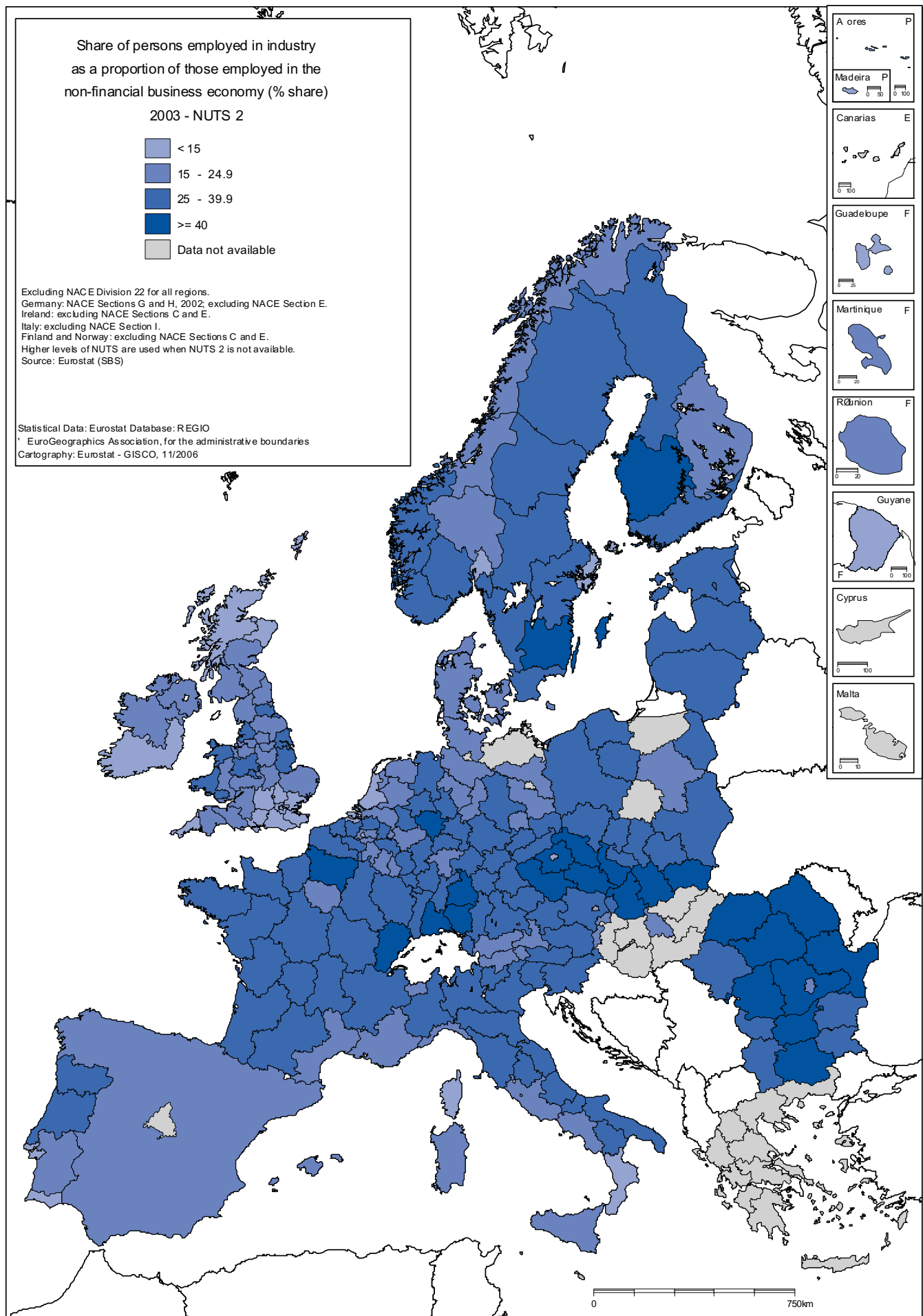
(5) Energy and non-energy mining and quarrying, not available.

Source: Eurostat (SBS)

SPECIALISATION AT A REGIONAL LEVEL

Maps 1.1 and 1.2 show the proportion of the non-financial business economy workforce occupied within the industrial and non-financial services sectors in 2003 (note that a similar map for the construction sector is presented within Chapter 15). Západoé Slovensko (Slovakia) was the only region in the EU-25 (at the NUTS 2 level of detail) to report that the majority (58.0 %) of its workforce were employed within industrial activities. The few regions in which industrial employment accounted for more than 40 % of the workforce tended to be located within the Czech Republic, Slovakia, Germany and France (while several regions in Bulgaria and Romania also reported a relatively high proportion of industrial employment).

Map 1.1



Map 1.2

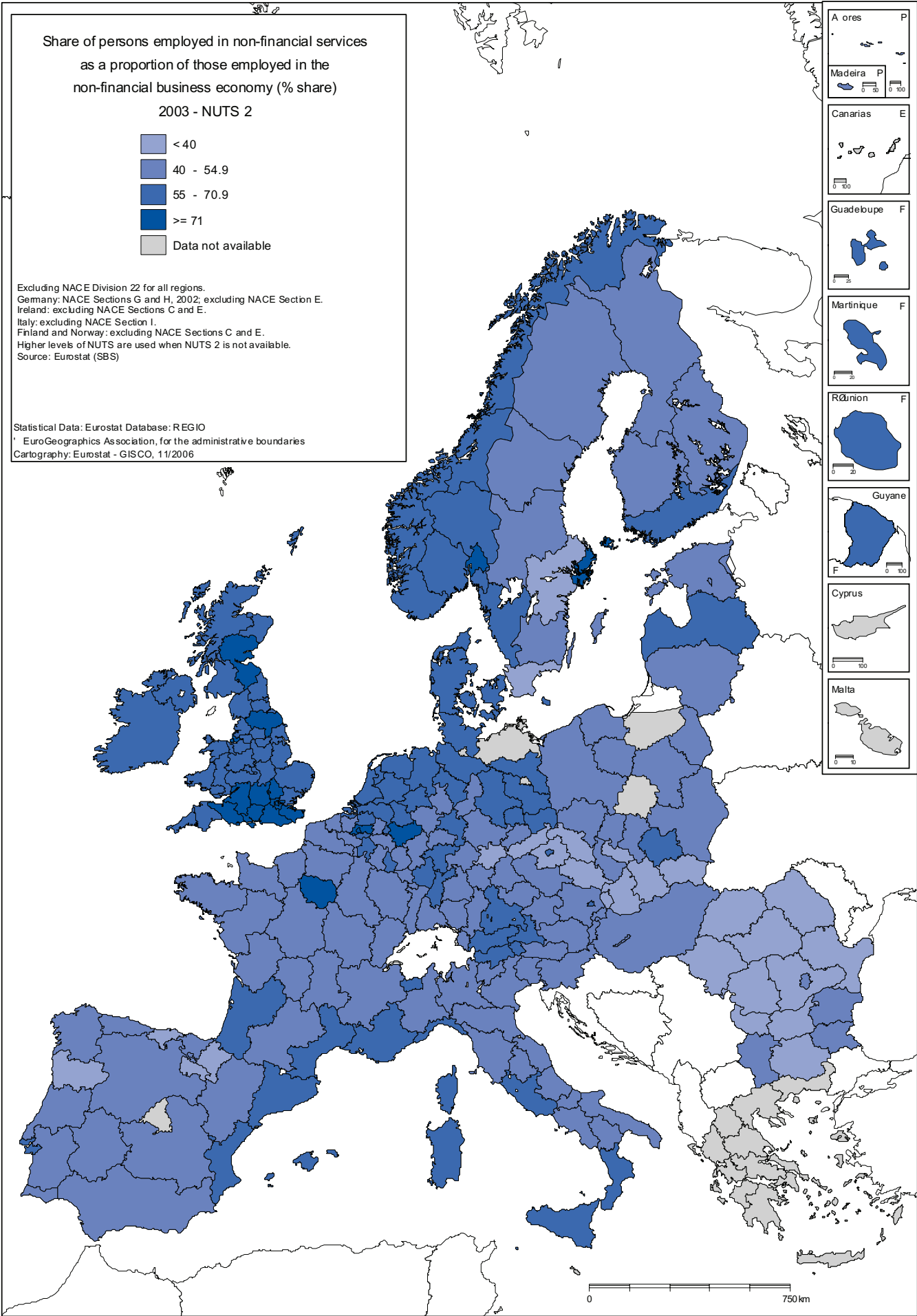


Table 1.6

Most specialised regions (NUTS 2 for sectoral chapter headings), 2003 (% share of non-financial business economy employment) (1)

	Most specialised	(%)	Second most specialised	(%)	Third most specialised	(%)
Food, beverages and tobacco	Bretagne (FR)	c	Podlaskie (PL)	10.8	Del-Alföld (HU)	10.4
Textiles, clothing, leather and footwear	Norte (PT)	22.4	Lódzkie (PL)	14.8	Marche (IT)	13.8
Wood and paper	Itä-Suomi (FI)	10.0	Norra Mellansverige (SE)	8.0	Mellersta Norrland (SE)	7.7
Chemicals, rubber and plastics	Rheinessen-Pfalz (DE)	15.7	Auvergne (FR)	11.6	Picardie (FR)	8.9
Other non-metallic mineral products	Centro (PT)	6.2	Swietokrzyskie (PL)	5.7	Oberfranken (DE)	5.1
Metals and metal products	Arnsberg (DE)	15.2	Východné Slovensko (SK)	c	Moravskoslezsko (CZ)	12.9
Machinery and equipment	Tübingen (DE)	12.6	Unterfranken (DE)	12.5	Stuttgart (DE)	10.8
Electrical machinery and optical equip.	Oberpfalz (DE)	12.4	Západné Slovensko (SK)	12.1	Mittelfranken (DE)	11.9
Transport equipment	Braunschweig (DE)	21.9	Stuttgart (DE)	14.7	Niederbayern (DE)	13.6
Furniture and other manufacturing activ.	Warminko-Mazurskie (PL)	6.9	Friuli-Venezia Giulia (IT)	6.6	Detmold (DE)	c
Non-energy mining and quarrying	Dolnoslaskie (PL)	c	Övre Norrland (SE)	3.9	Guyane (FR)	c
Energy	Slaskie (PL)	16.5	North Eastern Scotland (UK)	9.7	Bratislavský kraj (SK)	9.2
Water supply, sewerage and waste	Stredné Slovensko (SK)	3.8	Východné Slovensko (SK)	2.0	Észak-Magyarország (HU)	1.7
Construction	Ciudad Autónoma de Melilla (ES)	67.8	Ciudad Autónoma de Ceuta (ES)	62.7	La Rioja (ES)	46.1
Motor trades	Reunion (FR)	7.2	Martinique (FR)	6.6	Brandenburg - Südwest (DE)	6.6
Wholesale trade	Flevoland (NL)	14.8	Región de Murcia (ES)	14.4	Prov. Vlaams Brabant (BE)	14.0
Retail trade	Dorset and Somerset (UK)	22.6	Lubelskie (PL)	22.0	West Wales and The Valleys (UK)	21.9
Hotels and restaurants	Illes Balears (ES)	24.7	Algarve (PT)	23.2	Provincia Autonoma Bolzano-Bozen (IT)	21.2
Transport services	Åland (FI)	47.5	Bratislavský kraj (SK)	21.3	Darmstadt (DE)	15.6
Communications and media	Köln (DE)	29.2	Mazowieckie (PL)	13.2	Île de France (FR)	11.1
Business services	Inner London (UK)	39.9	Utrecht (NL)	31.0	Stockholm (SE)	30.5
Real estate, renting and R&D	Berlin (DE)	6.9	Latvia (LV)	6.5	Inner London (UK)	6.1

(1) Germany (distributive trades and hotels and restaurants), Luxembourg, Malta, Poland, Sweden and the United Kingdom, 2002; Belgium, 2001; Greece, not available; partial use of older data in some regions in other Member States; data based on enterprises instead of local units in Estonia, Cyprus, Luxembourg and Malta; c: confidential.

Source: Eurostat (SBS)

Table 1.6 shows the three most specialised regions within the EU-25 for each of the chapter headings, on the basis of employment shares within the non-financial business economy. It should be borne in mind that some Member States are considered as a single region (at the level of detail employed for this particular analysis – NUTS 2 regions). There are a number of factors that may explain regional concentrations and specialisation. Location close to a critical mass of clients (other businesses or individual households/consumers), as well as a concentrated skills base may help explain why many of the non-financial service sectors (such as real estate, renting, business services, or retail trade) tend to be concentrated within built-up areas (in particular, capital cities and major conurbations). In many activities there are strategic clusters of enterprises, such as aerospace equipment suppliers around Toulouse (France), manufacturers of motor vehicles and their parts around Stuttgart (Germany), or communications and media enterprises in Köln (Germany).

As noted above (at a national level), geographical and geological factors may help explain why some regions are particularly specialised in energy production, or the forest-based activities of wood and paper manufacturing. Slaskie (Poland) and Bratislavský kraj (Slovakia) are centres of coal production, while North Eastern Scotland (United Kingdom) has offshore oil and gas production, as well as nuclear energy production. In a similar vein, it is not surprising to find that the most specialised region for food, beverage and tobacco manufacturing was a largely rural area, with a high proportion of agricultural land, Bretagne (France).

The weather, landscape and location are key factors driving relative specialisation within the hotels and restaurants sector, where the three most specialised regions in 2003 were all popular holiday destinations (as opposed to areas characterised by business tourism).

Table 1.7

Selected top 20 manufacturing products produced and sold, EU-25, 2004 (EUR million) (1)

	Prodcom code	
Motor vehicles with a petrol engine > 1 500 cm ³ (including motor caravans of a capacity > 3 000 cm ³) (excluding vehicles for transporting >= 10 persons)	34.10.22.30	118 270
Motor vehicles with a diesel or semi-diesel engine > 1 500 cm ³ but <= 2 500 cm ³ (excluding vehicles for transporting >= 10 persons)	34.10.23.30	85 936
Newspapers; journals and periodicals; appearing less than four times a week published by you; or printed and published by you (including advertising revenue) (2)	22.13.11.00	34 695
Radio transmission apparatus with reception apparatus (2)	32.20.11.70	32 397
Preparations for animal feeds (excluding dog or cat food) (2)	15.70.10.23	29 872
Beer made from malt (excluding non-alcoholic beer)	15.96.10.00	29 064
Fresh bread containing by weight in the dry matter state <= 5% of sugars and <= 5% of fat (excluding with added honey; eggs; cheese or fruit) (2)	15.81.11.00	21 708
Grated; powdered; blue-veined and other non-processed cheese (excluding fresh cheese; whey cheese and curd) (2)	15.51.40.50	20 751
Ready-mixed concrete	26.63.10.00	18 971
Motor vehicles with a diesel or semi-diesel engine <= 1 500 cm ³ (excluding vehicles for transporting >= 10 persons)	34.10.23.10	13 060
Cartons; boxes and cases of corrugated paper or paperboard	21.21.13.00	18 047
Plastic parts and accessories for all land vehicles (excluding for locomotives or rolling stock) (2)	25.24.90.60	17 619
Parts for all types of aircraft excluding propellers	35.30.50.90	16 899
Cake and pastry products; other baker's wares with added sweetening matter	15.81.12.00	18 760
Goods vehicles with a diesel or semi-diesel engine	34.10.41.10	13 637
Sausages not of liver (2)	15.13.12.15	15 891
Cigarettes containing tobacco or mixtures of tobacco and tobacco substitutes (excluding tobacco duty)	16.00.11.50	13 968
Refined white cane or beet sugar in solid form	15.83.12.30	13 020
Vehicle reciprocating piston engines of a cylinder capacity > 1 000 cm ³	34.10.12.00	12 312
Vehicle compression-ignition internal combustion piston engines (diesel or semi-diesel) (excluding for railway or tramway rolling stock)	34.10.13.00	12 298

(1) Excluding products of a generic nature (other), sales of services such as repair, maintenance and installation, and one confidential product (not among the top five).

(2) Estimated.

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-25. 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. In this way, the product-based information of PRODCOM should not be confused with the activity-based information under the NACE classification.

Table 1.7 shows a selection of the 20 products with the highest values of production sold in the EU-25 in 2004, excluding a few products: of a generic nature, sales of services (such as repair, maintenance and installation), and one product with a confidential value. This list features a number of products derived from motor trades (Chapter 16), the manufacture of transport equipment (Chapter 10), and the manufacture of food, beverages and tobacco (Chapter 2).

1.3: COSTS, PRODUCTIVITY AND PROFITABILITY

LABOUR AND CAPITAL INTENSITY RATIOS

There is increasing interest in analysing the competitiveness of an economy from a sectoral perspective. Applying a set of indicators to all sectors helps to identify the performance of those individual sectors relative to the rest and how these sectors inter-relate. One area of particular interest is in relation to cost structures for current and capital expenditure, referred to as operating expenditure and gross tangible investment. These statistics provide an insight into the capital/labour intensity of different sectors, as well as the speed at which goods are consumed.

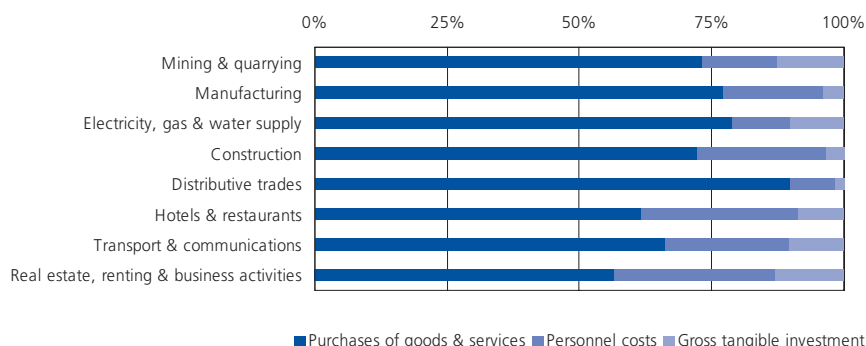
Figure 1.10 shows the cost structure in different activities, with a breakdown of total expenditure into the three main components. A comparison of the shares accounted for by personnel costs against that of gross tangible investments can be used to study the capital/labour divide. According to this ratio, the construction sector (NACE Section F) was the most labour-intensive sector within the non-financial business economy (NACE Sections C to I and K), with personnel costs representing 24.4 % of total costs compared with gross tangible investment that represented 3.4 % of total costs in 2003. In contrast, the mining and quarrying (NACE Section C) and the electricity, gas and water supply sectors (NACE Sector E) were the most capital-intensive, with investments and personnel costs accounting for a similar share of total costs.

The highest proportion of total costs spent on purchases of goods and services (89.9 %) was recorded for distributive trades (NACE Section G), where a very large part of it was in the form of purchases for resale without transformation, underlining the high volume (but low value added per unit) character of wholesale and retail trade activities. In contrast, purchases of goods and services represented a relatively low proportion (56.5 %) of total costs in the real estate, renting and business activities sector (NACE Section K).

An SBS development project carried out by Eurostat collected information on the types of services purchased. Almost a quarter (25.9 %) of the services purchased in the countries with data available related to transport, logistics and postal services (see Figure 1.11), reflecting the need to get goods to market. Marketing and sales related services represented the second highest proportion (16.2 %) of services purchased in 2003, reflecting efforts to raise brand, enterprise and product awareness. Rental and operational leasing (11.9 %) and

Figure 1.10

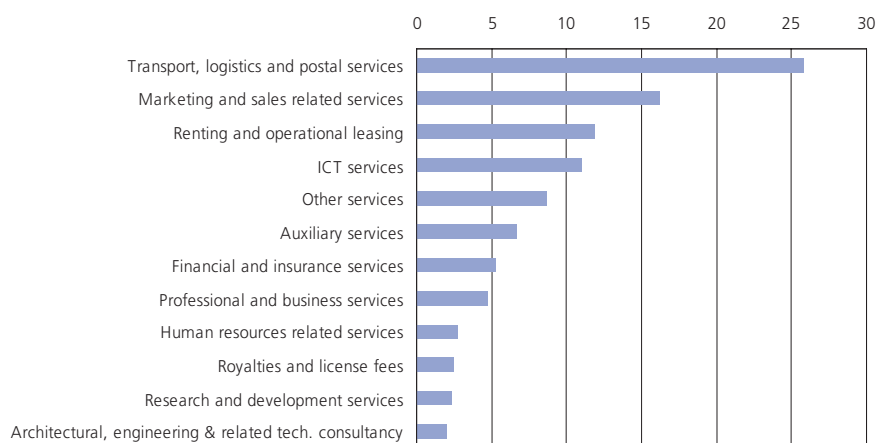
Relative importance of operating expenditure and gross investment in tangible goods, EU average, 2003 (%) (1)



(1) Based on data available for the Member States in 2003.
Source: Eurostat (SBS)

Figure 1.11

Purchases of services broken down by product, average for available Member States, 2003 (% share of total purchases of services) (1)



(1) Simple average for Denmark, Germany, Latvia, Lithuania, Poland, Slovenia and Finland; survey covers enterprises with 50 or more persons employed in the following activities: manufacturing, construction, services (NACE Sections G, H, I, K, Division 90 and Groups 92.1 and 92.2).
Source: Eurostat (SBS - demand for services)

information and communication technologies (11.1 %) also accounted for a significant proportion of the services purchased.

The cost structures of the Member States within industry and construction (see Table 1.8) appeared to fall into one of two groups, the first comprising the majority of the Member States that joined the EU in 2004 for whom personnel costs represented a relatively low proportion of total costs (below the EU average of 19.2 % in all but Slovenia and Cyprus) and gross investment in tangible goods a relatively high proportion of total costs (above the EU average of 4.7 % in all ten countries). Among the EU-15 Member States, gross investment in tangible goods as a proportion of total costs

was (except for Denmark and Portugal) below the rates recorded in the ten Member States that joined the EU in 2004, while the proportion of total costs accounted for by personnel costs was often higher. This was particularly the case in Germany (and to a somewhat lesser degree in France), where the share of personnel costs in total costs rose to 22.6 %).

These patterns observed for industry and construction were not as apparent for non-financial services, as the range of values was considerably narrower. The proportion of total costs accounted for by personnel costs was in fact, in each of the Member States for which data are available, lower than the corresponding share for industry and construction. The main factor behind this is clearly the effect of the specific cost structure in distributive trades, as personnel costs accounted for a relatively high share of total expenditure in all other services sectors (NACE sections) shown in Figure 1.10. However, also contributing is the level of average personnel costs per employee (see below for more details), which stood at EUR 25 900 for non-financial services compared with EUR 32 700 for industry in 2002.

THE STRUCTURE OF LABOUR COSTS

Labour costs are the expenditure borne by employers, including employee compensation in the form of wages and salaries in cash and in kind, employer's social security contributions, vocational training costs, and other expenditure (recruitment costs, working clothes, employment taxes).

A number of the Member States have tried to change labour market conditions in recent years in a way that has affected the composition of labour costs, often through a reduction of non-wage and salary costs. These moves may be seen as an attempt to increase labour market flexibility and the likelihood that employers will hire new staff more rapidly once economic fortunes are improving.

Total wages and salaries accounted for the largest proportion of labour costs in the business economy (which includes financial services) in each of the Member States (see Figure 1.12) in 2004, although their share ranged between 66.5 % in Sweden (2003) and 92.2 % in Malta.

Table 1.8

Relative importance of operating expenditure and gross investment in tangible goods, 2003 (%)

	Industry and construction			Non-financial services		
	Purchases of goods & services	Personnel costs	Gross investment in tangible goods	Purchases of goods & services	Personnel costs	Gross investment in tangible goods
EU average (1)	76.0	19.2	4.7	79.6	15.2	5.2
BE	:	:	:	84.1	11.8	4.1
CZ	80.6	13.3	6.1	85.5	9.5	5.0
DK	69.8	23.9	6.3	76.9	15.5	7.6
DE	73.7	22.6	3.7	78.5	17.1	4.4
EE	76.3	15.1	8.6	84.3	8.7	7.0
EL	:	:	:	:	:	:
ES	76.5	18.8	4.8	80.6	13.5	5.8
FR (2)	78.3	18.3	3.4	77.0	17.4	5.6
IE	:	:	:	81.1	14.1	4.8
IT	79.3	15.6	5.0	83.9	11.2	4.9
CY	65.5	27.2	7.3	:	:	:
LV	74.5	14.1	11.4	82.8	8.2	9.0
LT (3)	76.6	14.7	8.7	84.3	8.7	7.0
LU	81.0	15.2	3.7	82.5	14.9	2.6
HU	82.4	11.1	6.4	84.1	8.9	7.0
MT (4)	75.9	18.5	5.6	80.4	12.9	6.7
NL	79.6	16.8	3.6	80.5	15.4	4.1
AT	71.4	23.5	5.1	76.0	16.2	7.8
PL	80.1	13.8	6.1	91.5	5.9	2.6
PT	77.4	15.8	6.8	80.4	11.5	8.1
SI	73.3	19.6	7.0	82.1	12.9	5.0
SK	83.0	11.0	6.1	84.3	9.2	6.5
FI	78.8	17.0	4.2	79.6	14.8	5.6
SE (2)	74.2	20.7	5.1	75.7	17.8	6.5
UK	74.2	20.4	5.4	77.3	17.6	5.1

(1) Based on available 2003 data for the Member States.

(2) Industry and construction, 2002.

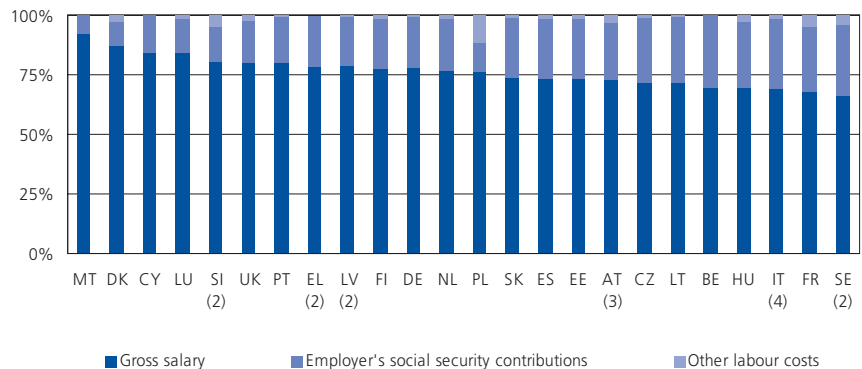
(3) Non-financial services, 2002.

(4) 2002.

Source: Eurostat (SBS)

Figure 1.12

Breakdown of labour costs, business economy, 2004
(% share of total labour costs) (1)



(1) NACE Sections C to K; Ireland, not available.

(2) 2003.

(3) 2000.

(4) 2002.

Source: Eurostat (Labour costs)

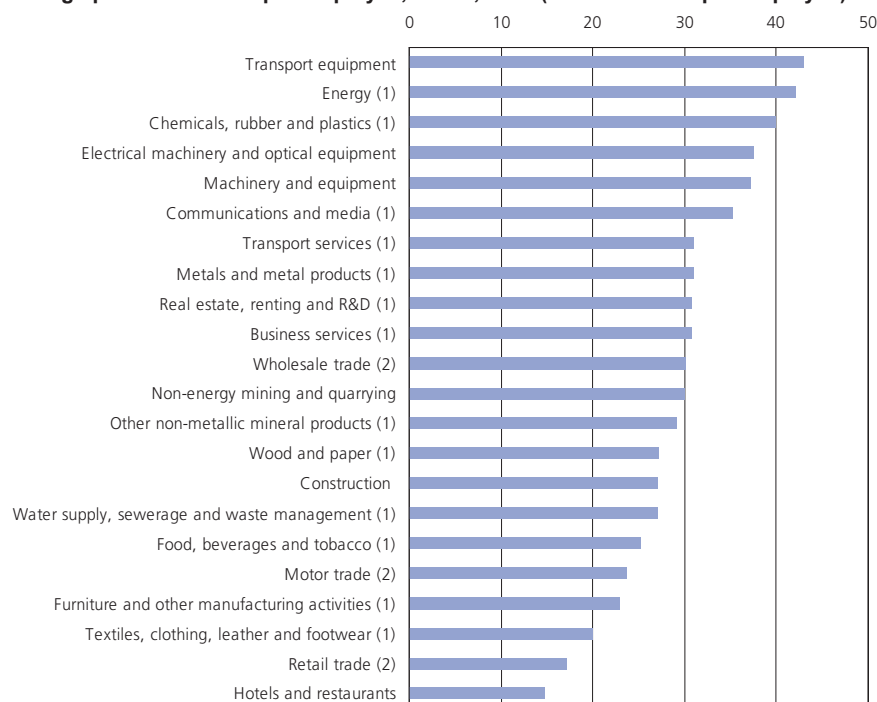
PERSONNEL COSTS AND LABOUR PRODUCTIVITY

Average personnel costs per employee were EUR 28 400 in 2002 for the EU-25's non-financial business economy (NACE Sections C to I and K). Among the sectoral chapter headings used in this publication, personnel costs per employee were highest for the manufacture of transport equipment (see Chapter 10) at EUR 42 900, falling to just one third of this level (EUR 14 800 per employee) for hotels and restaurants (see Chapter 19) - see Figure 1.13. Note that this ratio is calculated on the basis of head counts regarding the measurement of labour input (as opposed to full-time equivalents). Within several service sectors the propensity to employ on a part-time basis is considerably higher than average. Indeed, the two chapter headings that reported the lowest personnel costs per employee, hotels and restaurants and retail trade (see Chapter 18), where personnel costs per employee averaged EUR 17 100 in 2002, also reported the highest proportion of part-time employment.

Productivity is a measure of economic efficiency, showing how effectively economic inputs are converted into output. Apparent labour productivity is defined as value added (a measure of output in price terms) divided by the number of persons employed. Wage adjusted labour productivity can be calculated by dividing the apparent labour productivity by the average personnel costs and expressing the result as a percentage.

Wage adjusted labour productivity and apparent labour productivity tended to be highest in those sectors of the EU-25 economy that were capital-intensive and tended to be lowest in those areas of the economy that were labour-intensive. The energy sector (see Chapter 13) and real estate, renting and R&D sector (see Chapter 23) reported by far the highest levels of apparent labour productivity (value added per person employed) and wage adjusted labour productivity in the EU-25's non-financial business economy in 2003 (see Figure 1.14).

Figure 1.13
Average personnel costs per employee, EU-25, 2003 (EUR thousand per employee)

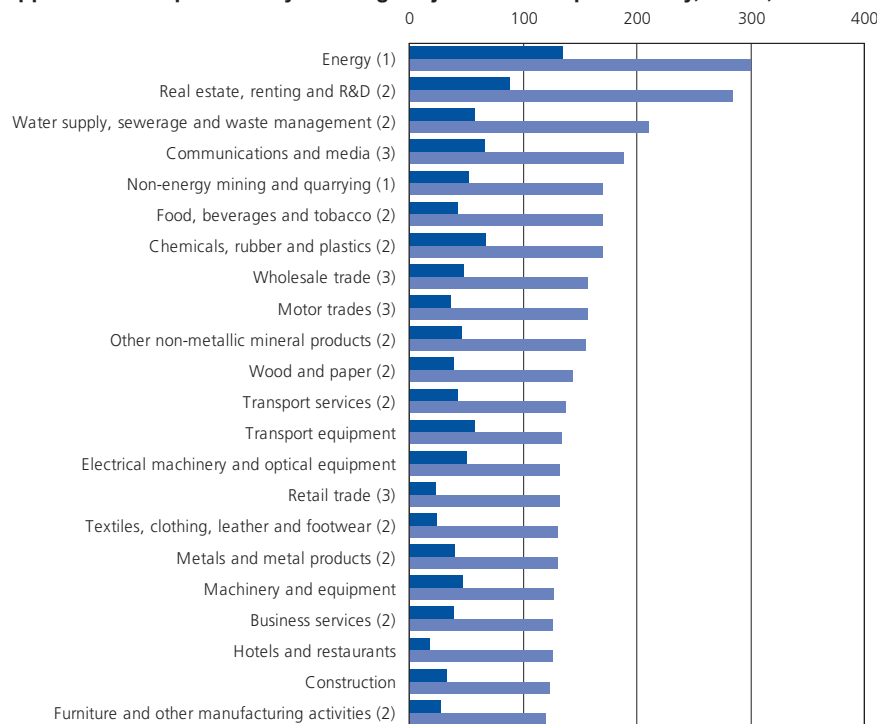


(1) Rounded estimate based on non-confidential data.

(2) 2002.

Source: Eurostat (SBS)

Figure 1.14
Apparent labour productivity and wage adjusted labour productivity, EU-25, 2003



■ Apparent labour productivity (EUR thousand per person employed) ■ Wage adjusted labour productivity (%)

(1) EU-25 is an EU average based on available data for 2002 and 2003.

(2) Rounded estimate based on non-confidential data.

(3) Wage adjusted labour productivity, 2002.

Source: Eurostat (SBS)

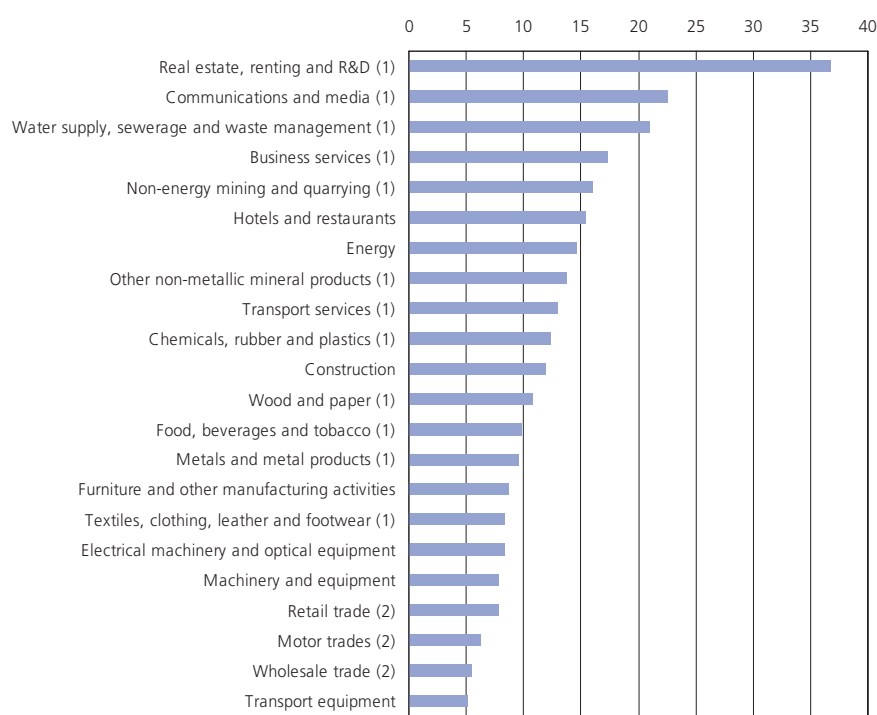
PROFITABILITY:
THE GROSS OPERATING RATE

The gross operating rate can be considered as one measure of profitability and, as such, is a key indicator for competitiveness and enterprise success. The gross operating rate is defined as the gross operating surplus (value added at factor cost less personnel costs) divided by turnover and is expressed as a percentage. The gross operating surplus is therefore a measure of the operating revenue that is left to compensate the capital factor input, after the labour factor input has been recompensed. The surplus is used by the unit to recompense the providers of own funds and debt, to pay taxes and eventually to finance all or a part of its investment (the consumption of fixed capital representing the amount of fixed assets used up, during the period under consideration, as a result of normal wear and tear and foreseeable obsolescence). As such, although not always the case, the gross operating surplus will 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 EU-25's gross operating rate for the non-financial business economy (NACE Sections C to I and K) was 10.8 % in 2002. In terms of the sectoral chapter headings used in this publication, the real estate, renting and R&D sector reported the highest gross operating rate in 2003 (36.7 %, see Figure 1.15). This was substantially more than the second highest rate (22.6 %) for the communications and media sector (see Chapter 21). The lowest EU-25 gross operating rates in 2003 were recorded for wholesale trade (see Chapter 17) and the manufacture of transport equipment (see Chapter 10).

Among the Member States in 2003, the highest gross operating rates for the broad headings of industry, construction and non-financial services tended to be recorded in Latvia, Malta (2002) and the United Kingdom (see Table 1.9), while the limited data available for Cyprus and Ireland also showed relatively high levels of profitability. In contrast, the lowest levels of profitability, using this measure, were often recorded in Germany and France.

Figure 1.15
 Gross operating rate, EU-25, 2003 (%)



(1) Rounded estimate based on non-confidential data.
 (2) 2002.
 Source: Eurostat (SBS)

Table 1.9

Costs, productivity and profitability, 2003

	Industry				Construction				Non-financial services			
	Apparent labour prod. (EUR thousand per person employed)	Average personnel costs (EUR thousand per employee)	Wage adjusted labour prod. ratio (%)	Gross operating ratio (%)	Apparent labour prod. (EUR thousand per person employed)	Average personnel costs (EUR thousand per employee)	Wage adjusted labour prod. ratio (%)	Gross operating ratio (%)	Apparent labour prod. (EUR thousand per person employed)	Average personnel costs (EUR thousand per employee)	Wage adjusted labour prod. ratio (%)	Gross operating ratio (%)
EU-25 (1)	49.6	32.6	152.0	10.3	33.5	27.0	123.9	11.9	38.2	25.9	145.9	11.2
BE	77.0	48.5	158.9	9.8	37.3	34.8	107.1	9.1	50.0	38.0	131.5	7.3
CZ	15.1	8.4	180.7	13.5	9.9	8.2	120.0	10.1	12.7	8.5	150.3	10.5
DK	69.4	41.0	169.3	14.5	44.5	37.9	117.5	8.7	56.0	34.6	161.9	10.4
DE	59.3	45.0	131.8	7.0	34.6	32.3	107.0	6.8	47.3	27.8	170.0	6.1
EE	11.1	6.4	173.7	11.7	9.8	6.4	154.2	7.1	12.5	6.4	195.0	8.8
EL	:	:	:	:	:	:	:	:	:	:	:	:
ES	46.7	28.2	165.5	11.7	30.4	24.4	124.6	11.3	31.4	21.4	146.7	11.7
FR	56.0	41.0	136.8	6.3	37.7	34.3	109.8	7.1	47.2	35.8	131.9	6.8
IE	:	:	:	:	97.9	46.7	209.5	21.3	48.3	26.6	181.3	13.6
IT	45.1	31.2	144.6	10.3	27.6	24.0	114.9	15.0	33.9	27.5	123.2	12.1
CY	29.5	17.4	169.1	15.5	26.6	20.4	130.6	16.4	:	:	:	:
LV	8.7	4.0	218.0	17.7	8.4	3.3	254.7	16.2	9.3	3.7	252.7	13.2
LT (2)	7.9	4.4	179.9	11.4	6.4	4.2	153.3	10.3	7.2	3.9	185.5	8.7
LU	70.5	45.1	156.4	6.4	40.1	33.1	121.2	8.2	57.1	36.0	158.3	9.9
HU	17.6	8.8	200.2	11.4	7.8	5.9	133.4	6.7	11.2	7.4	151.1	7.5
MT (3)	25.6	14.6	176.1	14.3	11.4	9.2	123.7	18.1	25.7	10.8	237.5	24.6
NL	77.0	43.8	175.9	10.7	48.6	44.0	110.6	8.3	45.1	28.9	155.7	9.5
AT	65.4	41.8	156.3	12.4	47.0	34.9	134.9	13.6	45.3	31.8	142.5	10.2
PL	16.9	7.7	219.9	18.5	8.4	6.2	135.9	12.8	9.5	6.8	140.2	9.5
PT	23.9	14.0	170.0	11.9	15.6	12.4	126.2	7.4	21.0	14.8	142.1	7.3
SI	23.6	15.6	151.2	11.1	15.5	12.9	120.4	7.7	21.9	15.7	139.3	7.7
SK	13.7	6.4	214.4	11.5	7.7	5.4	141.2	6.2	11.3	6.2	182.9	7.8
FI	73.3	39.9	183.9	13.6	44.8	34.4	130.1	10.0	50.0	33.7	148.4	8.9
SE (4)	59.5	42.2	140.9	9.0	43.3	38.2	113.5	8.4	49.8	40.7	122.4	8.2
UK	67.0	36.7	182.9	15.4	57.5	34.9	165.0	16.5	43.9	26.6	164.8	12.6

(1) Industry, rounded estimate based on non-confidential data; non-financial services, average labour productivity, rounded estimate based on non-confidential data; average personnel costs, wage adjusted labour productivity and gross operating ratio, 2002.

(2) Non-financial services, 2002.

(3) 2002.

(4) Industry and construction, 2002.

Source: Eurostat (SBS)

1.4: ENTERPRISE DEMOGRAPHY AND SIZE CLASS ANALYSIS

BUSINESS DEMOGRAPHY

Entrepreneurship is often cited as a driver of competitiveness, forcing enterprises that already exist to improve their efficiency, while driving inefficient enterprises out of business. The entrepreneur, in the form of a new enterprise, is seen as disturbing market equilibrium, through the process of 'creative destruction'. Newly born enterprises are also potentially important for employment creation, although in their initial start-up stage many enterprises actually have no paid employees, operating with a working owner (and/or unpaid family and friends).

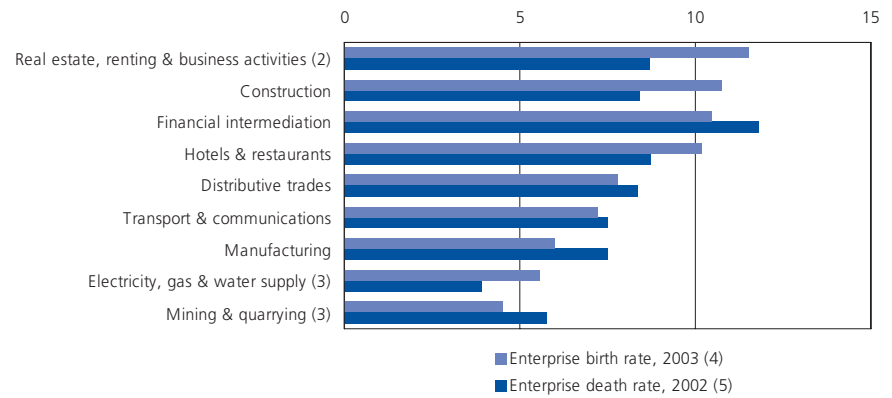
Business demography statistics focus on so-called real enterprise births and deaths. Under the definitions employed, births do not include entries into the enterprise population due to mergers, break-ups, splits or the restructuring of enterprises, nor do they include changes resulting from a change in the enterprise's principal activity. Note that for enterprise deaths, it is often quite difficult, statistically, to determine the exact cessation of activity, as this may well be detected only after a lengthy period (of several years).

Economic theory suggests that low enterprise birth rates are likely to be recorded in those activities that are characterised by relatively large enterprises, where greater barriers to entry tend to exist, perhaps because a high level of initial investment in production factors is required to reach a minimum efficient scale of production. Most enterprise births therefore tend to occur within service and construction sectors of the economy, while there are relatively low birth rates in most industrial activities.

Figure 1.16 shows enterprise birth rates in 2003 and death rates in 2002 across a range of different activities based on an average for available Member States ⁽³⁾. Real estate, renting and business activities (NACE Section K) and the construction sector reported the highest enterprise birth rates, as well as the largest positive differences (in percentage point terms) between birth and death rates. Financial intermediation (NACE Section J) and hotels and restaurants (NACE Section H) were the only other activities to report enterprise birth rates above 10 %, while hotels and restaurants and electricity, gas and water supply (NACE Section E) were the only other sectors where the enterprise birth rate was higher than the

Figure 1.16

Enterprise birth and death rates, average (% share of active enterprises) for available Member States (1)



(1) EU-25 excluding Belgium, Germany, Greece, France, Ireland, Cyprus, Malta, Austria and Poland.

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

(3) Also excluding the United Kingdom.

(4) Denmark, 2001; Portugal, provisional.

(5) Also excluding Denmark.

Source: Eurostat (SBS)

death rate. It should be noted that the difference in these two rates is not the only factor that affects the number of enterprises within a sub-population, as the number of active enterprises may also change as a function of mergers, take-overs, split-offs and break-ups.

Among those Member States for which data are available (as shown in Table 1.10) the vast majority (75.5 %) of enterprise births were in the services sector, while 16.4 % of births were in the construction sector and just 8.2 % in the industrial economy. The proportion of births within the construction sector rose to almost 20 % of the total number of births in Spain,

Table 1.10

Enterprise births and deaths, 2003 (units)

	Enterprise births (1)			Enterprise deaths (2)		
	Industry	Construction	Services (3)	Industry	Construction	Services (3)
CZ	14 205	14 604	64 686	14 107	12 348	69 461
DK	1 602	2 952	19 721	:	:	:
EE	761	1 010	7 062	357	214	2 614
ES	15 838	54 995	205 355	13 461	28 115	131 425
IT	25 307	53 260	198 830	37 455	46 360	220 416
LV	648	319	4 605	1 247	241	7 770
LT	957	419	4 504	1 049	304	4 292
LU	92	157	2 299	65	121	1 918
HU	4 262	7 879	47 589	6 647	7 208	50 127
NL	2 882	6 325	41 273	3 494	5 207	41 838
PT	2 678	3 239	10 853	2 327	910	7 545
SI	714	907	4 398	1 327	918	4 929
SK	3 665	3 833	16 863	6 481	4 176	29 100
FI	1 625	3 082	13 747	2 125	2 601	12 221
SE	2 837	3 705	26 240	2 808	2 933	22 467
UK	15 935	31 465	199 765	18 415	23 700	167 830
Average (available M.S.)	94 008	188 151	867 790	111 365	135 356	773 953
RO	7 924	4 567	50 695	4 725	1 889	26 679
NO	1 258	3 293	17 764	:	:	:
CH	807	1 039	8 319	1 459	1 137	8 089

⁽³⁾ EU-25 excluding Belgium, Germany, Greece, France, Ireland, Cyprus, Malta, Austria and Poland.

(1) Denmark and Norway, 2001.

(2) Preliminary data, 2003; the Czech Republic, Italy, Lithuania, Luxembourg, Hungary, the Netherlands, Portugal, Slovenia and Finland, 2002.

(3) NACE Sections G to K, excluding management activities of holding companies (NACE Class 74.15).

Source: Eurostat (SBS)

Italy and Portugal, while a relatively high proportion (15 % or more) of enterprise births in the Czech Republic, Lithuania, Portugal and Slovakia were in the industrial sector.

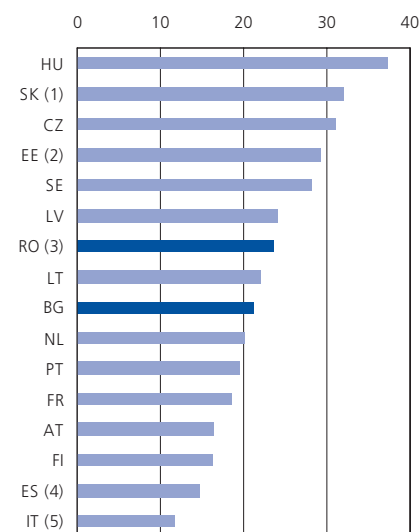
The services sector recorded an almost identical share of enterprise deaths on average (75.8 %), while the proportion of total enterprise deaths (13.3 %) in the construction sector was below the corresponding share of births, unlike for industry (10.9 %).

FOREIGN-CONTROLLED ENTERPRISES (INWARD FATS)

Aside from enterprise creation, an alternative way for the business economy to diversify in terms of its structural profile is through foreign investment. Inward FATS statistics describe the activity of foreign-controlled enterprises. For this 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. While foreign-controlled enterprises are generally few in number, they tend to be relatively large in size, and thus often have a significant economic impact in those areas where they were present.

Figure 1.17 shows that foreign-controlled enterprises often generated more than 20 % of national value added in the non-financial business economy in 2003. More detailed information for two additional indicators (the number of enterprises and persons employed) is provided in Table 1.11, supporting the belief that foreign-controlled enterprises had a very large average size. Besides their relatively large average size, foreign-controlled enterprises also consistently accounted for a higher proportion of value added than employment in each of the countries for which data are available, indicating that this sub-population of enterprises had a higher level of apparent labour productivity than nationally-controlled enterprises. Note that this may be due at least partly to their large, average size, rather than any inherent difference between nationally-controlled and foreign-controlled enterprises.

Figure 1.17
Foreign-controlled enterprises in the non-financial business economy, 2003
(% share of total value added)



- (1) Enterprises with 20 or more persons employed as a share of the total enterprise population; foreign ownership based on first shot concept.
 (2) Enterprises with 20 or more persons employed as a share of the total enterprise population.
 (3) Enterprises with 50 or more persons employed as a share of the total enterprise population; foreign ownership based on first shot concept.
 (4) Excluding construction.
 (5) 2002.

Source: Eurostat (SBS)

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

Recently the European Commission has placed SMEs at the centre of industrial policy-making. SME policy is concentrated within five key areas: covering the promotion of entrepreneurship and skills; the improvement of SMEs' access to markets; cutting red tape; the improvement of SMEs' growth potential; and strengthening dialogue and consultation with SME stakeholders ⁽⁴⁾.

⁽⁴⁾ More details can be found on the web-site for the Directorate-General for Enterprise and Industry, available at http://ec.europa.eu/enterprise/smes/index_en.htm.

Table 1.11
Foreign-controlled enterprises in the non-financial business economy, 2003
(% share of total)

	Number of enterprises	Value added	Number of persons employed
CZ	1.4	31.2	18.7
EE (1)	1.8	29.2	19.6
ES (2)	0.2	14.7	9.6
FR (3)	0.9	18.6	14.6
IT (4)	0.3	11.7	7.3
LV	4.3	24.0	12.7
LT	3.1	22.1	10.2
HU (5)	:	37.3	14.5
NL	0.9	20.2	12.2
AT	1.1	16.4	11.8
PT	0.3	19.6	7.9
SK (6)	:	32.1	21.6
FI	1.1	16.3	14.3
SE	1.7	28.2	21.2
BG	2.1	21.3	10.7
RO (7)	:	23.7	13.1

- (1) Foreign-controlled enterprises with 20 or more persons employed as a share of the total enterprise population.
 (2) Excluding construction.
 (3) Number of employees instead of number of persons employed.
 (4) 2002.
 (5) Legal units, instead of enterprises.
 (6) Foreign-controlled enterprises with 20 or more persons employed as a share of the total enterprise population; foreign ownership based on first shot concept.
 (7) Foreign-controlled enterprises with 50 or more persons employed as a share of the total enterprise population; foreign ownership based on first shot concept.
 Source: Eurostat (SBS)

In an attempt to improve the financial and regulatory environment in which SMEs work, the Commission has set a goal of reducing red-tape and bureaucracy for entrepreneurs by as much as 25 %, through screening all new EU laws and reviewing existing legislation as regards its friendliness to smaller enterprises. To do so, the Commission nominated an SME Envoy, who works on two levels: outside of the Commission, the SME Envoy acts as a visible interface with the SME community and representative organisations; while internally the SME Envoy helps to ensure that the interests of SMEs are taken into account in new EU laws and policies (acting as a bridge between SME organisations and Commission departments).

The definition of an SME (used when evaluating funding) is an enterprise with fewer than 250 persons employed, annual turnover of up to EUR 50 million, and a balance sheet total of no more than EUR 43 million. However, for reasons of feasibility, the collection of structural business statistics on SMEs only uses the criteria based on persons employed. As such, for the purpose of the statistics presented in this publication, SMEs are defined as having fewer than 250 persons employed; while large enterprises are therefore defined as employing 250 or more persons. This sub-population of SMEs may be further divided into:

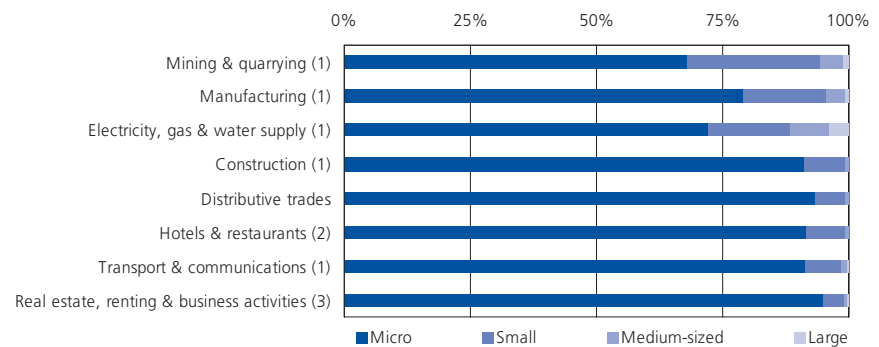
- micro enterprises (with 1 to 9 persons employed);
- small enterprises (with 10 to 49 persons employed);
- medium-sized enterprises (with 50 to 249 persons employed).

Within the EU-25's non-financial business economy (NACE Sections C to I and K) there were almost 18 million enterprises in 2003. Of these, 91.4 % were micro enterprises, 7.3 % were classified as small enterprises, 1.1 % as medium-sized enterprises, and just 0.2 % as large enterprises. As such, each enterprise within the EU-25's non-financial business economy employed an average of 6.5 persons in 2003.

There was a clear division between the size structure of enterprises within the industrial economy (NACE Sections C to E) and the other sectors (see Figure 1.18), as the proportion of micro enterprises fell to 79.2 % of the total enterprise population within manufacturing (NACE Section D), 72.3 % for electricity, gas and water supply (NACE Section E), and 68.1 % for mining and quarrying (NACE Section C).

The density of enterprises per inhabitant provides an indication of the different enterprise structures across the EU. Map 1.3 provides information on the number of SMEs within the non-financial business economy per 1 000 inhabitants, with particularly high ratios in the relatively small economies of Malta, Luxembourg and Cyprus. On the other hand, the four largest Member States (in terms of population and GDP) were found at the bottom of the ranking with the lowest ratios of SMEs per 1 000 inhabitants. Map 1.4 shows the density of large enterprises, with many of the southern Member States having relatively few large enterprises per 10 000 inhabitants. These maps need to be interpreted with some care, as the relatively low ratio of SMEs per 1 000 inhabitants in Italy hides the importance of this sub-population in terms of their overall contribution to total value added and employment (both well above the EU-25 average).

Figure 1.18 Breakdown of number of enterprises, EU-25, 2003 (% share of total number of enterprises)



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

(2) Rounded estimates based on non-confidential data for medium-sized and large enterprises.

(3) Rounded estimates based on non-confidential data for small and large enterprises.

Source: Eurostat (SBS)

SMEs accounted for a high proportion of the EU-25's economic activity, representing just over two thirds (67.2 %) of the non-financial business economy workforce, and 57.3 % of its value added. However, the distribution of enterprises by size class varied considerably between Member States, as micro enterprises

employed almost half (47.1 %) of the workforce in Italy, while large enterprises employed more than 45 % of the workforce in Slovakia and the United Kingdom (see Table 1.12).

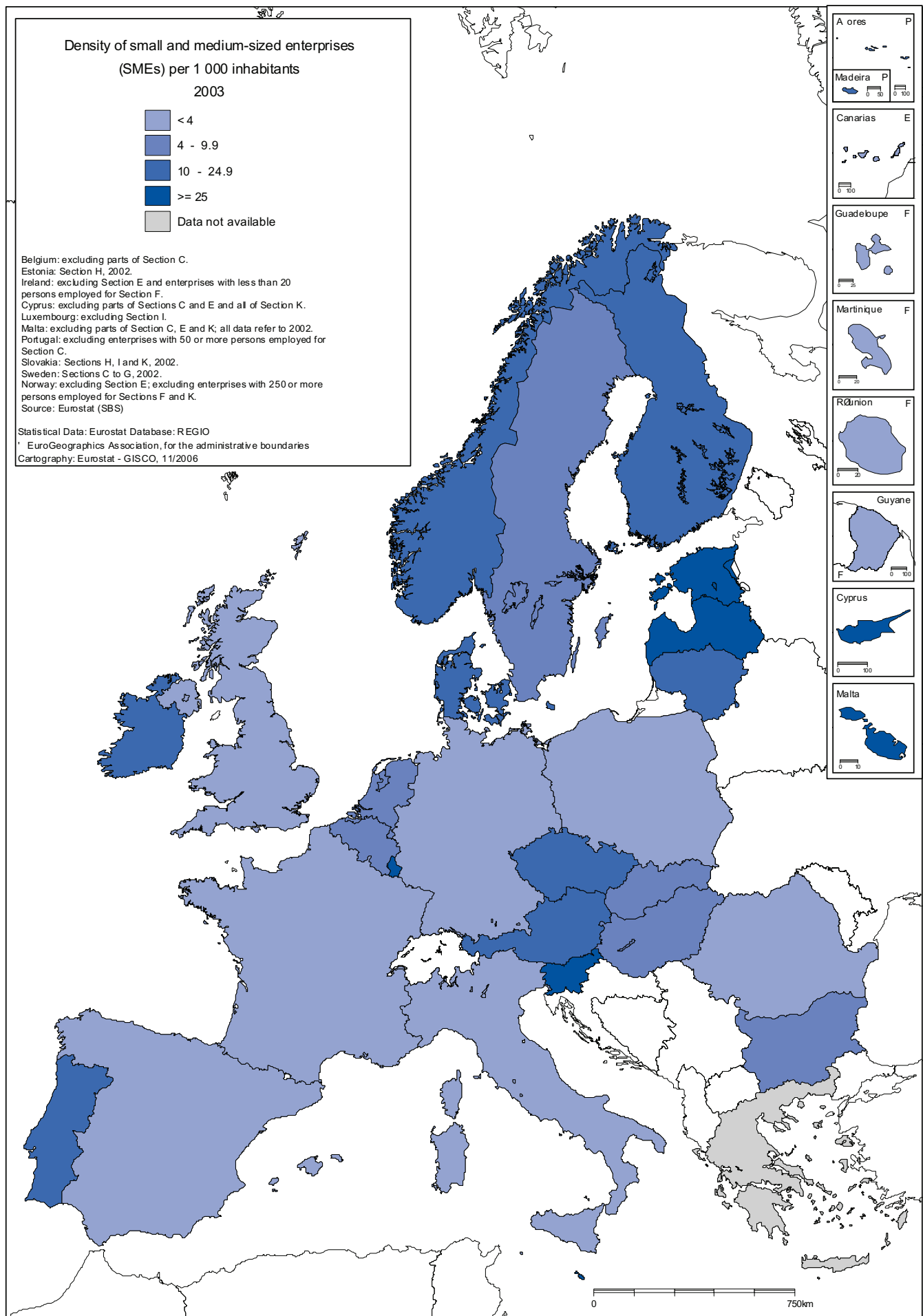
Table 1.12 Breakdown of value added and employment, non-financial business economy, 2003 (% share of total)

	Value added				Number of persons employed			
	Micro	Small	Medium-sized	Large	Micro	Small	Medium-sized	Large
EU-25	20.5	19.1	17.6	42.7	29.9	20.8	16.5	32.8
BE	19.3	:	19.0	:	29.0	:	15.9	:
CZ	20.4	17.1	19.3	43.2	32.6	18.6	17.8	31.0
DK	23.4	21.2	:	:	19.6	24.9	:	:
DE	15.6	18.3	18.6	47.6	19.6	21.9	18.7	39.8
EE	:	:	:	:	:	:	:	:
EL	:	:	:	:	:	:	:	:
ES	26.8	24.5	17.1	31.6	38.6	25.8	14.7	20.9
FR	19.6	18.2	16.0	46.2	23.3	20.7	16.9	39.2
IE	:	:	:	:	:	:	:	:
IT	31.7	22.4	:	:	47.1	22.0	:	:
CY	:	:	:	:	:	:	:	:
LV	:	25.6	27.6	:	20.6	27.1	26.2	26.1
LT	:	:	:	:	:	:	:	:
LU	:	:	:	:	:	:	:	:
HU	17.2	16.2	18.4	48.2	35.9	18.6	16.3	29.2
MT	:	:	:	:	:	:	:	:
NL	:	:	20.9	39.3	28.9	:	18.6	:
AT	18.9	:	:	:	25.1	:	:	:
PL	16.0	11.0	21.4	51.7	40.5	11.5	18.3	29.6
PT (1)	22.9	20.7	21.6	34.8	40.5	22.9	17.3	19.4
SI	18.8	17.3	:	:	:	:	:	:
SK	11.7	12.3	17.6	58.3	12.5	14.6	22.2	50.7
FI	18.1	16.0	19.0	46.8	22.3	18.4	18.5	40.9
SE	:	:	:	:	:	:	:	:
UK	17.9	16.1	16.5	49.4	21.1	17.9	14.8	46.2

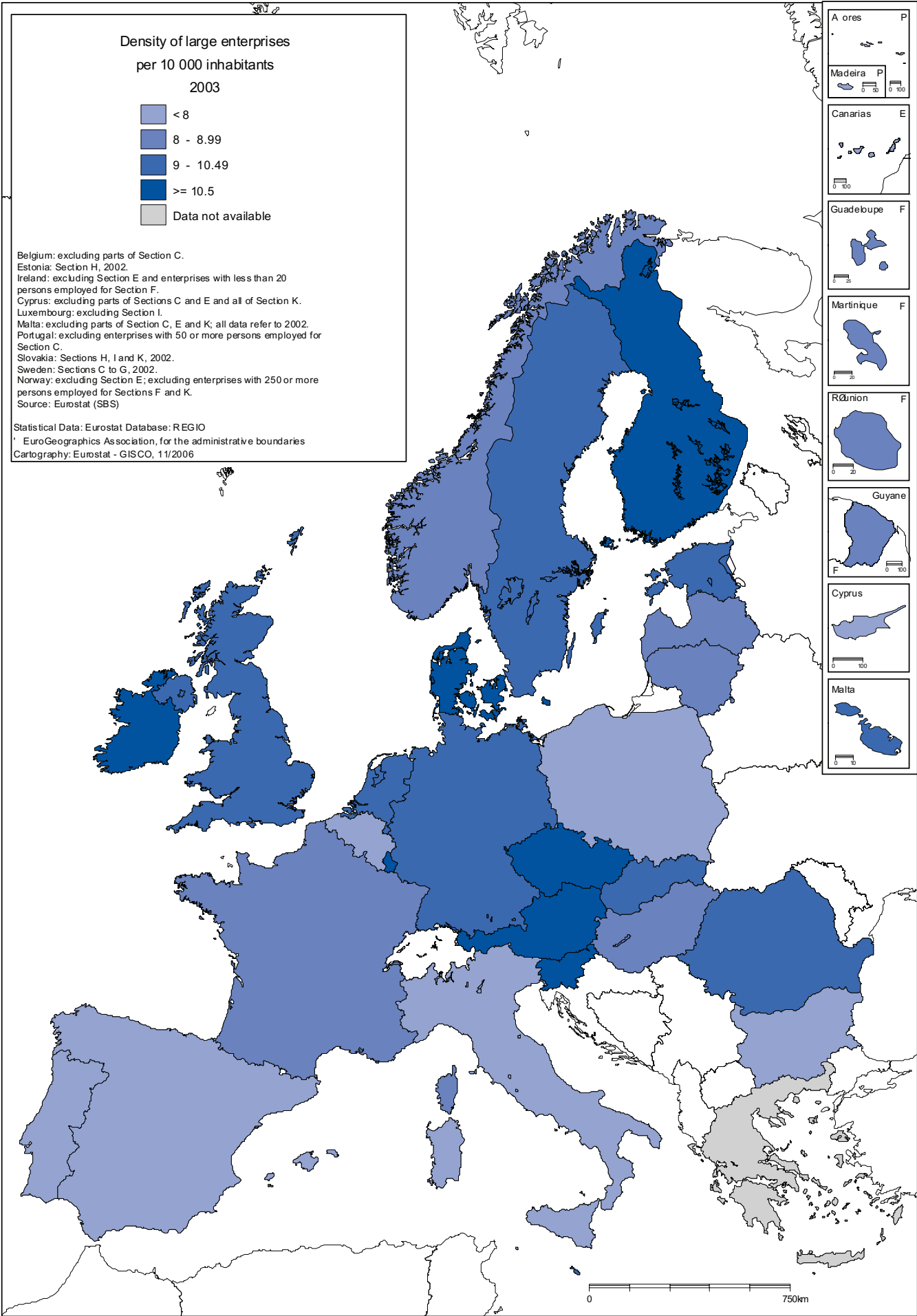
(1) 2002.

Source: Eurostat (SBS)

Map 1.3



Map 1.4

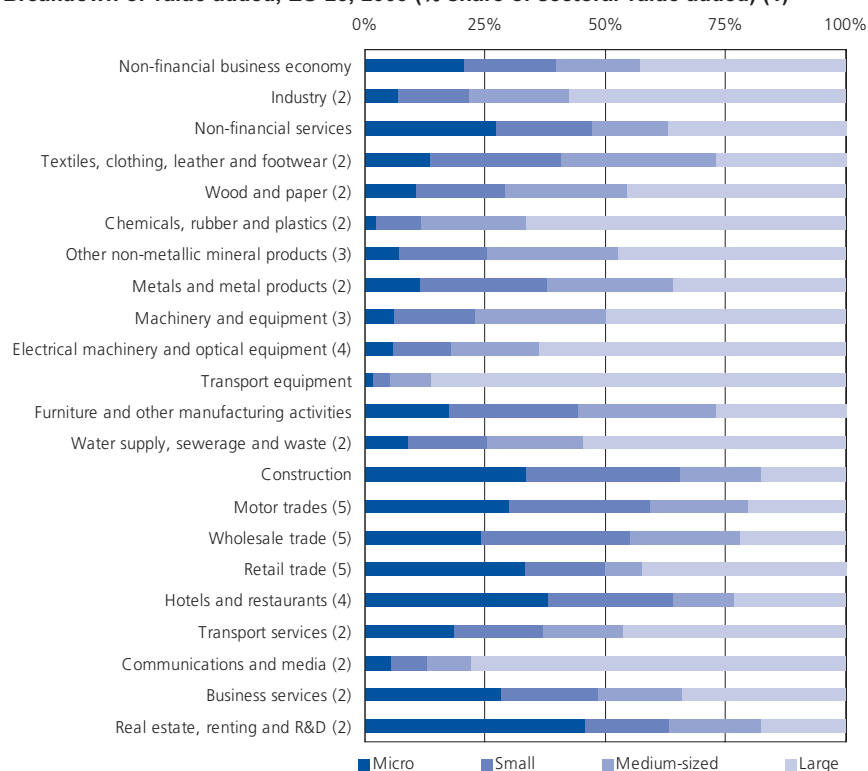


The size structure of the business enterprise population varies not just between countries, but also across activities - see Figure 1.19 for a breakdown of EU-25 value added according to the chapter headings employed in this publication. SMEs accounted for more than 80 % of the added value created in the construction sector (see Chapter 15) and the real estate, renting and R&D sector (see Chapter 23). On the other hand, in several industrial activities a majority of the value added was created by large enterprises, with this proportion rising to as high as 86.2 % for transport equipment manufacturers (see Chapter 10). Communications and media (see Chapter 21) was the only service sector where large enterprises contributed more than 50 % of sectoral value added.

The first part of Table 1.13 provides similar information on the breakdown of EU-25 employment by enterprise size class for the different chapter headings presented in European business. SMEs accounted for a higher proportion of employment than value added for each of the industrial headings. Overall, SMEs employed 57.1 % of the EU-25's industrial workforce in 2003, which was 14.8 percentage points below their corresponding share of industrial value added. There were two service activities where the relative share of SMEs in total employment was below the corresponding share of value added; namely, business services (see Chapter 22) and real estate, renting and R&D.

The differentials in the relative shares of employment and value added by size class indicate differences in apparent labour productivity. Apparent labour productivity is a measure of the average value added, or wealth created, by each member of the workforce within an enterprise. For many activities, economic theory would suggest that economies of scale may lead to medium-sized and large enterprises generating more value added per person employed than micro or small enterprises. This theory tends to hold within industrial activities, where the labour productivity of large enterprises was 2.5 times as high as for micro enterprises, a ratio that rose to 3 or more times as high for food, beverages and tobacco (see Chapter 2), wood and paper (see Chapter 4), and chemicals, rubber and plastics (see Chapter 5). The only industrial sectors where increasing productivity returns were not reported for larger enterprises were furniture and other manufacturing activities (see Chapter 11) and non-energy mining and quarrying activities (see Chapter 12), where medium-sized enterprises reported slightly higher apparent labour productivity than their larger competitors.

Figure 1.19 Breakdown of value added, EU-25, 2003 (% share of sectoral value added) (1)



- (1) Food, beverages and tobacco, non-energy mining and quarrying, and energy, not available.
 (2) Rounded estimates based on non-confidential data.
 (3) Rounded estimates based on non-confidential data, except for small enterprises.
 (4) Rounded estimates based on non-confidential data for micro and medium-sized enterprises.
 (5) Rounded estimates based on non-confidential data for micro and small enterprises.

Source: Eurostat (SBS)

The pattern observed for industrial activities was not as evident for non-financial services, as medium-sized enterprises were marginally (EUR 0.7 thousand per person employed) more productive than large enterprises, while there was decreasing productivity for small and micro enterprises. Differences in productivity ratios between the size classes were generally smaller within the non-financial services sector, in particular for those activities where economies of scale did not play an important role, where barriers to entry were low, and where a close proximity to the market was of considerable importance. For example, productivity levels for micro, small and large enterprises were almost identical within real estate, renting and R&D activities, where medium-sized enterprises were 1.3 times as productive, while small enterprises within the business services sector were the most productive, ahead of medium-sized enterprises. On the other hand, the level of labour productivity rose in line with the average size of enterprises for communications and media.

Enterprises with a high proportion of part-time employment (whether from reduced hours or a reduced number of days) will tend to report relatively low apparent labour productivity ratios because it relies solely on head-counts of employment (and not full-time equivalents). This may explain, to some degree, the low levels of apparent labour productivity for activities such as retail trade (see Chapter 18) or hotels and restaurants (see Chapter 19); more information on the labour force characteristics is provided in Table 1.15 in Section 1.5.

In a similar vein, those countries that are characterised by relatively high proportions of part-time employment (in particular, the Netherlands, the United Kingdom and Germany) are also likely to have their labour productivity ratios under-stated (see Figure 1.21 in Section 1.5 for more information on part-time employment rates across the Member States).

Table 1.13

Employment and apparent labour productivity, non-financial business economy, EU-25, 2003

	Employment (% share of sectoral employment)				Apparent labour productivity (EUR thousand per person employed)			
	Micro	Small	Medium-sized	Large	Micro	Small	Medium-sized	Large
Non-financial business economy	29.9	20.8	16.5	32.8	28.3	37.8	43.9	53.6
Industry (1)	13.4	20.0	23.7	42.9	26.4	35.9	43.4	66.7
Non-financial services	35.9	19.4	13.1	31.6	29.1	39.6	45.5	44.8
Food, beverages and tobacco (2)	:	:	38.1	61.9	20.0	30.0	40.0	60.0
Textiles, clothing, leather and footwear (1)	18.3	29.2	30.6	21.9	18.0	22.5	25.4	30.0
Wood and paper (1)	21.8	24.8	25.3	28.1	18.8	29.8	39.6	63.8
Chemicals, rubber and plastics (3)	5.6	14.0	27.1	53.3	28.5	44.0	54.8	84.2
Other non-metallic mineral products (4)	14.5	21.7	26.8	37.0	22.2	38.0	46.0	58.0
Metals and metal products (1)	17.4	29.4	25.8	27.3	27.0	37.0	41.3	52.5
Machinery and equipment (5)	8.9	19.5	28.7	42.9	31.7	40.8	44.6	54.6
Electrical machinery and optical equipment (6)	10.6	15.3	21.1	53.0	27.6	39.0	43.7	60.0
Transport equipment (7)	2.5	5.7	12.0	79.8	36.5	36.0	42.0	62.1
Furniture and other manufacturing activities	25.7	26.1	24.6	23.6	19.0	28.7	32.5	31.9
Non-energy mining and quarrying	14.5	31.7	26.9	27.0	:	:	55.6	54.5
Energy	3.3	9.5	8.9	78.4	:	:	:	:
Water supply, sewerage and waste (1)	9.9	16.6	24.6	48.9	52.5	57.1	46.7	64.4
Construction	43.0	30.6	14.9	11.5	26.0	34.9	38.8	50.8
Motor trades (8)	43.7	29.6	15.7	11.0	26.0	36.2	49.0	68.0
Wholesale trade (9)	34.1	28.4	19.6	17.8	35.0	52.0	56.5	59.4
Retail trade (10)	43.7	14.5	6.9	34.9	17.5	27.0	25.5	27.8
Hotels and restaurants (11)	46.1	25.6	10.0	18.2	15.6	18.9	24.0	23.8
Transport services (1)	23.7	17.5	15.2	43.7	31.6	42.9	44.1	42.9
Communications and media (1)	10.7	12.4	11.6	65.4	33.5	40.0	53.6	78.8
Business services (1)	31.8	17.3	16.8	34.1	35.1	45.2	41.2	39.2
Real estate, renting and R&D (1)	47.5	18.4	15.7	18.3	83.9	83.3	106.1	83.6

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

(2) Rounded estimates based on non-confidential data for apparent labour productivity.

(3) Rounded estimates based on non-confidential data, except for medium-sized enterprises for number of persons employed.

(4) Rounded estimates based on non-confidential data, except for medium-sized and large enterprises for number of persons employed.

(5) Rounded estimates based on non-confidential data, except for small and medium-sized enterprises for number of persons employed and small enterprises for apparent labour productivity.

(6) Rounded estimates based on non-confidential data, except for micro and large enterprises for number of persons employed and large enterprises for apparent labour productivity.

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

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

(9) Rounded estimates based on non-confidential data for micro and small enterprises.

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

(11) Rounded estimates based on non-confidential data, except for micro and medium-sized enterprises for number of persons employed.

Source: Eurostat (SBS)

Table 1.14

Apparent labour productivity, 2003 (EUR thousand per person employed)

	Industry (1)				Construction (2)				Non-financial services (3)			
	Micro	Small	Medium-sized	Large	Micro	Small	Medium-sized	Large	Micro	Small	Medium-sized	Large
EU-25 (4)	26.4	35.9	43.4	66.7	26.0	34.9	38.8	50.8	29.1	39.6	45.5	44.8
BE	54.1	:	67.8	:	27.6	39.0	47.2	58.6	37.0	53.8	71.5	53.4
CZ	7.3	10.7	13.3	20.1	6.7	10.0	12.6	18.2	9.1	14.1	17.4	16.2
DK	144.5	53.3	:	:	43.4	41.7	45.8	53.8	63.3	50.9	58.3	53.5
DE	30.8	39.2	52.9	71.0	26.3	34.9	41.8	54.4	44.7	45.7	49.3	49.6
EE	6.3	:	:	:	6.1	7.7	12.9	16.3	:	11.7	:	:
EL	:	:	:	:	15.5	24.9	35.3	57.1	:	:	:	:
ES	24.2	33.2	46.3	77.8	23.3	32.8	33.1	51.8	24.2	32.7	38.2	41.1
FR	36.8	41.6	46.1	70.2	34.1	38.3	40.7	45.8	44.3	44.8	47.6	50.3
IE	:	:	:	:	:	:	94.5	:	38.7	39.1	58.3	59.8
IT	26.5	38.7	52.9	67.3	23.0	31.1	46.4	56.5	25.4	38.9	42.9	51.9
CY	:	:	:	:	23.2	24.5	29.0	31.8	:	:	:	:
LV	4.3	6.6	8.1	11.3	7.9	8.0	7.6	11.9	:	9.4	11.2	:
LT	2.7	5.1	6.5	11.0	3.5	5.4	6.8	8.3	:	:	8.0	:
LU	:	:	:	:	40.0	35.8	43.4	43.2	:	:	:	:
HU	6.0	9.8	13.4	25.7	4.5	8.9	12.9	17.7	6.7	13.2	17.2	16.2
MT	:	:	:	:	13.6	19.1	18.7	4.6	:	:	:	:
NL	:	:	68.8	:	32.6	54.8	54.7	63.1	31.7	53.2	53.5	49.2
AT	42.2	:	:	:	45.0	42.3	47.7	59.8	37.2	45.7	57.5	48.0
PL	5.2	9.3	13.0	25.7	5.5	9.3	11.5	15.1	4.7	14.0	17.1	15.6
PT	11.6	15.5	21.8	43.8	10.2	15.8	24.0	33.6	12.4	22.4	33.0	33.3
SI	15.9	21.1	:	:	12.3	16.4	14.6	21.4	11.7	16.4	21.3	34.5
SK	9.3	10.0	9.1	16.3	7.0	6.9	7.5	9.3	12.8	11.4	11.7	10.3
FI	49.9	50.0	60.3	89.6	41.8	43.1	46.6	45.5	47.8	52.4	60.9	45.6
SE	:	:	:	:	33.8	44.1	53.5	53.5	36.5	48.5	57.6	50.6
UK	45.0	44.7	56.5	86.5	49.9	54.9	68.6	63.3	40.6	43.5	53.2	43.3

(1) Italy and Portugal, 2002.

(2) Greece, Malta and Sweden, 2002.

(3) Slovenia and Sweden, 2002.

(4) Rounded estimates based on non-confidential data for industry.

Source: Eurostat (SBS)

Despite considerable differences in the levels of labour productivity between Member States (generally lower among the ten Member States that joined the EU in 2004), there was a clear pattern of productivity rising in relation to enterprise size across the industrial economies of each Member State (see Table 1.14). This pattern was reversed for the non-financial services economy, where the majority of the 18 Member States⁽⁵⁾ for which data are available reported higher labour productivity among medium-sized enterprises than large enterprises; the exceptions being Germany, Spain, France, Ireland, Italy and Slovenia.

⁽⁵⁾ Estonia, Greece, Cyprus, Latvia, Lithuania, Luxembourg and Malta, not available.

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. Note that the information that is presented within this section is derived from the Labour Force Survey (LFS) which collects information from individual households (rather than from enterprises).

There are considerable variations as regards the gender breakdown of the EU-25's workforce across the different activities that compose the business economy (NACE Sections C to K). Most activities tend to report that the majority of the workforce is male (see Table 1.15). In non-energy mining and quarrying (NACE Subsection CB, see Chapter 12) and construction (NACE Section F, see Chapter 15),

men outnumbered women by a ratio of nine to one in the EU-25 in 2005. There are some activities, such as textiles, clothing, leather and footwear (NACE Subsections DB and DC, see Chapter 3), retail trade (NACE Division 52, see Chapter 18) and hotels and restaurants (NACE Division 55, see Chapter 19), where up to two thirds of the workforce were women.

While the majority of the workforce tends to work a regular five day week of between 7 and 8.5 hours per day, from Monday to Friday, there are some activities within the business economy that lend themselves to different working time profiles. A little under one third (30.2 %) of those employed within the retail trade sector worked on a part-time basis in 2005, while the corresponding ratio for hotels and restaurants was 28.5 %. In contrast, there was very little part-time work within traditional, industrial activities, such as non-energy mining and quarrying (3.2 % of the workforce), the manufacture of transport equipment (3.7 %, NACE Subsection DM, see Chapter 10), or the energy sector (4.4 %, NACE Subsection CA and Divisions 23 and 40, see Chapter 13).

The age profile of the EU-25 workforce varied considerably across the different sectors, in part reflecting skills requirements and experience. The hotels and restaurants sector and the retail trade sector, together with motor trades (NACE Division 50, see Chapter 16), all employed a relatively large proportion (between 30 % and 37 %) of young workers (defined as those aged between 15 and 29 years old). A much lower proportion of young persons were employed within the energy and transport services sectors (13.9 % and 17.5 % respectively), whereas one in four of those employed in both of these activities were aged 50 years or more.

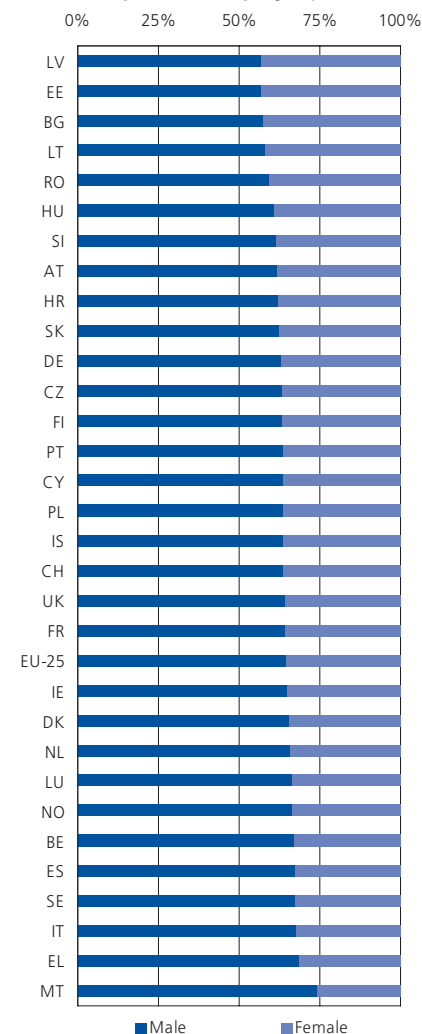
Table 1.15
Labour force characteristics, EU-25, 2005 (% share of the total number of persons employed)

	Gender		Time at work		Age		
	Male	Female	Full-time	Part-time	15-29	30-49	50+
Food, beverages and tobacco	59.0	41.0	88.2	11.8	24.3	55.6	20.1
Textiles, clothing, leather and footwear	35.5	64.5	89.9	10.1	18.6	59.2	22.2
Wood and paper	80.5	19.5	93.6	6.4	23.3	55.6	21.1
Chemicals, rubber and plastics	67.9	32.1	93.5	6.5	20.1	59.0	21.0
Other non-metallic mineral products	77.1	22.9	94.8	5.2	20.2	58.4	21.4
Metals and metal products	84.7	15.3	94.6	5.4	21.8	54.3	23.8
Machinery and equipment	82.2	17.8	94.3	5.7	20.5	55.3	24.1
Electrical machinery and optical equipment	66.4	33.6	93.5	6.5	22.8	57.6	19.6
Transport equipment	82.5	17.5	96.3	3.7	21.8	56.4	21.8
Furniture and other manufacturing activities	73.1	26.9	90.2	9.8	24.4	54.8	20.8
Non-energy mining and quarrying	90.0	10.0	96.8	3.2	:	56.4	:
Energy	81.5	18.5	95.6	4.4	13.9	60.4	25.8
Water supply, sewerage and waste (1)	78.6	21.4	94.0	6.0	16.0	57.7	26.3
Construction	91.8	8.2	94.2	5.8	24.7	53.9	21.4
Motor trades	82.1	17.9	90.5	9.5	30.1	49.9	20.0
Wholesale trade	66.5	33.5	88.7	11.3	21.5	56.9	21.6
Retail trade	38.8	61.2	69.8	30.2	31.3	48.8	20.0
Hotels and restaurants	45.5	54.5	71.5	28.5	36.2	46.7	17.1
Transport services	78.9	21.1	90.9	9.1	17.5	57.5	25.0
Communications and media	60.7	39.3	82.7	17.3	21.2	56.6	22.2
Business services	55.8	44.2	78.7	21.3	23.5	55.6	20.8
Real estate, renting and R&D	54.4	45.6	81.1	18.9	19.7	51.7	28.6
Financial services	48.9	51.1	85.7	14.3	21.8	57.8	20.4

(1) Includes only water supply and recycling.
Source: Eurostat (LFS)

Figure 1.20

Employment breakdown by gender, business economy, 2005 (% share of total number of persons employed)

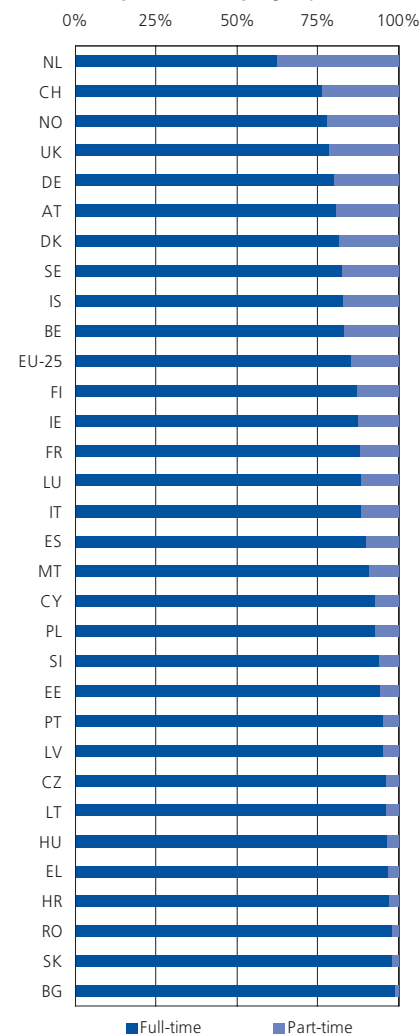


Source: Eurostat (LFS)

As well as differences in the labour characteristics of the workforce among the sectors of the economy, there are also differences across the Member States. The new Social Agenda ⁽⁶⁾ launched by the European Commission in 2005 looks, among a number of other objectives, to support women in (re-)entering the labour market. In this respect, it is interesting to note that there are considerable differences in the proportion of the business economy workforce that are female. There are much higher proportions of women in the workforces of the Baltic Member States (between 42 % and 43 %) than in a number of Mediterranean Member States, among which the proportion of women in the workforce was lowest in Malta (25.7 %) - see Figure 1.20. In part, these proportions reflect socio-economic policies regarding family allowances, the availability of crèches and after

Figure 1.21

Employment breakdown by time at work, business economy, 2005 (% share of total number of persons employed)



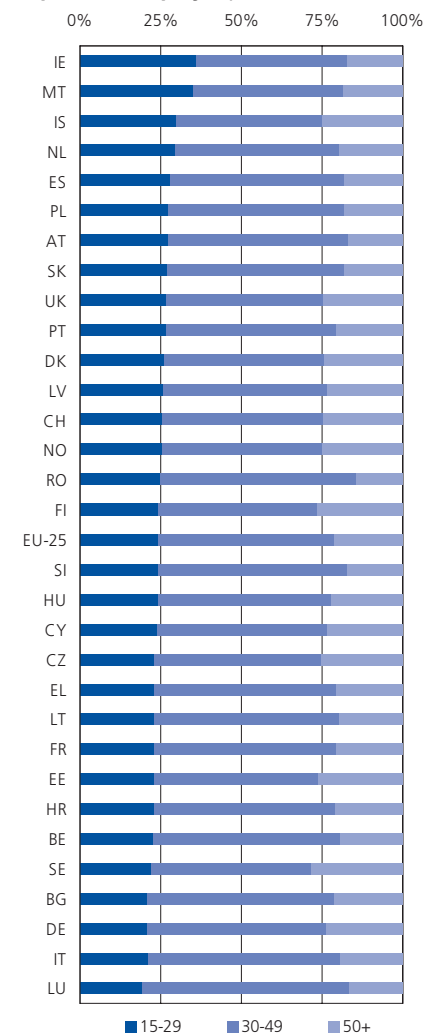
Source: Eurostat (LFS)

school care, and the propensity to employ on a part-time basis, as well as cultural differences with respect to interdependence / independence of (extended) family units.

Among the Member States, the Netherlands reported, by far, the highest proportion of part-time employment (37.8 % in 2005), largely due to three out of every four women who were in employment working on a part-time basis. This situation in the Netherlands contrasted vividly with the situation in Slovakia, where about one in every fifty (1.9 %) persons in employment worked on a part-time basis in 2005 (see Figure 1.21). The proportion of the workforce employed part-time was below 10 % in all of the Member States that joined the EU in 2004, as well as Greece (3.4 %), Portugal (5.0 %) and Spain (9.9 %).

Figure 1.22

Employment breakdown by age, business economy, 2005 (% share of total number of persons employed)



Source: Eurostat (LFS)

The different age profiles of the Member States workforces reflect socio-economic characteristics and policies on the one hand, and broader demographic trends (such as an ageing population or a baby-boom cohort) on the other. In terms of social characteristics and policies, differences in the proportion of young workers in the business economy may reflect, among many other factors, differences in higher education rates or the length of higher education courses, the relevance of the education attained for the jobs available, as well as the availability of work and job placements. Note that some activities, for example, information, technology and communication-related sectors may favour younger workers who understand the latest technological developments. At the other end of the age range, the proportion of older workers in the business economy may be affected, among many other factors, by pension rights and schemes, age-related wage schemes and life-long learning schemes.

⁽⁶⁾ COM(2005) 33 final.

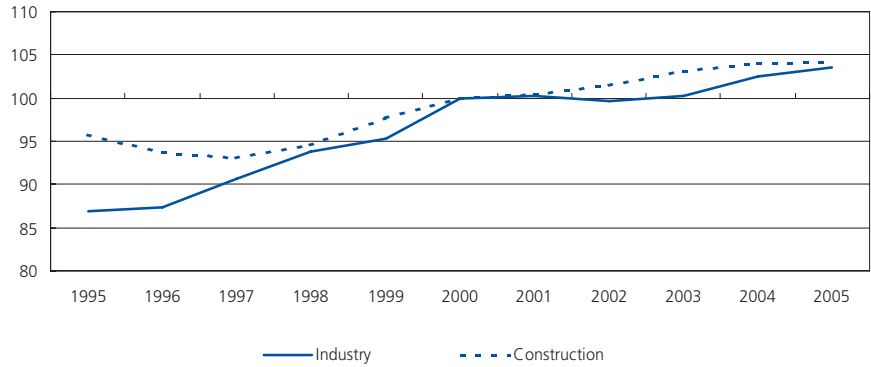
The age profile of the business economy workforce tended to be relatively similar in the majority of Member States on the aggregate level (see Figure 1.22). Among the main differences in 2005 was the relatively high proportion (35.9 %) of the Irish workforce aged between 15 and 29 years old. This may be, in part, explained by a growing number of young persons from other Member States moving to Ireland in search of work. In contrast, Luxembourg recorded the lowest proportion (19.3 %) of young workers; this may in part be explained by a high proportion of students leaving the country to complete their education. Interestingly, the lowest proportion of the workforce aged over 50 years was also reported in Luxembourg (16.7 %), with relatively low shares also recorded in Slovenia (17.3 %) and Spain (18.1 %). The highest proportion of older workers was recorded in the northern Member States of Sweden (28.4 %), Finland (26.7 %) and Estonia (26.3 %).

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 factor cost 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 (given the nature of services products that are often not tangible, physical goods) an index of turnover is used instead to analyse the evolution of output. Note that these figures are based on current prices and as such include the effects of price increases.

The EU-25 index of production for total industry (NACE Sections C to E) rose strongly between 1995 and 2000 (on average by 2.8 % per annum) but then stabilised with little change between 2001 and 2004, since when there has been renewed vigour in the pace at which industrial output has risen. The output of construction activities (see Chapter 15) contracted in 1996 and 1997 after which there were successive year-on-year expansions, albeit with slow growth in 2001 and 2005 (see Figure 1.23).

Figure 1.23 Index of production, EU-25 (2000=100) (1)



(1) Working day adjusted data.
Source: Eurostat (STS)

Among the service sectors, the EU-25 index of turnover for business services (see Chapter 22) rose particularly strongly in the period between 2000 and 2005 (on average by 6.1 % per annum), as did the turnover index for transport services (on average by 5.3 % per annum) - see Figure 1.24.

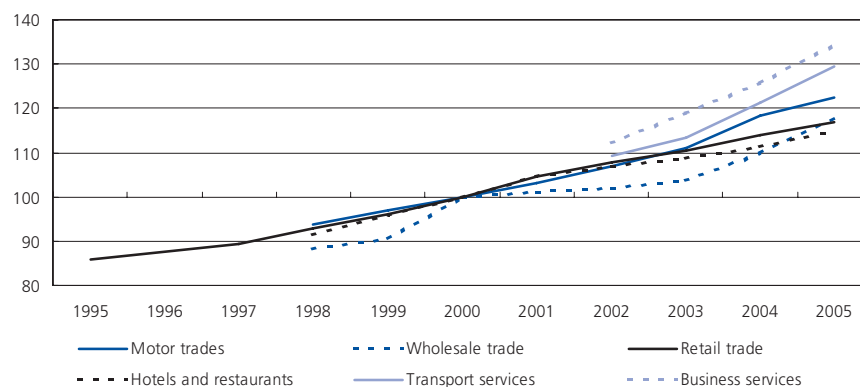
Annualised short-term business statistics may also be used to analyse the evolution of employment within the EU-25's non-financial business economy (NACE Sections C to I and K). The index of employment for industrial activities showed a steady decline during the period 1995 to 2005, with annual reductions averaging 1.2 % per annum over this period. In contrast, there was employment growth for a number of non-financial services (see Figure 1.25). There were relatively fast rates of employment growth for hotels and restaurants (on average rising by 2.2 % per annum, see Chapter 19) and, in particular, for business services, where the number of persons employed rose on average by 5.0 % per annum between 1996 and 2005.

EVOLUTION WITHIN INDUSTRIAL ACTIVITIES

EU-25 production indices for the majority of the NACE subsections within the industrial economy increased during the period between 1995 and 2005 (see Figure 1.26). However, there were three notable exceptions: these concerned the activities of mining and quarrying of energy producing materials (NACE Subsection CA) which saw their output decline, on average, by 2.0 % per annum (see Subchapter 13.1), textiles and textile products (NACE Subsection DB) which declined by 4.1 % per annum (see Subchapter 3.1) and leather and leather products (NACE Subsection DC) which declined by an average of 5.5 % per annum (see Subchapter 3.3).

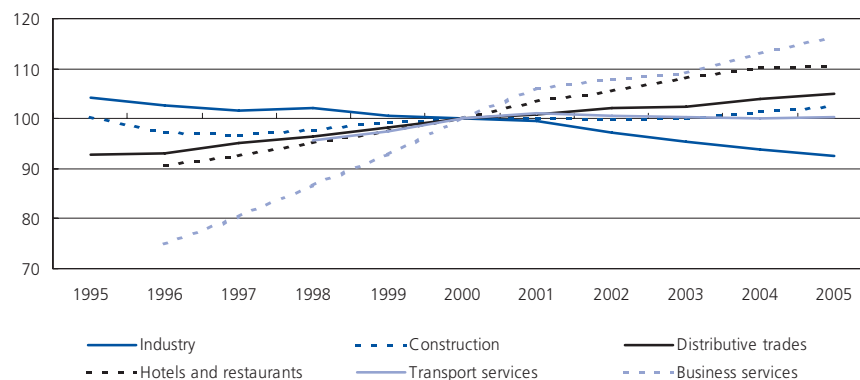
In contrast, the three NACE subsections within the EU-25's industrial economy that recorded the highest growth rates were: electrical and optical equipment (NACE Subsection DL), where output rose by an average of 3.4 % per year (see Chapter 9), chemicals, chemical products and man-made fibres (NACE Subsection DG), where production increased by 3.6 % per annum (see Subchapters 5.1 to 5.4), and transport equipment (NACE Subsection DM), where the highest output growth was recorded, averaging 4.0 % per annum (see Chapter 10).

Figure 1.24
Index of turnover, EU-25 (2000=100) (1)



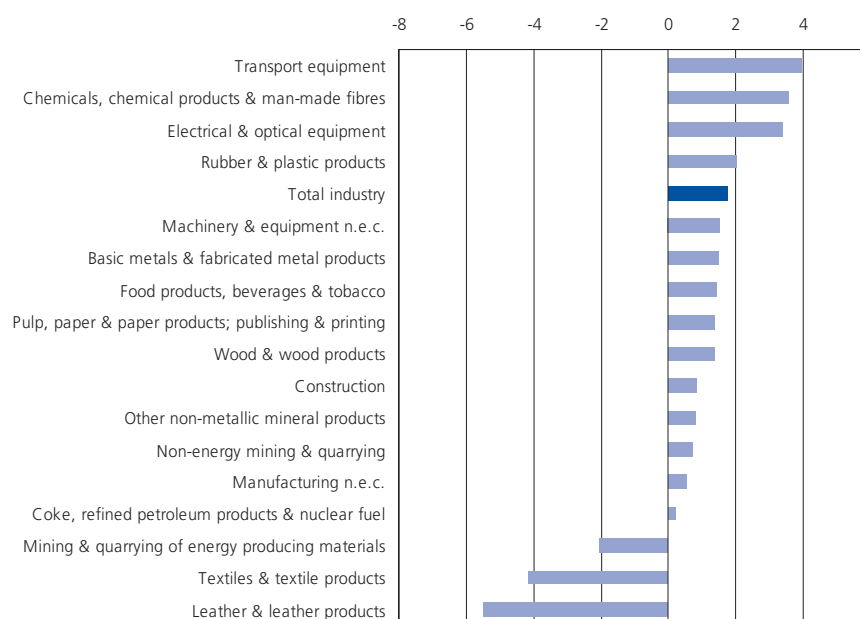
(1) Gross data, except for retail trade (working day adjusted data).
Source: Eurostat (STS)

Figure 1.25
Index of employment, EU-25 (2000=100) (1)



(1) Gross data.
Source: Eurostat (STS)

Figure 1.26
Average annual growth rates, index of production, EU-25, 1995-2005 (% per annum) (1)



(1) Working day adjusted data.
Source: Eurostat (STS)

Expansions in EU-25 industrial production were achieved, for the most part, with a reduced workforce ⁽⁷⁾ - see Figure 1.27, reinforcing the notion of productivity improvements. The only two sectors that reported an increase in the size of their respective workforces were rubber and plastic products manufacturing and the construction sector; in both these cases, average gains in output were in excess of the additional labour input (suggesting that productivity gains were also made in these sectors).

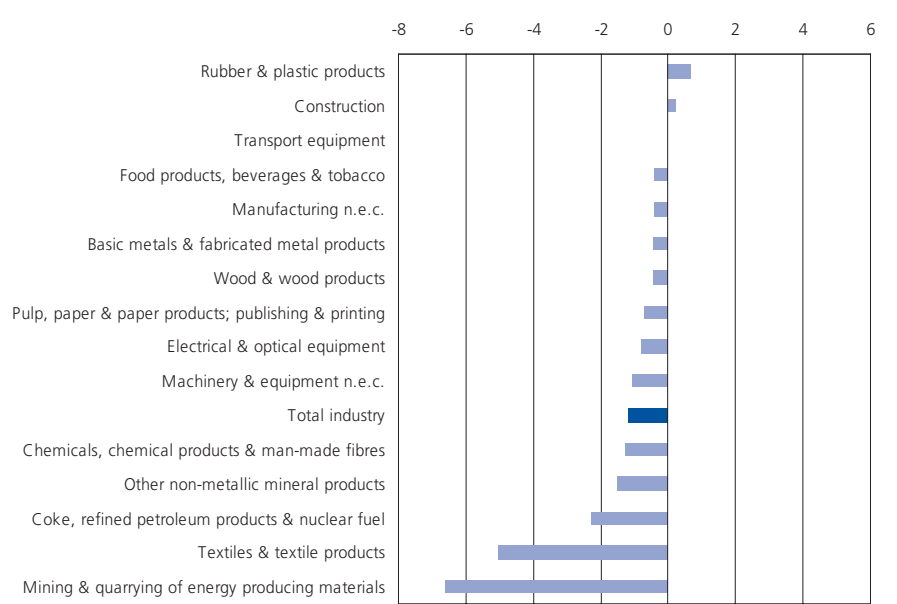
EVOLUTION WITHIN SERVICE SECTORS

Between 2002 and 2005, the EU-25 index of turnover for each of the service sectors covered in Figure 1.28 increased. The highest rates of sales growth tended to be reported for transport services, although there was some variation between the individual activities, with average growth of 3.7 % per annum for air transport services (NACE Division 62, see Subchapter 20.4), which was about half the rate (7.8 % per annum) recorded for water transport services (NACE Division 61, see Subchapter 20.3). The slowest rates of turnover growth across the NACE divisions for non-financial services were registered for hotels and restaurants (2.4 % per annum) and for retail trade (2.7 % per annum).

In contrast to the industrial economy, the evolution of employment saw the number of persons employed rise in the majority of the EU-25's services sectors. The sharpest rate of increase among the services sectors between 2000 and 2005 was registered for other business activities (NACE Division 74, see Subchapters 22.2 to 22.6), where the number of persons employed rose, on average by 3.2 % per annum. There were some service activities that reported a reduction in their respective numbers of persons employed, although the reductions were generally at a slower pace than those recorded within the industrial economy. The number of persons employed in the EU-25 in post and telecommunications, water transport and air transport declined during the period 2000 to 2005 by between 1 and 2 % per annum (see Figure 1.29).

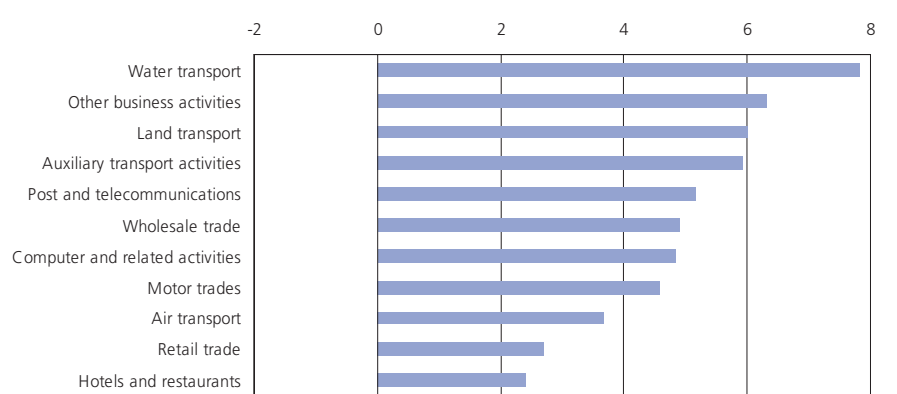
⁽⁷⁾ Mining and quarrying, except of energy producing materials and leather and leather products, not available.

Figure 1.27 Average annual growth rates, index of employment, EU-25, 1995-2005 (% per annum) (1)



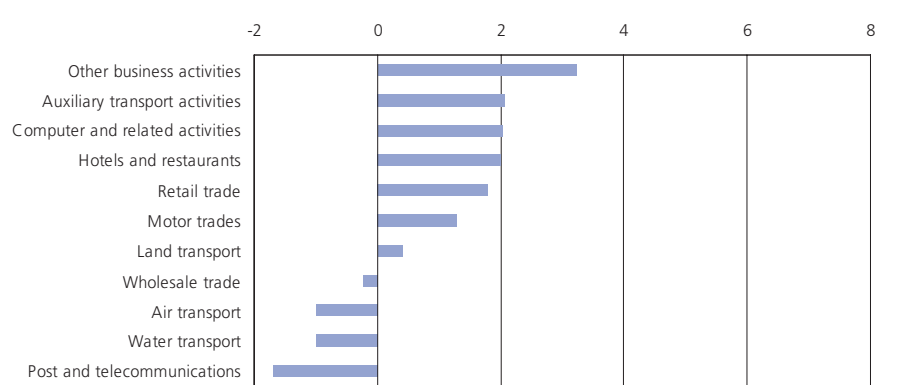
(1) Non-energy mining & quarrying, and leather & leather products, not available.
Source: Eurostat (STS)

Figure 1.28 Average annual growth rates, index of turnover, EU-25, 2002-2005 (% per annum) (1)



(1) Gross data, except for retail trade (working day adjusted data).
Source: Eurostat (STS)

Figure 1.29 Average annual growth rates, index of employment, EU-25, 2000-2005 (% per annum)



Source: Eurostat (STS)

1.7: EXTERNAL TRADE

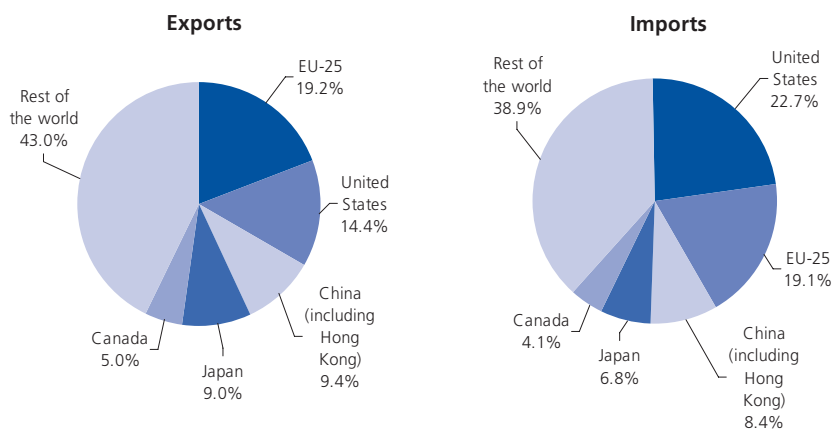
The world economy is increasingly inter-related, with foreign-controlled enterprises and globalisation making the distinction between domestic and non-domestic production less clear. With the successive removal of trade barriers (particularly those under the auspices of the World Trade Organisation's 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.

The evolution of world trade has in recent years been affected by a relatively rapid change in the origin of imports, 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). At the same time, there have also been structural changes in the origin of imports within particular product groupings, for example, the rapid growth in energy exports from the Russian Federation, which has become an important global supplier of energy.

Data from the International Monetary Fund (IMF) show that the EU-25 had the largest share (19.2 %) of the world market for exports of goods in 2004. This share of the global market was significantly higher than that of the United States (14.4 %), which recorded the second highest share (see Figure 1.30). In terms of the world market for the import of goods, however, the United States had the largest share (22.7 %), with the EU-25 accounting for 19.1 % of global imports. Note that extra-EU-25 trade statistics cover the trading of goods with non-member countries. As such, the export data for the EU-25 represent exports from the whole of the EU-25 as a single trading block to the rest of the world, and statistics for EU-25 imports are given with respect to imports that come into the EU-25; at no stage is trade between Member States considered.

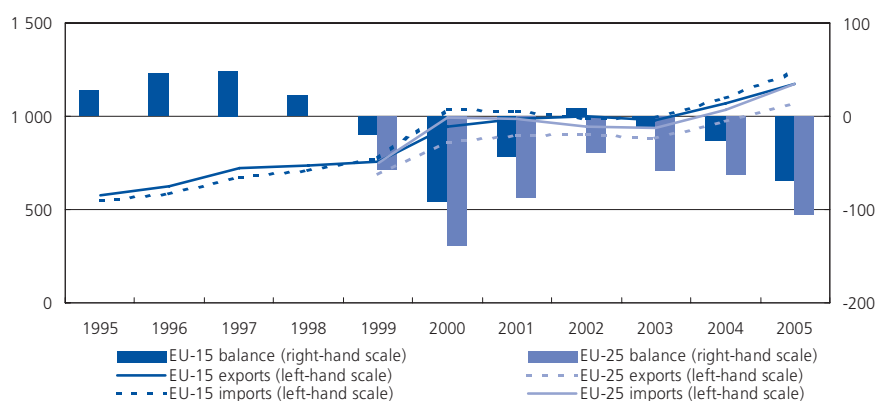
EU-25 external trade data shows (see Figure 1.31) that there was almost continuous growth in exports and imports over the last decade. During the period 1995 to 2005 both EU-15 industrial exports and imports more than doubled in value terms. Data for the EU-25 are limited to the period between 1999 and 2005, but this too shows an increase in the value of industrial exports (up 55.3 % overall) and imports (up 57.6 %).

Figure 1.30
External trade in goods, 2004 (% share of world total)



Source: IMF, Eurostat (Comext)

Figure 1.31
Evolution of external trade, goods (EUR billion) (1)



(1) EU-25 not available for 1995-1999.
Source: Eurostat (Comext)

The EU trade balance (the value of exports minus imports) for industrial goods followed a cyclical pattern that may be related to the overall economic cycle and changes in exchange rates that affect the relative price of imports and exports. The trade surplus (when exports exceed imports) for EU-15 industrial goods peaked at EUR 48.6 billion in 1997. This surplus for the EU-15 was quickly eroded and the widening trade deficit grew to EUR 91.4 billion by 2000 (a year that was characterised by its rapid economic growth, when demand may have out-stripped supply resulting in increased levels of imports). The situation rapidly swung again, after a period

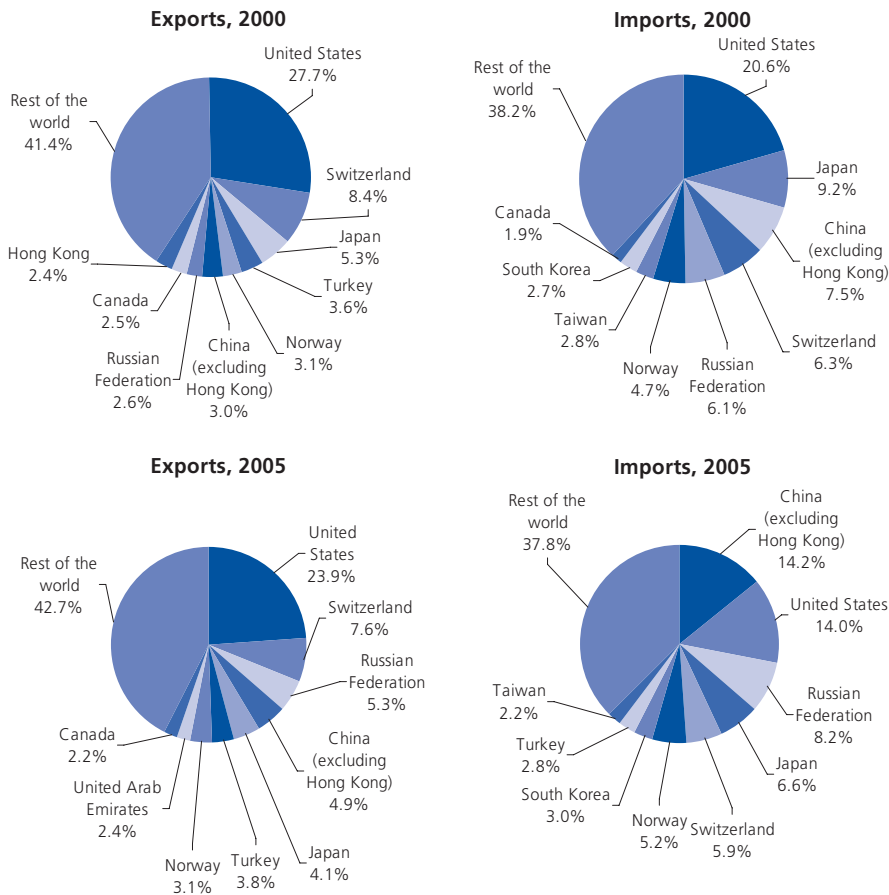
characterised by a slowdown in economic growth, the bursting of the dot.com bubble, and concerns over terrorist attacks, reducing the EU-25 trade deficit from EUR 138.2 billion in 2000 to EUR 38.9 billion in 2000. Subsequently, there was a gradual return to more pronounced economic growth that was accompanied by a growing EU-25 trade deficit that reached EUR 105.8 billion in 2005.

EU-25 TRADE PARTNERS

The most important destination for EU-25 exports in 2005 was the United States which accounted for a little less than a quarter (23.9 %) of total exports. The proportion of exports that were destined for the United States has fallen gradually in recent years, having stood at 27.7 % of the total in 2000. A similar pattern was observed for the second largest market for EU-25 exports of industrial goods, namely Switzerland, which accounted for 7.6 % of total exports in 2005, some 0.8 percentage points less than in 2000. The declining share of EU-25 exports to established, industrialised trading partners was offset by the growing importance of trade with Russia and China (excluding Hong Kong), whose combined market share rose from 5.6 % in 2000 to 10.2 % in 2005.

The relatively slow change in the structure of EU-25 exports by partner was in contrast to more rapid developments as regards the origin of EU-25 imports (see Figure 1.32). The United States provided a little over one fifth (20.6 %) of all industrial goods that were imported into the EU-25 in 2000. By 2005, the relative importance of the United States had diminished considerably, as American imports accounted for 14.0 % of the total. There was also a considerable reduction in relative share of Japanese imports, with a decline of 2.6 percentage points from 9.2 % of EU-25 imports in 2000 to 6.6 % in 2005. In contrast, the share of EU-25 imports that originated from China and Russia increased rapidly to reach 14.2 % and 8.2 % respectively by 2005.

Figure 1.32 Main trading partners, goods, EU-25 (% share of total)



Source: IMF, Eurostat (Comext)

Table 1.16

External trade flows, goods, EU-25, 2005

	Exports (EUR million)	Imports (EUR million)	Cover ratio (%)	Balance (EUR million)	Share in EU-25 industrial exports (%)	Share in EU-25 industrial imports (%)
Food, beverages and tobacco	49 050	40 841	120.1	8 210	4.9	3.8
Textiles, clothing, leather and footwear	49 760	95 794	51.9	-46 034	5.0	8.9
Wood and paper	20 891	18 687	111.8	2 204	2.1	1.7
Chemicals, rubber and plastics	180 681	112 837	160.1	67 844	18.2	10.5
Other non-metallic mineral products	16 078	9 154	175.6	6 924	1.6	0.8
Metals and metal products	66 800	66 726	100.1	74	6.7	6.2
Machinery and equipment	152 407	67 097	227.1	85 310	15.3	6.2
Electrical machinery and optical equipment	192 217	241 336	79.6	-49 119	19.3	22.4
Transport equipment	175 929	104 911	167.7	71 018	17.7	9.7
Furniture; other manufactured goods n.e.c.	27 429	38 229	71.7	-10 800	2.8	3.5
Non-energy mining and quarrying	14 019	28 084	49.9	-14 065	1.4	2.6
Energy products, steam and hot water	43 197	251 894	17.1	-208 698	4.3	23.3

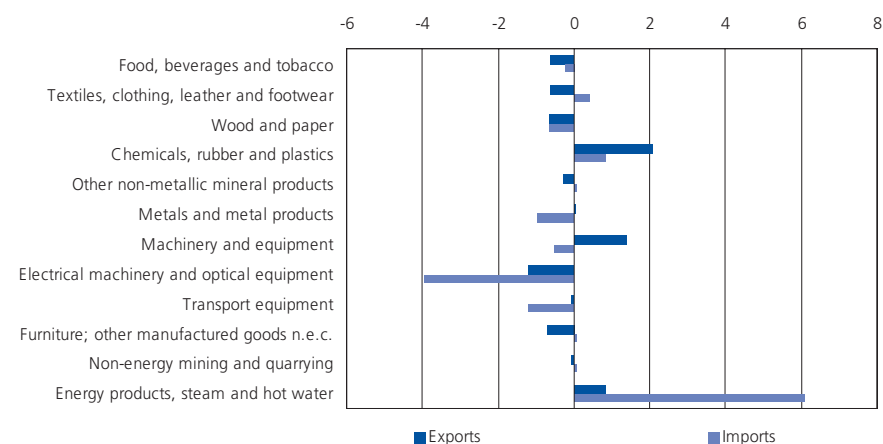
Source: Eurostat (Comext)

EU-25 TRADE BY PRODUCT

Table 1.16 shows information relating to the external trade flows for the EU-25 broken down according to the industrial chapter headings employed within European business. EU-25 imports of energy products (see Chapter 13) and electrical and optical equipment (see Chapter 9) together represented a little less than half (45.7 %) of all industrial imports in 2005. With relatively low levels of exports of energy products, the EU-25 recorded a trade deficit in energy products of EUR 208.7 billion in 2005. This was by far the largest deficit and dwarfed those recorded for electrical and optical goods (EUR 49.1 billion) and textiles and textile products, leather and leather products, following the end of the Agreement on Textiles and Clothing (ATC). Three product groups stood out with the highest EU-25 trade surpluses for industrial goods in 2005: namely, machinery and equipment n.e.c. (see Chapter 8), transport equipment (see Chapter 10) and chemicals, rubber and plastics (see Chapter 5).

Figure 1.33 presents information on the changing composition of industrial exports and imports for the EU-25. These relative shares reflect, to some degree, differences in prices between 2000 and 2005, 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).

Figure 1.33

Structural change of external trade in goods, EU-25, 2000-2005
(percentage point change in share of industrial exports and imports)

Source: Eurostat (Comext)

Exports of electrical and optical equipment to non-member countries in 2005 continued to record the highest share of EU-25 exports, although the 19.3 % share of industrial exports was somewhat reduced in relation to 2000 (20.5 %). In contrast, EU-25 exports of chemicals, rubber and plastics rose, with their relative importance gaining 2.1 percentage points between 2000 and 2005, to reach 18.2 % of EU-25 exports.

Aside from the rapid evolution of energy imports (which may in part be attributed to higher energy prices), the next highest relative increase was recorded for chemicals, rubber and plastics, whose share of EU-25 imports rose by 0.8 percentage points. The largest reduction was (as for exports) recorded for electrical and optical equipment, whose share of EU-25 imports fell by 4.0 percentage points between 2000 and 2005. Note that the price of certain electrical and optical equipment products tends to fall, as a result of rapid technological gains and fierce competition (for example, the price of a home computer has fallen in the last decade, while the specification of an average model has increased considerably).

TRADE BY MEMBER STATE

The five largest economies accounted for the majority of total EU trade, in other words, the sum of trade between the Member States (hereafter referred to as intra-EU trade) and trade with non-member countries (extra-EU trade), both in terms of exports (59.8 %) and imports (60.2 %). Germany recorded the largest trade surplus in industrial goods (EUR 151.5 billion) in 2005; with exports covering imports by 128.2 % (see Table 1.17). Much of this trade surplus in industrial goods reflected a German trade surplus for transport equipment (see Chapter 10), an activity in which Germany was particularly specialised (see Table 1.18).

The highest cover ratio among the Member States (169.8 %) was recorded for Ireland, where much of the trade surplus was accounted for by basic chemicals (CPA Group 24.1) and the pharmaceuticals (CPA Group 24.4) – see Chapter 5. Spain and the United Kingdom recorded the largest trade deficits for industrial goods in 2005 (between 70 and EUR 80 billion), although Greece and Cyprus had the lowest cover ratios (28.6 % and 18.3 % respectively).

Relative import specialisation in specific groups of products may reflect little or no domestic production but could also be the result of high demand, for example as basic inputs or components that are used in downstream activities. Table 1.19 shows that both Germany and Italy were relatively specialised in importing basic metals and fabricated metal products (CPA Subsection DJ, see Chapter 7), France and Spain were most specialised in importing transport equipment, and the United Kingdom in importing non-energy mining and quarrying products (CPA Subsection CB, see Chapter 12).

Table 1.17
External trade, goods, 2005 (1)

	Exports		Imports		Trade balance (EUR million)	Cover ratio (%)
	(EUR million)	Share of EU-25 (%)	(EUR million)	Share of EU-25 (%)		
BE	250 374	8.6	240 724	8.2	9 650	104.0
CZ	58 782	2.0	56 135	1.9	2 647	104.7
DK	61 060	2.1	56 039	1.9	5 021	109.0
DE	689 476	23.8	537 972	18.4	151 503	128.2
EE	5 117	0.2	7 001	0.2	-1 884	73.1
EL	11 590	0.4	40 589	1.4	-28 999	28.6
ES	135 945	4.7	207 775	7.1	-71 830	65.4
FR	340 887	11.8	376 547	12.9	-35 660	90.5
IE	82 839	2.9	48 796	1.7	34 043	169.8
IT	276 323	9.5	269 693	9.2	6 630	102.5
CY	870	0.0	4 758	0.2	-3 888	18.3
LV	3 596	0.1	6 304	0.2	-2 708	57.0
LT	8 789	0.3	11 614	0.4	-2 825	75.7
LU	12 945	0.4	15 385	0.5	-2 441	84.1
HU	45 706	1.6	46 732	1.6	-1 026	97.8
MT	1 801	0.1	2 764	0.1	-963	65.2
NL	252 576	8.7	245 400	8.4	7 177	102.9
AT	91 786	3.2	95 042	3.3	-3 256	96.6
PL	68 385	2.4	75 325	2.6	-6 940	90.8
PT	27 743	1.0	44 026	1.5	-16 283	63.0
SI	14 428	0.5	15 107	0.5	-679	95.5
SK	23 384	0.8	26 637	0.9	-3 254	87.8
FI	45 394	1.6	43 164	1.5	2 230	105.2
SE	96 128	3.3	80 922	2.8	15 206	118.8
UK	289 405	10.0	367 604	12.6	-78 199	78.7

(1) Data are presented for world trade flows (intra- and extra-EU trade).
Source: Eurostat (Comext)

Table 1.18

Export specialisation relative to the EU-25, 2005

	Most specialised	Second most specialised	Third most specialised
BE	Non-energy mining & quarrying products	Chemicals, rubber & plastic products	Energy products, steam & hot water
CZ	Other non-metallic mineral products	Furniture; other manufactured goods n.e.c.	Metals & metal products
DK	Food products, beverages & tobacco	Energy products, steam & hot water	Furniture; other manufactured goods n.e.c.
DE	Transport equipment	Machinery & equipment	Metals & metal products
EE	Wood & paper products	Textiles & textile products; leather & leather products	Furniture; other manufactured goods n.e.c.
EL	Textiles & textile products; leather & leather products	Food products, beverages & tobacco	Energy products, steam & hot water
ES	Other non-metallic mineral products	Transport equipment	Food products, beverages & tobacco
FR	Transport equipment	Food products, beverages & tobacco	Chemicals, rubber & plastic products
IE	Chemicals, rubber & plastic products	Electrical machinery & optical equipment	Food products, beverages & tobacco
IT	Textiles & textile products; leather & leather products	Furniture; other manufactured goods n.e.c.	Other non-metallic mineral products
CY	Electrical machinery & optical equipment	Food products, beverages & tobacco	Transport equipment
LV	Wood & paper products	Energy products, steam & hot water	Textiles & textile products; leather & leather products
LT	Energy products, steam & hot water	Furniture; other manufactured goods n.e.c.	Textiles & textile products; leather & leather products
LU	Electrical machinery & optical equipment	Metals & metal products	Other non-metallic mineral products
HU	Electrical machinery & optical equipment	Transport equipment	Machinery & equipment
MT	Electrical machinery & optical equipment	Textiles & textile products; leather & leather products	Furniture; other manufactured goods n.e.c.
NL	Food products, beverages & tobacco	Energy products, steam & hot water	Electrical machinery & optical equipment
AT	Wood & paper products	Metals & metal products	Furniture; other manufactured goods n.e.c.
PL	Furniture; other manufactured goods n.e.c.	Wood & paper products	Other non-metallic mineral products
PT	Textiles & textile products; leather & leather products	Wood & paper products	Other non-metallic mineral products
SI	Furniture; other manufactured goods n.e.c.	Wood & paper products	Metals & metal products
SK	Wood & paper products	Metals & metal products	Other non-metallic mineral products
FI	Wood & paper products	Electrical machinery & optical equipment	Metals & metal products
SE	Wood & paper products	Non-energy mining & quarrying products	Machinery & equipment
UK	Non-energy mining & quarrying products	Energy products, steam & hot water	Electrical machinery & optical equipment

Source: Eurostat (Comext)

Table 1.19

Import specialisation relative to the EU-25, 2005

	Most specialised	Second most specialised	Third most specialised
BE	Non-energy mining & quarrying products	Chemicals, rubber & plastic products	Furniture; other manufactured goods n.e.c.
CZ	Other non-metallic mineral products	Machinery & equipment	Metals & metal products
DK	Wood & paper products	Food products, beverages & tobacco	Other non-metallic mineral products
DE	Metals & metal products	Electrical machinery & optical equipment	Transport equipment
EE	Other non-metallic mineral products	Wood & paper products	Electrical machinery & optical equipment
EL	Energy products, steam & hot water	Food products, beverages & tobacco	Other non-metallic mineral products
ES	Transport equipment	Energy products, steam & hot water	Machinery & equipment
FR	Transport equipment	Other non-metallic mineral products	Energy products, steam & hot water
IE	Electrical machinery & optical equipment	Other non-metallic mineral products	Food products, beverages & tobacco
IT	Metals & metal products	Textiles & textile products; leather & leather products	Food products, beverages & tobacco
CY	Other non-metallic mineral products	Food products, beverages & tobacco	Furniture; other manufactured goods n.e.c.
LV	Other non-metallic mineral products	Wood & paper products	Food products, beverages & tobacco
LT	Energy products, steam & hot water	Other non-metallic mineral products	Wood & paper products
LU	Electrical machinery & optical equipment	Metals & metal products	Other non-metallic mineral products
HU	Electrical machinery & optical equipment	Other non-metallic mineral products	Machinery & equipment
MT	Electrical machinery & optical equipment	Other non-metallic mineral products	Food products, beverages & tobacco
NL	Electrical machinery & optical equipment	Energy products, steam & hot water	Non-energy mining & quarrying products
AT	Other non-metallic mineral products	Machinery & equipment	Furniture; other manufactured goods n.e.c.
PL	Machinery & equipment	Other non-metallic mineral products	Metals & metal products
PT	Food products, beverages & tobacco	Other non-metallic mineral products	Energy products, steam & hot water
SI	Other non-metallic mineral products	Metals & metal products	Wood & paper products
SK	Other non-metallic mineral products	Machinery & equipment	Metals & metal products
FI	Non-energy mining & quarrying products	Machinery & equipment	Electrical machinery & optical equipment
SE	Machinery & equipment	Metals & metal products	Electrical machinery & optical equipment
UK	Non-energy mining & quarrying products	Textiles & textile products; leather & leather products	Furniture; other manufactured goods n.e.c.

Source: Eurostat (Comext)

Food, beverages and tobacco



Many food products and some beverages are essential daily products. Although the proportion of household consumption accounted for by food, beverages and tobacco has declined steadily, it continues to account for a considerable share (16.3 % of EU-25 household consumption in 2005, down from 18.1 % in 1995). Indeed, in the Baltic Member States, food, beverages and tobacco continue to account for the largest share (over 30 % in each case) of household consumption (at the COICOP 2-digit level).

The character of the food, beverages and tobacco manufacturing sector as one that operates on two levels has intensified; there are a few, large multi-nationals based in the EU with a global reach and a broad range of products on the one hand (see Table 2.1) and, on the other, many smaller enterprises that often serve demand for speciality products and regional tastes using regional products (re-enforced by the growth in products of designated origin and protected geographical indication).

There have been a number of recent policy developments that will impact upon

manufacturers of food products, beverages and tobacco products, both directly and indirectly.

Firstly, the sixth Ministerial Conference of the World Trade Organisation in Hong Kong concluded in December 2005 with agreement that there will be an elimination of export subsidies by the end of 2013 and greater market access, among other points. This agreement will have significant implications for EU exporters of some key food products (mentioned in more detail in the subchapters that follow).

Secondly, the European Commission and Council launched new initiatives in the areas of hygiene and personal health aimed at reinforcing awareness of the so-called 'farm-to-fork' policy issues (assuring food safety and food quality). The new Hygiene Package came into force at the start of 2006 and aims to provide a single, transparent EU hygiene policy, applicable to all food and feed, at every point in the food chain. It complements existing Community legislation that set stringent guidelines requiring that all food manufactured and sold in the EU from the start of 2005 should be safe and fully traceable.

This chapter refers to the processing of food, beverages and tobacco products. Importantly, it excludes the agricultural activities of growing, farming, rearing and hunting (NACE Division 01, which is not covered in this publication). Given that a number of products, such as wine, olive oil, eggs and cheese are also sold directly by agricultural holdings and recorded in part, therefore, as an agricultural activity when own-produced, this distinction is important to bear in mind.

This chapter brings together the food products and beverages that are covered in NACE Division 15, and tobacco that is covered in NACE Division 16.

NACE

- 15: manufacture of food products and beverages;
- 15.1: production, processing and preserving of meat and meat products;
- 15.2: processing and preserving of fish and fish products;
- 15.3: processing and preserving of fruit and vegetables;
- 15.4: manufacture of vegetable and animal oils and fats;
- 15.5: manufacture of dairy products;
- 15.6: manufacture of grain mill products, starches and starch products;
- 15.7: manufacture of prepared animal feeds;
- 15.8: manufacture of other food products;
- 15.9: manufacture of beverages;
- 16: manufacture of tobacco products.

Table 2.1
Largest agro-food enterprises in Europe ranked by world sales in food products, 2003-2004

	Country	Main products	Food sales (EUR billion)
Nestlé	CH	Multi-product	54.5
Unilever	NL/UK	Multi-product	26.2
Diageo	UK	Alcoholic beverages	13.7
Danone	FR	Multi-product	13.1
Cadbury Schweppes	UK	Beverages, confectionery	9.4
Heineken	NL	Beer	9.3
Parmalat (1)	IT	Dairy, snacks, beverages	7.6
Scottish & Newcastle	UK	Alcoholic beverages	7.3
Associated British Foods	UK	Sugar, starches, prepared foods	7.1
InBev	BE	Beer	7.0

(1) Total sales.

Source: CIAA, <http://www.ciaa.be>

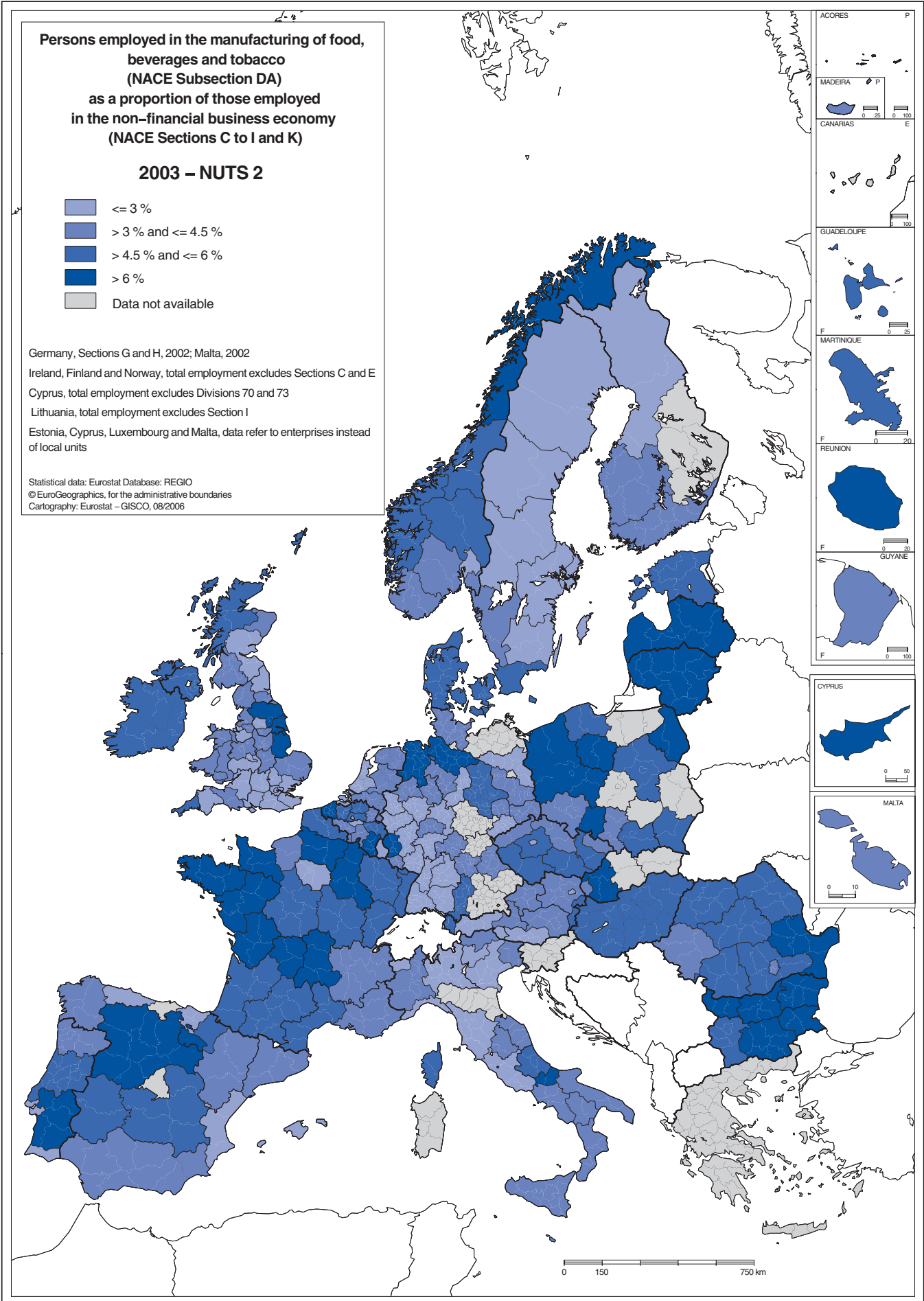


Table 2.2

Manufacture of food products, beverages and tobacco (NACE Subsection DA)
Structural profile, EU-25, 2003

	Value added (EUR million)	Share of industrial value added (%)	Number of persons employed (thousands)	Share of industrial employment (%)
Food products, beverages and tobacco (1)	192 000	11.3	4 490	12.8
Meat	30 605	1.8	1 004	2.9
Fish	3 752	0.2	129	0.4
Dairy products (1)	18 000	1.1	390	1.1
Bread, sugar, confectionery and other food products	66 657	3.9	1 911	5.4
Miscellaneous food products (1)	28 000	1.7	550	1.6
Processing and preserving of fruit and vegetables (1)	10 900	0.6	265	0.8
Manufacture of vegetable and animal oils and fats (1)	4 000	0.2	59	0.2
Manuf. of grain mill products, starches & starch products	6 026	0.4	108	0.3
Manufacture of prepared animal feeds (1)	7 000	0.4	130	0.4
Beverages	33 814	2.0	437	1.2
Tobacco (1)	10 000	0.6	60	0.2

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

Table 2.3

Manufacture of food products, beverages and tobacco (NACE Subsection DA)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (3)
1	Germany (35 312.5)	18.4	Germany (867.2)	19.3	Cyprus (25.2)	Cyprus (32.4)
2	United Kingdom (31 133.0)	16.2	France (653.2)	14.5	Latvia (20.3)	Latvia (19.6)
3	France (29 451.1)	15.3	United Kingdom (489.6)	10.9	Poland (19.0)	Denmark (18.5)
4	Italy (19 419.1)	10.1	Italy (457.2)	10.2	Lithuania (17.1)	Lithuania (18.0)
5	Spain (16 890.9)	8.8	Poland (445.7)	9.9	Netherlands (16.4)	Netherlands (16.2)

(1) Malta and Sweden, 2002; Greece not available.
(2) Sweden, provisional; Malta, 2002; Greece not available.
(3) Malta and Sweden, 2002; Greece and Ireland, not available.
Source: Eurostat (SBS)

A Green paper on 'Healthy Diets and Physical Activity' was adopted by the European Commission in December 2005 ⁽¹⁾, in response to problems of growing levels of obesity and chronic diseases. The Green paper recognises that daily diets have typically tended towards increasingly high energy, fat, salt and sugar intake foods, and that modern life is increasingly sedentary and urbanised. Given the multi-causal character of the problems, the Green paper looks at bringing together all the stakeholders concerned (including the food industry and retailers) to propose a raft of diversified initiatives.

Thirdly, the European Commission is reforming or re-examining some key Common Market Organisations (CMOs) for primary products, such as sugar, wine, fresh fruit and vegetables and fish that will impact on several food products manufacturing subsectors (see Subchapters 2.2, 2.4, 2.5 and 2.6).

STRUCTURAL PROFILE

The manufacture of food products, beverages and tobacco (NACE Subsection DA) is one of the largest industrial (NACE Sections C to E) sectors at the NACE subsection level in the EU-25, both in terms of value added generated and in terms of numbers of persons employed. Food, beverages and tobacco products generated EUR 192 billion of value added in 2003, the largest contribution (at 11.3%) to industrial value added among the industrial subsections. The food, beverages and tobacco sector also employed 4.5 million persons in 2003, occupying more than one in ten of all industrial jobs in the EU-25 (a 12.8 % share of the total).

Within EU-25 food products, beverages and tobacco manufacturing, the manufacture of bread, sugar, confectionary and other food products (NACE Group 15.8) was the largest activity at the NACE group level both in terms of value added and employment; it accounted for over a third (34.9 %) of the total sectoral value

added in 2003 and employed 1.9 million people (42.7 % of all sectoral employment). The second and third largest subsectors were beverages (NACE Group 15.9) and meat processing (NACE Group 15.1) which together accounted for a further third of both sectoral value added (individually accounting for 17.7 % and 16.0 % respectively) and sectoral employment (individually accounting for 9.7 % and 22.4 % respectively). The remaining third of sectoral value added and quarter of sectoral employment was shared among the remaining food and tobacco subsectors, for which the manufacture of dairy products (NACE Group 15.5) accounted for the next largest share (9.4 % of sectoral value-added and 8.7 % of sectoral employment in 2003).

Almost half (49.9 %) of the value added generated by the manufacture of food products, beverages and tobacco in the EU-25 as a whole came from Germany (18.4 %), the United Kingdom (16.2 %) and France (15.3 %). The relative importance of this sector within

⁽¹⁾ COM(2005) 637.

total industrial value added was not, however, especially high in these three Member States. Indeed in Germany, the value added generated by the manufacture of food products, beverages and tobacco represented only 7.8 % of industrial value added in 2003, among the lowest shares in the Member States (lower only in Finland and Slovakia, where it represented 6.7 %). In contrast, the importance of the food, beverages and tobacco sector to the industrial economy was greatest in Cyprus (25.2 % of industrial value added and 32.4 % of industrial employment) and Latvia (20.3 % of industrial value added and 19.6 % of industrial employment). Regional specialisation in these activities is shown on the map on page 40, which is based on the non-financial business economy employment share of this sector. The two most specialised regions (at the level of detail shown in the map) were Bretagne (France) and Podlaskie (Poland). There were several regions in France, Poland and Bulgaria that were particularly specialised in the manufacturing of food, beverages and tobacco, as well Latvia, Lithuania and Cyprus (which are each considered as a single region at the level of detail in the map).

There has been a constant and steady rise in the output of food, beverages and tobacco in the EU-25 over the past decade (the production index rising by an average of 1.4 % per annum between 1995 and 2005). The relative immunity of food, beverages and tobacco production levels from broader economic downturns in part reflects the fact that many foods and beverages are essential daily items. Although steady, the average rate of growth in food, beverage and tobacco output was lower than the more volatile industrial average which grew by 1.8 % per annum over the same reference period.

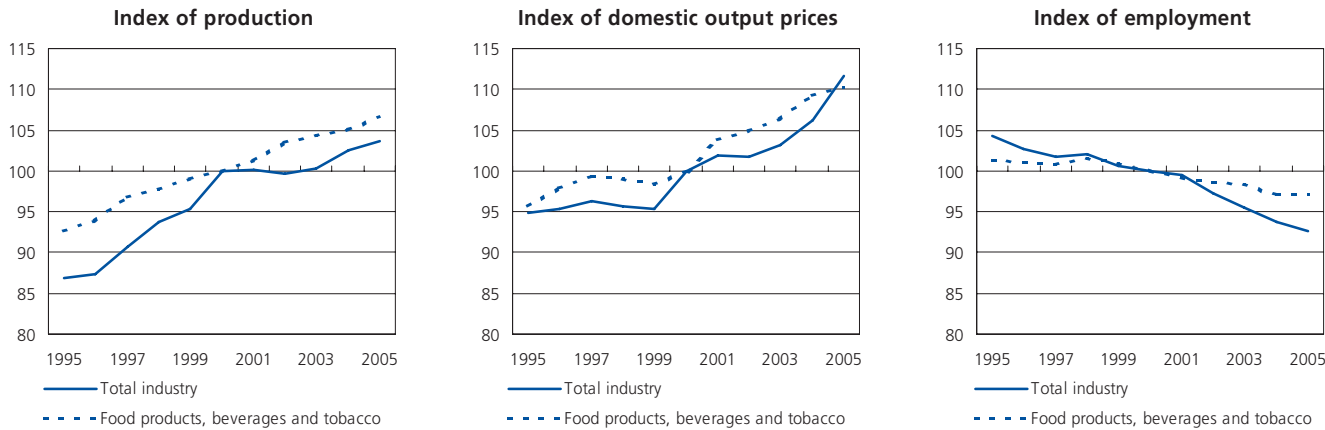
Within food, beverages and tobacco manufacturing there have been some contrasting developments in output of more specific activities during the past decade. The fastest rate of growth in the EU-25 was recorded in the manufacture of bread, sugar, confectionary and other food products (NACE Group 15.8), on average rising by 1.8 % per annum. In contrast, tobacco manufacturing (NACE Divisions 16) declined sharply (an average of -3.0 % per annum between 1995 and 2005), with crude oils and fats manufacturing (NACE Class 15.41) falling even faster (-4.7 % per annum since 2000); these declines may well reflect health concerns and associated Community legislation to some extent.

Small and medium-sized enterprises (SMEs) that employ between 1 and 249 people generated a similar proportion of EU (2) value added within the food, beverages and tobacco manufacturing sector (43.1 %) as they did for industry as a whole (42.3 %). Within the food and beverages manufacturing (NACE Division 15) part of the sector, however, SMEs generated a higher proportion (46.2 %) of EU-25 value added. In terms of employment, SMEs within the food, beverages and tobacco manufacturing sector accounted for a higher proportion of employment (60.9 %) than in industry as a whole (57.1 %).

There were some Member States for which the distribution of value added among the size classes was quite different in their respective food, beverages and tobacco manufacturing sectors than for industry as a whole. In the United Kingdom and Lithuania, SMEs in the food, beverages and tobacco manufacturing sector generated a much lower proportion of value added (21.8 % and 29.4 % respectively) than they did in industry (40.1 % and 40.4 %) whereas in Slovakia they generated a much higher proportion of value added than in industry (46.2 % compared with 25.0 %).

(2) EU average, 2003; Germany and the Netherlands, 2002; excluding Greece, Luxembourg, Hungary, Malta, Slovenia and Sweden.

Figure 2.1
Manufacture of food products, beverages and tobacco (NACE Subsection DA)
Evolution of main indicators, EU-25 (2000=100)



Source: Eurostat (STS)

Table 2.4
Manufacture of food products, beverages and tobacco (NACE Subsection DA)
Labour force characteristics, 2005

	Male		Full-time		Breakdown by age (% share of total)		
	Proportion of those employed (%)	Index (industry=100)	Proportion of those employed (%)	Index (industry=100)	< 30 years	30-49 years	50+ years
EU-25	59.0	82.7	88.2	95.5	24.3	55.6	20.1
BE	64.2	84.9	82.8	93.0	25.8	59.3	14.9
CZ	49.7	77.1	95.9	98.4	22.6	51.2	26.1
DK	60.5	87.0	86.6	96.4	23.3	52.9	23.8
DE	48.9	67.4	75.4	85.3	23.1	54.3	22.6
EE	36.6	65.7	98.0	100.4	18.1	52.6	29.3
EL	61.6	83.0	97.4	99.2	20.7	60.0	19.3
ES	64.6	85.9	93.4	98.0	23.8	55.8	20.4
FR	61.2	85.7	90.8	96.7	24.9	56.3	18.8
IE	68.9	97.7	93.2	98.4	30.3	50.7	19.0
IT	63.7	89.1	90.3	96.6	19.6	61.0	19.3
CY	56.5	81.7	92.6	98.8	22.9	54.7	22.3
LV	44.0	75.0	97.7	101.3	25.8	49.1	25.1
LT	39.0	73.2	94.8	96.9	28.2	54.9	17.0
LU	59.8	73.3	85.9	91.6	28.9	54.5	:
HU	59.2	94.9	97.6	100.4	20.5	60.1	19.4
MT	82.7	107.2	92.6	96.9	37.2	39.9	:
NL	67.7	87.4	67.3	92.1	26.2	54.8	19.0
AT	60.5	81.0	84.5	93.9	26.0	56.4	17.5
PL	59.8	86.7	94.6	98.3	31.4	55.4	13.1
PT	54.5	92.0	95.3	98.1	25.0	53.4	21.6
SI	57.8	90.5	94.8	98.7	24.9	57.8	17.3
SK	49.9	78.2	98.4	99.5	27.9	55.5	16.6
FI	50.1	70.0	92.6	97.5	22.5	50.0	27.6
SE	66.1	88.0	85.6	94.9	27.1	48.8	24.1
UK	67.7	90.4	89.5	98.0	21.5	53.5	25.0

Source: Eurostat (LFS)

LABOUR FORCE CHARACTERISTICS

The workforce in the food, beverages and tobacco manufacturing sector comprised a higher proportion of women on average in the EU-25 than for industry as a whole in 2005 (41.0 % compared with 28.7 %). This was a characteristic noted for almost all of the Member States in 2005, the exception being Malta. Indeed, in the Baltic Member States, Germany, the Czech Republic and Slovakia, women represented at least half the workforce in this sector in 2005.

There was also a relatively high proportion of part-time work in the food, beverages and tobacco manufacturing sector in 2005 (an average of 11.8 % for the EU-25) compared with the average for industry as a whole (7.6 %). This distinction was most acute in Germany, where almost one quarter (24.6 %) of those employed in the sector worked part-time in 2005 compared with an 11.5 % share across industry as a whole.

There was a slightly higher proportion of young workers (under the age of 30 years) in the food, beverages and tobacco manufacturing sector in the EU-25 in 2005 (24.3 %) compared with industry as a whole (21.4 %). This distinction was most apparent in Luxembourg (28.9 % compared with 14.4 %) and Sweden (27.1 % compared with 17.1 %), with other notable differences in Lithuania, Poland and the Netherlands.

COSTS, PRODUCTIVITY AND PROFITABILITY

Compared with many other industrial subsections, the proportion of total operating expenditure accounted for by personnel costs in the food, beverages and tobacco sector was relatively low (an EU ⁽³⁾ average of 14.3 % in 2003). To some extent, this may reflect the less skilled nature of many of the jobs in the sector combined with the high expenditure on raw products for processing. Within the sector, the relative share of personnel costs within total operating expenditure was lowest at the NACE

group level in the manufacture of vegetable and animal oils and fats (an EU ⁽⁴⁾ average of 5.7 %) and highest in the manufacture of bread, sugar, confectionary and other food products (an EU ⁽⁵⁾ average of 21.3 %). Among the Member States, personnel costs as a share of total operating expenditure within the food, beverages and tobacco sector were particularly low (between 10 % and 11 %) in Slovakia, Poland, Italy and the Czech Republic and highest in Austria (20.8 %) and Luxembourg (22.0 %).

⁽⁴⁾ EU average, 2003; the Netherlands and Sweden, 2002; excluding Denmark, Estonia, Greece, Latvia, Luxembourg and Malta.

⁽⁵⁾ EU average, 2003; Malta, 2002; excluding Greece and Sweden.

⁽³⁾ EU average, 2003; Malta and Sweden, 2002; excluding Greece.

Table 2.5

Manufacture of food products, beverages and tobacco (NACE Subsection DA)**Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003**

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	4.2	85.7	14.3	42.7	25.2	170.0	9.9
1	Latvia (10.9)	Slovakia (89.7)	Luxembourg (22.0)	Ireland (147.8)	Netherlands (40.1)	Ireland (388.4)	Ireland (23.4)
2	Lithuania (8.8)	Poland (89.5)	Austria (20.8)	Netherlands (77.9)	Ireland (38.1)	Poland (316.9)	Poland (21.3)
3	Slovenia (8.1)	Italy (89.2)	Cyprus (19.6)	United Kingdom (63.6)	Denmark (37.8)	Latvia (242.0)	Malta (18.9)
4	Estonia (7.4)	Czech Republic (89.1)	Slovenia (18.6)	Denmark (58.8)	Belgium (37.5)	Malta (222.6)	Latvia (16.1)
5	Portugal (6.7)	Ireland (88.5)	Sweden (18.6)	Belgium (58.7)	Finland (35.3)	Czech Republic (206.0)	United Kingdom (14.0)

(1) Malta and Sweden, 2002; Belgium and Greece not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Malta and Sweden, 2002; Greece, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Malta and Sweden, 2002; Greece, not available; EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

Compared with total operating costs, investment in tangible goods in the food, beverages and tobacco sector was also relatively low in 2003 (an EU ⁽⁶⁾ average of 4.2 %), with the highest ratio at the NACE group level recorded in the manufacture of beverages (an EU ⁽⁷⁾ average of 7.1 %). The ratio for the sector as a whole was generally highest among the Member States that joined the EU in 2004; in Latvia, such investment was the equivalent of 10.9 % of total operating costs within the sector, with the next highest ratios in the other Baltic Member States and Slovenia.

⁽⁶⁾ EU average, 2003; Malta and Sweden, 2002; excluding Belgium and Greece.

⁽⁷⁾ EU average, 2003; Malta and Sweden, 2002; excluding Belgium and Greece.

The apparent labour productivity of the EU-25 food, beverages and tobacco sector was EUR 42 700 per person in 2003, about 14 % less than the industrial (NACE Sections C to E) average. Within the sector, there was a stark contrast between the apparent labour productivity level for food and beverages manufacturing (an average of EUR 40 900 per person in 2003) and for tobacco products manufacturing (which was at least four times as high). There were also relatively low average personnel costs in the food, beverages and tobacco sector (at EUR 25 200 per person in 2003, this being EUR 7 400 below the industrial average). These relatively low average personnel costs help explain why the wage adjusted labour productivity ratio for food, beverages and tobacco in 2003 (at 170 %) was significantly above the average for industry as a whole (152 %). Within food, beverages and tobacco manufacturing, the highest wage adjusted labour productivity ratio at the NACE group level ⁽⁸⁾ in 2003 was for beverages (219.5 %). Among Member States, the highest ratios for the food, beverages and tobacco manufacturing sector as a whole were in Ireland (388.4 %) and Poland (316.9 %).

The gross operating rate for the food, beverages and tobacco sector in the EU-25 was 9.9 % in 2003, a little below the industrial average of 10.3 %. According to this measure of profitability, there were particularly high rates in the manufacture of bread, sugar, confectionery and other food products (13.7 %) and beverages (15.3 %). Among the Member States, the rates were highest in Ireland (23.4 %) and Poland (21.3 %) and lowest in Slovakia, France and Germany (between 6.2 % and 7.3 %).

⁽⁸⁾ Vegetable and animal oils and fats (NACE Group 15.4), 2002; manufacture of tobacco products (NACE Division 16), not available.

EXTERNAL TRADE

The EU-25 had a positive trade balance of EUR 8.2 billion with the rest of the world in food products, beverages and tobacco (CPA Subsection DA) in 2005. This surplus resulted from extra-EU-25 exports of EUR 49.1 billion (a 4.9 % share of total industrial exports) and imports of food products, beverages and tobacco to the value of EUR 40.8 billion (a 3.8 % share of total industrial imports).

This trade surplus was the result of a large trade surplus in several CPA groups, mainly beverages (CPA Group 15.9), bread, sugar, confectionery and other food products (CPA Group 15.8) and dairy products (CPA Group 15.5), outweighing the large deficits in fish products (CPA Group 15.2), fruit and vegetables (CPA Group 15.3) and vegetable and animal oils and fats (CPA Group 15.4). Beverages, bread, sugar, confectionery and other food products and dairy products together accounted for about two thirds (65.7 %) of the total exports of food products, beverages and tobacco in 2005. The United States was the largest export market for food products, beverages and tobacco as a whole (a 21 % share of exports) and a particularly significant market for beverages (42 % of all EU exports).

Imports of processed and preserved fish products (CPA Group 15.2) and vegetable and animal oils and fats (CPA Group 15.4) together represented almost half of all food products, beverages and tobacco imports in 2005 (28 % and 20 % respectively). Imports of vegetable and animal oils and fats, particularly from South America accounted for a growing share of imports within the sector.

Table 2.6

Food products, beverages and tobacco (CPA Subsection DA)
External trade, EU-25, 2005

	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Food products, beverages and tobacco	49 050	4.9	40 841	3.8	8 210	120.1
Meat and meat products	5 183	0.5	5 205	0.5	-22	99.6
Processed and preserved fish and fish products	1 934	0.2	11 414	1.1	-9 480	16.9
Dairy products and ice cream	5 366	0.5	775	0.1	4 591	692.8
Bread, sugar, confectionery and other food products	12 388	1.2	5 700	0.5	6 688	217.3
Miscellaneous food products	7 758	0.8	14 299	1.3	-6 541	54.3
Processed and preserved fruit and vegetables	2 788	0.3	4 654	0.4	-1 866	59.9
Vegetable and animal oils and fats	2 394	0.2	8 189	0.8	-5 796	29.2
Grain mill products, starches and starch products	1 729	0.2	813	0.1	917	212.8
Prepared animal feeds	846	0.1	643	0.1	203	131.6
Beverages	14 467	1.5	3 137	0.3	11 330	461.1
Tobacco products	1 870	0.2	243	0.0	1 626	768.2

Source: Eurostat (Comext)

2.1: MEAT

This subchapter covers all meat processing stages that follow on from animal rearing; in other words, the activities of slaughtering through to the preparation of meat for final consumption (NACE Group 15.1), including fresh, chilled, frozen, processed, dried, salted and smoked meats. The data presented also include the treatment of hides and skins, the rendering of fats and the processing of animal offal.

Over recent years, the meat market chain has been affected by a wide range of animal sanitary health crises. The European Commission has forecast greater stability in this market in the medium-term in its report on 'Prospects for agricultural markets and income, 2005-2012'. Meat consumption is expected to increase slightly to about 89 kg/head by 2012. This overall growth is likely to stem almost exclusively from the increased poultry consumption, which currently accounts for 26 % of all meats consumed in the EU (almost half the share of pig meat). The market remains fragile, however, as reflected in consumer reaction to the latest avian influenza outbreaks.

Partnership arrangements between producers and processors as well as consolidation within the EU-25 continued apace. Among large enterprises, the Vion Group (DE/NL) took over Südfleisch (DE) to confirm their position as one of the two major players in pig and beef slaughtering (see Table 2.7) and other processors continue to expand into Eastern Europe.

Table 2.7

Leading meat slaughtering enterprises (groups), EU-25, 2005 (EU market share in terms of volume of meat slaughtered, %)

	Country	(%)
Pig slaughterers		
Danish Crown	DK / UK	10.0
VION	DE / NL	8.4
Tönnies Fleisch	DE	2.5
Westfleisch	DE	2.3
Cooperl	FR	1.6
Beef slaughterers		
VION	DE / NL	4.5
Irish Food Group	IE / UK	3.5
Cremonini	IT	2.1
Socopa	FR	2.1
Queally Dawn	IE / UK	1.7
Poultry slaughterers		
Doux	FR	5.0
LDC	FR	4.0
AIA	IT	3.5
Grampian	UK	4.0
Wiesenhof / Westjohann	DE	2.0

Source: Meat Processing Global,
<http://www.meatnews.com>**STRUCTURAL PROFILE**

The production, processing and preserving of meat and meat products (NACE Group 15.1) in the EU-25, hereafter termed the meat processing sector, provided EUR 30.6 billion in value added in 2003, representing 16.0 % of the total recorded for food, beverages and tobacco manufacturing (NACE Subsection DA). There were just over a million people working in the meat processing sector in the EU-25 in 2003, over one in five (22.4 %) of all those working in food, beverages and tobacco manufacturing.

Within the meat processing sector, the production of meat and poultry products (NACE Class 15.13) was the largest in terms of both those employed and value added; it employed a little over half of all those working in the EU's meat processing sector and generated 60 % of the total value added for this sector in 2003.

Germany, France and the United Kingdom together contributed more than half of the EU-25's total value added in the meat processing sector (55.3 % in 2003) and engaged more than half of the sector's workforce (50.4 % in 2003). There was also a significant workforce in meat processing in Poland (119 400 persons or 11.9 % of the EU-25 total). However, Denmark was the only Member State that showed notable specialisation in the activities of meat processing in 2003 (its contribution to industrial

Table 2.8

Production, processing, preserving of meat, meat products (NACE Group 15.1)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (6 386.7)	20.9	Germany (218.2)	21.7	Denmark (4.2)	Denmark (5.0)
2	France (5 735.2)	18.7	France (170.2)	16.9	Cyprus (2.8)	Poland (4.3)
3	United Kingdom (4 814.0)	15.7	Poland (119.4)	11.9	France (2.5)	Hungary (4.1)
4	Spain (2 795.1)	9.1	United Kingdom (117.5)	11.7	Spain (2.2)	France (4.1)
5	Italy (2 763.6)	9.0	Spain (77.2)	7.7	Hungary (2.2)	Latvia (3.3)

(1) Malta and Sweden, 2002; Greece, not available.

(2) Sweden, provisional; Malta, 2002; Greece, not available.

(3) Malta and Sweden, 2002; Greece and Ireland, not available.

(4) Sweden, provisional; Malta, 2002; Greece and Ireland, not available.

Source: Eurostat (SBS)

value added being more than twice the EU-25 average). The employment specialisation (within industry) in meat processing was also highest in Denmark, followed by Poland, Hungary and France.

The output of the meat processing sector followed closely the general pattern of steady growth noted for food and beverages manufacturing as a whole between 1995 and 2005. However, there was some stagnation in meat processing output in 1998 and a decline of 1.3 % in 2001 when animal health concerns led to a decline in the output of some meat products.

COSTS, PRODUCTIVITY AND PROFITABILITY

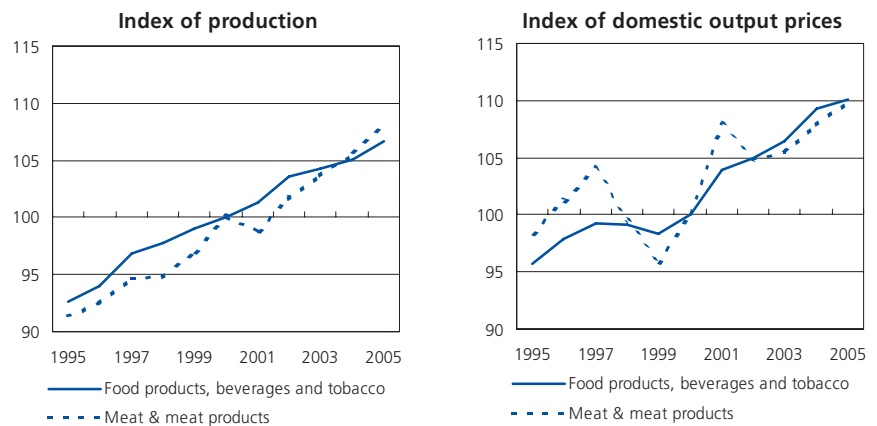
The proportion of total operating expenditure accounted for by personnel costs in the meat processing sector in 2003 was very similar (14.0 %) as an EU average ⁽⁹⁾ to the share for food, beverages and tobacco manufacturing (14.3 %). Investment in tangible goods in the meat processing sector (3.2 %) in 2003 was below even the low figure (4.2 %) for food, beverages and tobacco manufacturing.

The apparent labour productivity of the EU-25 meat processing sector was EUR 30 500 per person employed in 2003, significantly lower than the average level for the food, beverages and tobacco sector as a whole (EUR 42 700 per person employed). Average personnel costs were also relatively low (EUR 21 800 in 2003) compared with an average for the food, beverages and tobacco sector in the EU-25 of EUR 25 200 per employee.

⁽⁹⁾ EU average, 2003; Malta and Sweden, 2002; excluding Greece.

Figure 2.2

Production, processing, preserving of meat, meat products (NACE Group 15.1)
Evolution of main indicators, EU-25 (2000=100)



These figures explain why the wage adjusted labour productivity ratio for the meat processing sector (139.9 %) in the EU-25 remained below the ratio for the food, beverages and tobacco sector (170 % %) in 2003. In Estonia, Italy and particularly Cyprus, however, the wage adjusted labour productivity for meat processing was higher than that for food, beverages and tobacco manufacturing (between 13 – 35 percentage points higher). In contrast, both the apparent and wage adjusted labour productivity for meat processing were at least half the equivalent level for food, beverages and tobacco manufacturing in Ireland, Poland and Slovakia.

As an indicator of profitability, the gross operating rate of the meat processing sector in the EU-25 was (at 6.1 % in 2003) the second lowest among the food, beverages and tobacco NACE groups, after the manufacture of prepared animal feeds (NACE Group 15.7). In Slovakia, the gross operating rate was negative indicating that the personnel costs in meat processing enterprises were greater than the value added generated.

Table 2.9

Production, processing, preserving of meat, meat products (NACE Group 15.1)**Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003**

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	3.2	86.0	14.0	30.5	21.8	139.9	6.1
1	Slovenia (13.2)	Poland (91.4)	Luxembourg (30.2)	Denmark (58.1)	Denmark (43.7)	Latvia (189.7)	Austria (9.5)
2	Lithuania (12.0)	Slovakia (91.1)	Denmark (20.0)	Netherlands (53.4)	Netherlands (37.0)	Cyprus (185.0)	United Kingdom (9.3)
3	Latvia (11.0)	Lithuania (90.9)	Austria (18.6)	Belgium (50.9)	Belgium (34.8)	Malta (179.9)	Estonia (9.0)
4	Slovakia (8.8)	Czech Republic (90.8)	United Kingdom (17.9)	Finland (46.9)	Finland (34.6)	Estonia (175.7)	Latvia (8.3)
5	Estonia (8.0)	Cyprus (90.7)	Slovenia (17.4)	Italy (46.1)	Sweden (33.7)	Spain (162.6)	Malta (8.2)

(1) Malta and Sweden, 2002; Belgium and Greece not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Malta and Sweden, 2002; Greece, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Malta and Sweden, 2002; Greece, not available.

Source: Eurostat (SBS)

Table 2.10

Meat and meat products (CPA Group 15.1)**External trade, EU-25, 2005**

	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Meat and meat products	5 183	0.5	5 205	0.5	-22	99.6
Fresh and preserved meat, except poultry	3 514	0.4	3 500	0.3	14	100.4
Fresh and preserved poultry meat	928	0.1	720	0.1	208	128.9
Meat and poultry meat products	741	0.1	985	0.1	-244	75.2

Source: Eurostat (Comext)

EXTERNAL TRADE

Extra EU-25 exports of meat and meat products (CPA Group 15.1) represented 10.6 % of all exports of food products, beverages and tobacco products (CPA Subsection DA) in 2005. These exports were valued at EUR 5.2 billion, a similar figure to the value of meat and meat product imports. This relatively balanced net trade figure for the EU-25 incorporated a EUR 208 million trade surplus for fresh and preserved poultrymeat (CPA Class 15.12) and a EUR 244 million deficit for meat and poultrymeat products (CPA Class 15.13).

The principal export markets for EU-25 meat and meat products in 2005 were Japan (18.9 % of all such extra-EU exports) and Russia (15.5 %). Brazil and New Zealand were the main sources of imports of meat and meat products to the EU-25 in 2005 (accounting for 30.1 % and 20.8 % respectively of all such imports).

Among the Member States, Denmark, the Netherlands, Ireland and Belgium recorded the largest trade surpluses (intra and extra-EU) in 2005. Denmark was the only Member State, however, that had a significant external EU-trade surplus, being particularly specialised in the export of fresh and preserved meat (CPA Class 15.11). In contrast, the United Kingdom and Italy were the Member States that were most reliant on imports of meat and meat products in 2005 (recording trade deficits of EUR 3.9 billion and EUR 2.8 billion respectively).

2.2: FISH

This subchapter includes information on the preparation and preservation of fish, crustaceans and molluscs (be they fresh, frozen, smoked, salted or canned) and the manufacture of prepared fish and seafood dishes, all included within NACE Group 15.2.

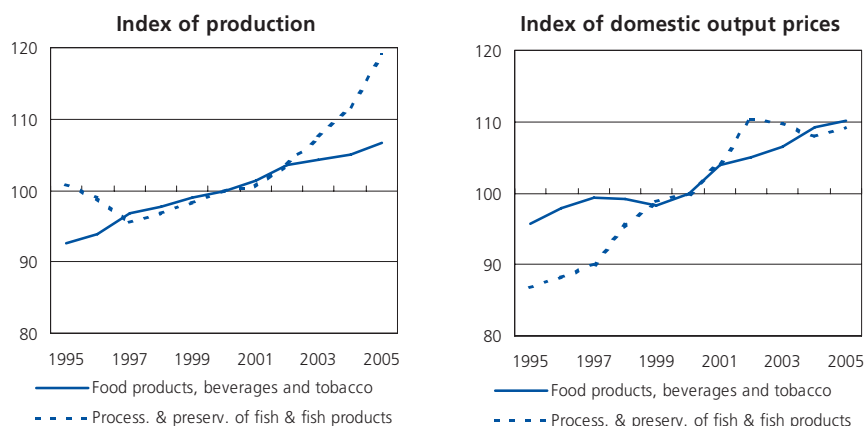
Total catches by EU-25 Member States within EU waters have been declining (north-east Atlantic catches fell 20.5 % between 1994 and 2004) as fish stocks have been depleted. Shortfalls in the EU's own 'maritime fish store' have been met by rising imports from non-member countries and aquaculture in order to respond to the strong increase in EU-25 demand. The Common Market Organisation is currently being evaluated and revisions may be proposed and reflected within a wider, all-encompassing approach to maritime and coastland policy. The European Commission also released a communication at the end of June 2005 on a Community approach towards eco-labelling schemes for fishery products ⁽¹⁰⁾.

STRUCTURAL PROFILE

The fish processing sector (NACE Group 15.2) of the EU-25 generated a value added of EUR 3.8 billion in 2003, representing only 2.0 % of the value added generated by food, beverages and tobacco manufacturing (NACE Subsection DA). There were 128 600 people employed in fish processing, representing 2.9 % of the food, beverages and tobacco workforce.

⁽¹⁰⁾ COM(2005) 275.

Figure 2.3
Processing and preserving of fish and fish products (NACE Group 15.2)
Evolution of main indicators, EU-25 (2000=100)



Source: Eurostat (STS)

Among the Member States ⁽¹¹⁾, the fish processing sectors in the United Kingdom, Spain and France contributed the most value added (each between EUR 690 million and EUR 640 million in 2003). In relative terms, the fish processing sectors in the Baltic Member States and Denmark were, by far, the most specialised. In Latvia and Estonia, the contribution of the value added of fish processing activities to industrial value added was about six times the EU-25 average.

⁽¹¹⁾ Italy, the Netherlands, Austria and Sweden, 2002; the Czech Republic, Greece, Cyprus, Malta and Slovenia, not available.

Despite concerns about the EU's own fish stocks, the output of EU-25 fish processing industry grew every year since a relative trough in 1997. Indeed, growth in output accelerated after 2001; the average rate of growth in the output of fish products rose on average by 4.3 % per annum after 2001, the fastest rate of increase among all the NACE groups within food and beverages as a whole.

Table 2.11
Processing and preserving of fish and fish products (NACE Group 15.2)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	United Kingdom (690.6)	18.4	Spain (23.1)	17.9	Latvia (1.4)	Latvia (4.0)
2	Spain (677.3)	18.1	United Kingdom (19.9)	15.5	Estonia (1.3)	Estonia (2.7)
3	France (642.6)	17.1	France (15.5)	12.1	Denmark (0.9)	Lithuania (1.5)
4	Germany (397.1)	10.6	Poland (12.4)	9.6	Lithuania (0.9)	Denmark (1.4)
5	Denmark (285.9)	7.6	Germany (9.8)	7.7	Spain (0.5)	Spain (0.8)

(1) Italy, the Netherlands, Austria and Sweden, 2002; the Czech Republic, Greece, Cyprus, Malta, and Slovenia, not available.

(2) Sweden, provisional; Italy and Austria, 2002; the Czech Republic, Greece, Cyprus, Malta and Slovenia, not available.

(3) Italy, the Netherlands, Austria and Sweden, 2002; the Czech Republic, Greece, Ireland, Cyprus, Malta and Slovenia, not available.

(4) Sweden, provisional; Italy and Austria, 2002; the Czech Republic, Greece, Ireland, Cyprus, Malta and Slovenia, not available.

Source: Eurostat (SBS)

Table 2.12

Processing and preserving of fish and fish products (NACE Group 15.2)**Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003**

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	3.4	86.7	13.3	29.2	19.5	149.6	6.6
1	Lithuania (7.8)	Italy (91.7)	Austria (19.9)	Belgium (64.7)	Belgium (35.8)	Belgium (180.8)	Austria (12.5)
2	Hungary (6.8)	Portugal (91.0)	Estonia (19.8)	Austria (45.5)	Denmark (31.8)	Portugal (172.0)	United Kingdom (9.0)
3	Estonia (6.0)	Poland (89.9)	Germany (17.4)	Denmark (45.1)	Germany (31.4)	Poland (170.4)	Belgium (8.8)
4	Latvia (5.8)	Belgium (88.8)	Finland (17.3)	Sweden (44.3)	Sweden (30.0)	Austria (169.5)	Poland (8.1)
5	Slovakia (5.0)	Spain (88.6)	United Kingdom (16.5)	Italy (43.0)	France (29.2)	Spain (162.2)	Sweden (7.8)

(1) Belgium, Italy, the Netherlands, Austria and Sweden, 2002; the Czech Republic, Greece, Cyprus, Malta and Slovenia, not available; EU-25 is an EU average based on available data for 2002 and 2003

(2) Italy, the Netherlands, Austria and Sweden, 2002; the Czech Republic, Greece, Cyprus, Malta and Slovenia, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Italy, the Netherlands, Austria and Sweden, 2002; the Czech Republic, Greece, Cyprus, Malta and Slovenia, not available.

Source: Eurostat (SBS)

COSTS, PRODUCTIVITY AND PROFITABILITY

The apparent labour productivity of fish processing activities was the lowest among the food, beverages and tobacco activities⁽¹²⁾ at the NACE group level for the EU-25 in 2003, with each person employed generating an average EUR 29 200 of value added. Average personnel costs within this sector were also the lowest (EUR 19 500). Despite the low average personnel costs, the wage adjusted labour productivity measure (149.6 %) was below the average ratio for food, beverages and tobacco (170 %). The profitability of the fish processing sector in the EU-25 was also low according to the gross operating rate of 6.6 % in 2003.

EXTERNAL TRADE

The rise in demand for fish and fish products in the EU-25 coupled with low fish stocks in EU waters has led to an increasing reliance on imports from a global-spread of non-member countries. Imports of fish and fish products (CPA Group 15.2) were valued at EUR 11.4 billion in 2005, accounting for 28 % of all imports of food, beverages and tobacco (CPA Subsection DA). The trade deficit in these items grew to EUR 9.5 billion in 2005, the largest deficit recorded among the ten CPA groups that make up food, beverages and tobacco products. Spain was the leading importer of fish and fish products (EUR 2.4 billion in 2005).

⁽¹²⁾ Manufacture of vegetable and animal oils and fats (NACE Group 15.4), and manufacture of prepared animal feed (NACE Group 15.7), 2002; manufacture of dairy products (NACE Group 15.5) and tobacco (NACE Division 16), not available.

2.3: DAIRY PRODUCTS

This subchapter includes the production of fresh milk, cream, butter, yoghurt, cheese, whey, ice creams and sorbets which are all classified within NACE Group 15.5. The data presented do not cover activities within the confines of farms themselves.

The Doha Round of world trade talks are important for this activity and the dairy enterprises within the EU (see Table 2.13), particularly as regards the possible phasing out of export subsidies. Any commitment is likely to lead the EU to rely increasingly on converting a greater volume of its 143 million tonnes of raw milk (set by the quota system) into higher added value products. In the longer-term it might lead to a reduction or abolition of quotas. The move away from bulk, residual, supported commodities such as skimmed milk powder (SMP) and butter towards branded, higher-value products that require more milk protein has already been noted by the European Commission for the EU as a whole during the past few years. This trend reflects a few changes in the activity; on the one hand, price cuts following reform of the Common Agricultural Policy (CAP) have gradually reduced the ground for (aided) SMP use in calf feed and the intervention purchases of butter, and on the other, there has been rising domestic and international consumer demand for cheeses and yoghurts produced in the EU (often as part of what is seen as a healthy and nutritional diet).

Table 2.13
Ranking of European dairy enterprises (groups) by milk intake, 2005

	Country	Intake (million kg)	Ownership
Arla	DK/SE/UK	7 200	Co-operative
Groupe Lactails	FR/BE	5 500	Private
Friesland Coberco	NL/DE	5 200	Co-operative
Campina	NL/DE/BE/PL	5 200	Co-operative
Nordmilch	DE/UK	4 200	Co-operative
Bongrain/CLE	FR/BE/DE	3 300	Private
Nestlé	CH	2 350	Private
Sodiaal	FR	2 300	Private
Dairy Crest	UK	2 100	Private
Humana Milchunion	DE	2 000	Co-operative

Source: Industry sources

STRUCTURAL PROFILE

The manufacture of dairy products (NACE Group 15.5) in the EU-25 generated EUR 18.0 billion of value added in 2003, representing 9.4 % of the total recorded for food, beverages and tobacco manufacturing (NACE Subsection DA). The 390 000 people employed in the manufacture of dairy products across the EU-25 in 2003 represented 8.7 % of the workforce in the food, beverages and tobacco sector as a whole.

Of the two subsectors within the manufacture of dairy products, the operation of dairies and cheese making (NACE Class 15.51) was the principal activity both in terms of employment (340 800 people across the EU-25) and value added. Indeed, the manufacture of ice cream (NACE Class 15.52) only accounted for 13.0 % of the value added generated in the manufacture of dairy products.

The main Member States for dairy products manufacturing in terms of value added in 2003 were France (EUR 3.2 billion), Italy (EUR 3.1 billion), Germany (EUR 3.0 billion) and the United Kingdom (EUR 2.0 billion). However, Germany and the United Kingdom were among the least specialised Member States in dairy products manufacturing. In contrast, Lithuania, Cyprus and Latvia were the most specialised in dairy products manufacturing, where this sector contributed between two and three and a half times the EU-25 average to both industrial value added and employment in 2003.

There was relatively steady growth in the production index of dairy products between 1995, the relative low point during the reference period, and 2000. Between 2000 and 2005 there were stronger annual fluctuations, however, with stagnation in 2002 and a small decline in 2004. Nevertheless, over the period as a whole, there was an average rate of growth of 0.9 % per year.

Table 2.14
Manufacture of dairy products (NACE Group 15.5)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	France (3 157.3)	17.5	France (63.5)	16.3	Lithuania (3.5)	Cyprus (3.8)
2	Italy (3 123.6)	17.4	Italy (55.3)	14.2	Cyprus (3.4)	Lithuania (3.5)
3	Germany (2 979.1)	16.6	Poland (48.1)	12.3	Latvia (2.6)	Latvia (2.3)
4	United Kingdom (2 006.5)	11.1	Germany (44.9)	11.5	Estonia (2.0)	Estonia (1.8)
5	Spain (1 483.3)	8.2	United Kingdom (31.3)	8.0	Italy (1.4)	Poland (1.7)

(1) Malta and Sweden, 2002; Denmark, Greece and Luxembourg, not available.

(2) Sweden, provisional; Malta, 2002; Denmark, Greece and Luxembourg, not available.

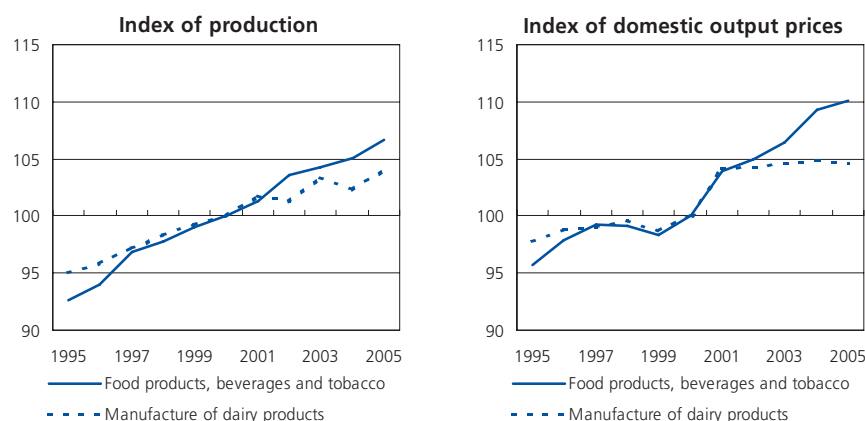
(3) Malta and Sweden, 2002; Denmark, Greece, Ireland and Luxembourg, not available.

(4) Sweden, provisional; Malta, 2002; Denmark, Greece, Ireland and Luxembourg, not available.

Source: Eurostat (SBS)

Figure 2.4

Manufacture of dairy products (NACE Group 15.5)
Evolution of main indicators, EU-25 (2000=100)



Source: Eurostat (STS)

COSTS, PRODUCTIVITY AND PROFITABILITY

The apparent labour productivity of dairy products manufacturing in the EU-25 was EUR 46 200 per person employed in 2003, while average personnel costs were EUR 29 000 per employee. In both cases, these averages were higher than those for the food, beverages and tobacco manufacturing as a whole. On the other hand, the wage adjusted labour productivity ratio for dairy products in the EU-25 (160 %) was a little lower than that for the manufacture of food, beverages and tobacco (170 %).

The profitability of the dairy products manufacturing sector was much lower than for foods, beverages and tobacco manufacturing as a whole in 2003, with a gross operating rate of 6.2 % compared with 9.9 %. Among all of the Member States for which information ⁽¹³⁾ is available, with the exception of Cyprus, the gross operating rate for the dairy products manufacturing sector was below that of food, beverages and tobacco manufacturing.

⁽¹³⁾ Malta and Sweden, 2002; Denmark, Greece and Luxembourg, not available.

EXTERNAL TRADE

The EU-25 exported EUR 5.4 billion of dairy products and ice cream (CPA Group 15.5) in 2005. Principal export markets were the United States and Russia (13.3 % and 8.7 % respectively of all such extra-EU exports). Imports of dairy products into the EU-25 were valued at EUR 775 million in 2005, over half of which came from Switzerland (37.0 %) and New Zealand (19.3 %). The resulting EU-25 trade surplus in dairy products was EUR 4.6 billion, a value that was broadly steady since 2000.

Among the Member States, France recorded the largest trade surplus in dairy products in 2005 (a total of EUR 2.4 billion, of which EUR 0.9 billion was extra-EU trade). The Netherlands, Germany, Denmark and Ireland also registered (extra and intra-EU) trade surpluses for dairy products at or above EUR 1.0 billion. In contrast, Italy and the United Kingdom both recorded trade deficits in excess of EUR 1.0 billion in dairy products.

Table 2.15

Manufacture of dairy products (NACE Group 15.5)
Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (4)	Wage adjusted labour productivity (%) (4)	Gross operating rate (%) (4)
EU-25	3.1	90.5	9.5	46.2	29.0	160.0	6.2
1	Portugal (9.3)	Slovakia (93.9)	Cyprus (19.7)	Ireland (81.1)	Netherlands (50.4)	Latvia (228.9)	Latvia (11.4)
2	Latvia (9.2)	Czech Republic (92.9)	Sweden (14.3)	Netherlands (74.4)	Ireland (45.6)	Portugal (227.5)	Malta (10.9)
3	Lithuania (8.9)	Netherlands (92.2)	Lithuania (13.8)	Austria (67.8)	Germany (43.0)	Hungary (209.0)	Portugal (10.4)
4	Cyprus (7.3)	Estonia (91.6)	Ireland (11.1)	Germany (66.3)	Belgium (41.2)	United Kingdom (198.9)	United Kingdom (9.9)
5	Estonia (6.1)	Hungary (91.5)	Malta (11.1)	United Kingdom (64.2)	Austria (39.3)	Spain (194.3)	Spain (9.8)

(1) Latvia, Malta, Slovenia and Sweden, 2002; Belgium, Denmark, Greece and Luxembourg, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Malta, Slovenia and Sweden, 2002; Denmark, Greece and Luxembourg, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Malta and Sweden, 2002; Denmark, Greece and Luxembourg, not available.

(4) Malta and Sweden, 2002; Denmark, Greece and Luxembourg, not available; EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

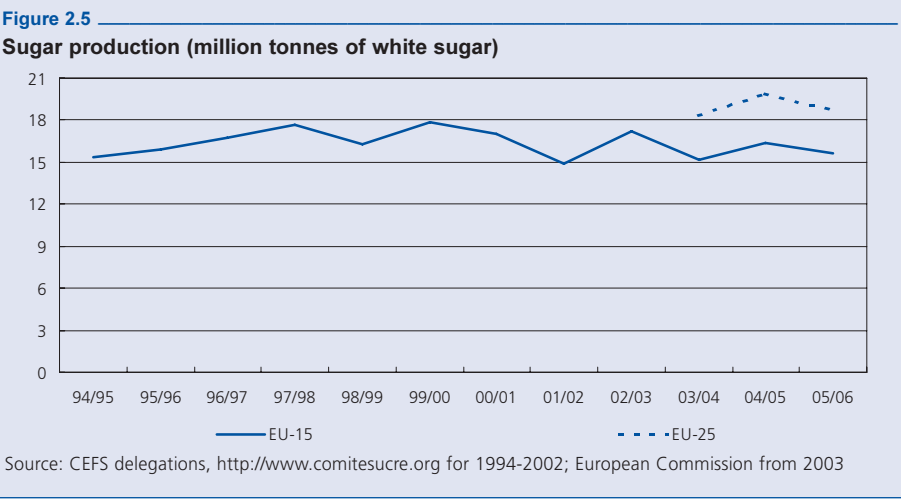
2.4: BREAD, SUGAR, CONFECTIONERY AND OTHER FOOD PRODUCTS

This subchapter refers to the products that are classified within NACE Group 15.8; it covers bread, sugar, confectionery and other food products (including pasta, tea and coffee, homogenised and dietetic foods).

Sugar is an important ingredient in the manufacture of chocolate, biscuits and confectionery. The decision by agricultural ministers in February 2006 to reform the sugar sector within the EU with a key 36 % cut in the guaranteed minimum sugar price (14) and to open its market completely to imports from the world's 49 poorest countries from 2009, should enable the large multinationals that dominate this market to source sugar from a wider range of suppliers at much more competitive prices.

The European Commission's Directorate-General for Agriculture has forecast a reduction in sugar production of 6-7 million tonnes, including a proposed and immediate quota reduction of 2.5 million tonnes in the EU-25 in 2006 (see Figure 2.5 for sugar production levels in terms of white sugar value). Financial incentives will also be offered by the Community to close down less competitive sugar factories, reinforcing the consolidation that has taken place in recent years.

(14) Council Regulation (EC) No 318/2006.



STRUCTURAL PROFILE

In 2003 the bread, sugar, confectionery and other food products manufacturing (NACE Group 15.8) sector was by far the largest of the NACE groups within food, beverages and tobacco manufacturing (NACE Subsection DA) in terms of both value added and employment; it generated EUR 66.7 billion of value added (34.9 % of the total) and employed 1.9 million people (42.7 % of those employed in food, beverages and tobacco manufacturing).

The manufacture of bread, fresh pastry goods and cakes (NACE Class 15.81) was the main activity within the bread, sugar, confectionery and other food products sector, generating EUR 26.6 billion in value added in 2003 (40.0 % of the sectoral total) and employing almost two thirds of the people in the sector (1.2 million).

The manufacture of bread, sugar, confectionery and other foods products in Germany generated the highest value added in 2003 (EUR 13.8 billion) of the Member States, with the United Kingdom and France also recording value added for these products above EUR 10 billion. However, Cyprus was the Member State that was most specialised in the manufacture of bread, sugar, confectionery and other foods products as they contributed more than twice the EU-25 average to national industrial value added.

Table 2.16
Manufacture of other food products (NACE Group 15.8)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (2)	Highest share of national industrial employment (%) (2)
1	Germany (13 821.4)	20.7	Germany (434.0)	22.7	Cyprus (9.0)	Cyprus (14.9)
2	United Kingdom (11 730.6)	17.6	France (287.4)	15.0	Netherlands (5.4)	Netherlands (7.5)
3	France (10 542.6)	15.8	Italy (233.2)	12.2	Latvia (4.8)	Belgium (7.4)
4	Italy (7 352.3)	11.0	United Kingdom (192.9)	10.1	United Kingdom (4.7)	Luxembourg (7.0)
5	Spain (4 223.9)	6.3	Poland (158.6)	8.3	France (4.5)	France (6.9)

(1) Malta, 2002; Greece and Sweden, not available.
(2) Malta, 2002; Greece, Ireland and Sweden, not available.
Source: Eurostat (SBS)

During the period 1995 to 2005, the production index of bread, sugar, confectionery and other foods products followed a very similar path and growth rate to the production index for food products and beverages as a whole. Apart from a modest decline of 1.0 % in output in 2003, there was year-on-year growth in output during this period, with an average annual growth rate of 1.8 %. There were some contrasting developments, however, in the production index of many of the activities within the sector. Although, typically, there were strong annual fluctuations in sugar manufacturing output (NACE Class 15.83), these occurred within the framework of a downward trend over the reference period (an average fall of 1.2 % per year), particularly since the relative peak in 1997. In contrast, there has been strong and relatively steady growth in the output of condiments and seasoning (NACE Class 15.87), homogenised food preparations and dietetic food (NACE Class 15.88) and the grouping of other miscellaneous food products n.e.c. (NACE Class 15.89).

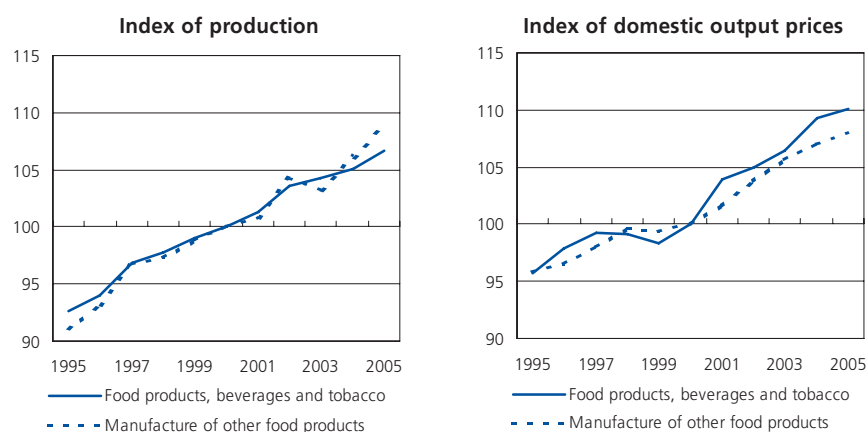
The domestic output price index for bread, sugar, confectionery and other foods products manufacturing increased by an average of 1.2 % per annum over the period 1995 to 2005, a similar rate to that for food and beverages as a whole. It is interesting to note that the output price of sugar manufacturing declined over the reference period, particularly in the period 1995 to 2000, despite there also being a fall in output over the same period. The output price of tea and coffee processing also declined, despite a surge in output prices in 2005, with steady falls in the period 1998 to 2004.

Table 2.17 Production value of selected other food products (CPA Group 15.8), EU-25, 2004 (EUR million)

	Prodcom code	
Cake and pastry products; other baker's wares with added sweetening matter	15.81.12.00	18 760
Sweet biscuits; waffles and wafers completely or partially coated or covered with chocolate or other preparations containing cocoa	15.82.12.53	4 778
Bakers' wares, no added sweetening (incl. crepes, pancakes, quiche, pizza; excl. sandwiches, crispbread, waffles, wafers, rusks, toasted, savoury or salted extruded/expanded products)	15.82.13.90	7 284
Refined white cane or beet sugar in solid form	15.83.12.30	13 020
Filled chocolate blocks; slabs or bars consisting of a centre (incl. of cream, liqueur or fruit paste; excl. chocolate biscuits) and chocolate blocks; slabs or bars (excl. filled, with added cereal; fruit or nuts, chocolate biscuits)	15.84.22.33 and 15.84.22.39	5 679
Chocolates (excl. those containing alcohol, in blocks; slabs or bars)	15.84.22.45	2 709
Filled chocolate confectionery (excl. in blocks; slabs or bars, chocolate biscuits, chocolates)	15.84.22.53	2 140
Uncooked pasta (excl. containing eggs, stuffed or otherwise prepared)	15.85.11.50	2 101
Cooked or uncooked pasta stuffed with meat; fish; cheese or other substances in any proportion	15.85.12.33	2 130
Extracts; essences and concentrates of coffee in solid form (incl. instant coffee)	15.86.12.30	2 283
Soups and broths and preparations therefor	15.89.11.00	3 308

Source: Eurostat (PRODCOM)

Figure 2.6 Manufacture of other food products (NACE Group 15.8)
Evolution of main indicators, EU-25 (2000=100)



Source: Eurostat (STS)

Table 2.18

Manufacture of other food products (NACE Group 15.8)**Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003**

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	4.9	78.7	21.3	34.9	22.4	155.7	13.7
1	Latvia (11.7)	Ireland (91.1)	Luxembourg (37.4)	Ireland (300.4)	Ireland (37.6)	Ireland (798.9)	Ireland (38.6)
2	Estonia (8.6)	Slovakia (86.1)	Austria (30.8)	United Kingdom (60.8)	Netherlands (33.4)	United Kingdom (203.7)	Malta (23.0)
3	Finland (7.1)	Poland (86.1)	Cyprus (27.0)	Netherlands (55.2)	Finland (32.5)	Latvia (191.3)	United Kingdom (19.8)
4	Cyprus (7.1)	Hungary (83.6)	Malta (26.7)	Finland (48.5)	Belgium (31.5)	Poland (180.4)	Italy (14.4)
5	Hungary (6.8)	Czech Republic (83.4)	Denmark (26.1)	Belgium (44.8)	Denmark (30.8)	Slovakia (167.7)	Latvia (14.0)

(1) Malta, 2002; Belgium, Greece and Sweden, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Malta, 2002; Greece and Sweden, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Malta, 2002; Greece and Sweden, not available.

Source: Eurostat (SBS)

COSTS, PRODUCTIVITY AND PROFITABILITY

The apparent labour productivity of bread, sugar, confectionery and other foods products manufacturing in the EU-25 was EUR 34 900 in 2003, about 18 % below the average for the manufacture of food, beverages and tobacco. Average personnel costs (EUR 22 400) for the sector were also lower than the average for food, beverages and tobacco manufacturing. These developments resulted in the wage adjusted labour productivity being lower than the average for food, beverages and tobacco manufacturing (155.7 % compared with 170 %).

In comparison to other NACE groups within food, beverages and tobacco manufacturing, the profitability of bread, sugar, confectionery and other foods products in the EU-25 was relatively high in terms of the gross operating rate (13.7 % in 2003), lower only than beverages manufacturing.

Among the Member States ⁽¹⁵⁾ for which data are available, apparent labour productivity levels and personnel costs were below national industrial averages in every case in 2003. Wage adjusted labour productivity was also below the national industrial average in most Member States, the exceptions being in Germany and the United Kingdom.

⁽¹⁵⁾ Greece, Ireland, Malta and Sweden, not available.

EXTERNAL TRADE

Extra EU-25 exports of the goods that are grouped together as bread, sugar, confectionery and other food products (CPA Group 15.8) in 2005 were valued at EUR 12.4 billion. The principal export markets for such goods were the United States (a 14.3 % share of exports) and Russia (8.0 %). The EU-25 imported bread, sugar, confectionery and other food products to the value of EUR 5.7 billion in 2005, notably from Switzerland (17.0 % share of such imports), the United States (7.2 %) and the Ivory Coast (7.0 %). These flows resulted in an EU-25 trade surplus for bread, sugar, confectionery and other food products of EUR 6.7 billion in 2005, the second largest trade surplus behind beverages within the ten CPA groups of food products, beverages and tobacco products.

All nine of the CPA classes within the grouping of bread, sugar, confectionery and other food products showed a trade surplus in 2005. The four largest were for tea and coffee (EUR 1.9 billion, CPA Class 15.86), other food products n.e.c. (EUR 1.4 billion, CPA Class 15.89), cocoa, chocolate and sugar confectionery (EUR 0.9 billion, CPA Class 15.84) and rusks, biscuits, pastry goods and cakes (EUR 0.9 billion, CPA Class 15.82). The surplus for tea and coffee has grown particularly strongly since 2000. Over the same period, there was a steady growth in imports of rusks and biscuits, and pasta (CPA Class 15.85) from relatively low levels, and strong growth in imports of cocoa, chocolate and sugar confectionery.

2.5: MISCELLANEOUS FOOD PRODUCTS

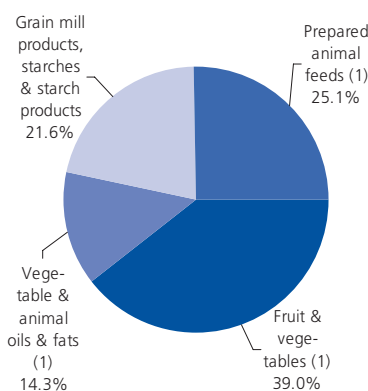
This subchapter deals with four different food processing activities that are each treated separately: the processing and preserving of fruit and vegetables (NACE Group 15.3); vegetable and animal oils and fats (NACE Group 15.4); grain mill and starch products (NACE Group 15.6) and prepared animal feed (NACE Group 15.7).

Within the grouping of activities in this subchapter, the processing and preserving of fruit and vegetables (NACE Group 15.3) was the largest in value added terms (EUR 10.9 billion in 2003). The market for industrial animal feed (NACE Group 15.6, which accounted for EUR 6.0 billion of value added in 2003) depends largely on the market for livestock products. In this way, many of the issues affecting the manufacture of meat and dairy products are also relevant to this sector (see Subchapters 2.1 and 2.3). Note that own-produced animal feed on farms is not included in this NACE group. The manufacture of grain mill and starch products (NACE Group 15.7) and the manufacture of animal oils and fats production (NACE Group 15.4) accounted for a further EUR 11.0 billion of value added in 2003.

PROCESSING AND PRESERVING OF FRUIT AND VEGETABLES (NACE GROUP 15.3)

The Common Market Organisation for fruit and vegetables is currently under review by the European Commission and reforms will be proposed by the end of 2006, among other things, to find a better balance within the value chain. Regulation 396/2005 of the European Parliament and Council on maximum residue levels of pesticides in food has also had consequences for frozen fruit and vegetables manufacturing.

Figure 2.7
Miscellaneous food products
(NACE Groups 15.3, 15.4, 15.6 and 15.7)
Breakdown of sectoral value added,
EU-25, 2003 (%)



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

The value added generated by the processing and preserving of fruit and vegetables in the EU-25 was EUR 10.9 billion, 5.7 % of the total value added generated by food, beverages and tobacco manufacturing (NACE Subsection DA) in 2003. With 265 000 people working in this activity, the average apparent labour productivity was EUR 41 000 per person employed.

The profitability of fruit and vegetables processing and preserving, as measured by the gross operating rate (9.6 %), and the wage adjusted labour productivity level (171 %), were very similar to the levels for food, beverages and tobacco manufacturing as a whole in 2003.

The manufacture of processed and preserved fruit and vegetables in the United Kingdom provided about one fifth (20.2 %) of the value added generated in this activity by the EU-25 as a whole in 2003. However, Malta (2002) was the Member State that was most specialised in this activity in value added terms, relative to industry as a whole.

The EU-25 was a net importer of processed and preserved fruit and vegetable products (CPA Group 15.3), with a trade deficit of EUR 1.9 billion in 2005. Almost exactly half (50.3 %) the imports of these products came from Turkey, China and Brazil. Exports of these goods from the EU-25 amounted to EUR 2.8 billion, with the United States and Russia being the principal export markets.

Table 2.19

Processing and preserving of fruit and vegetables (NACE Group 15.3) Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	United Kingdom (2 197.6)	20.2	United Kingdom (39.2)	14.8	Malta (2.4)	Malta (1.9)
2	Germany (1 575.8)	14.5	Poland (38.7)	14.6	Cyprus (1.3)	Cyprus (1.8)
3	Italy (1 340.1)	12.3	Spain (31.9)	12.0	Hungary (1.2)	Hungary (1.5)
4	France (1 264.0)	11.6	Germany (31.7)	12.0	Netherlands (1.1)	Poland (1.4)
5	Spain (1 116.5)	10.2	Italy (30.1)	11.4	Poland (1.1)	Spain (1.2)

(1) Malta, Slovakia and Sweden, 2002; Greece and Luxembourg, not available.

(2) Sweden, provisional; Malta and Slovakia, 2002; Greece and Luxembourg, not available.

(3) Malta, Slovakia and Sweden, 2002; Greece, Ireland and Luxembourg, not available.

(4) Sweden, provisional; Malta and Slovakia, 2002; Greece, Ireland and Luxembourg, not available.

Source: Eurostat (SBS)

Table 2.20
Production of crude vegetable oils and fats, EU-25 (thousand tonnes)

	2000	2004
EU-25	:	9 611
BE	667	494
CZ	:	228
DK	154	191
DE	2 828	2 854
EE	:	28
EL	160	151
ES	1 008	883
FR	1 263	1 374
IE	0	0
IT	555	567
CY	:	0
LV	:	4
LT	:	12
HU	:	213
MT	:	0
NL	1 171	860
AT	127	113
PL	:	366
PT	214	228
SI	:	2
SK	:	117
FI	79	72
SE	97	107
UK	820	747

Source: Fediol, <http://www.fediol.be>

VEGETABLE AND ANIMAL OILS AND FATS (NACE GROUP 15.4)

Vegetable and animal oils and fats generated EUR 4.0 billion of value added in 2003, representing 2.1 % of the food, beverages and tobacco manufacturing (NACE Subsection DA) total and had a workforce of 59 100 people (at 1.3 %, the share of the food, beverages and tobacco manufacturing total was the lowest together with that for the manufacture of tobacco).

The apparent labour productivity level of around EUR 62 000 per person employed in the manufacture of vegetable and animal oils and fats across the EU ⁽¹⁶⁾ in 2003 was considerably higher than the average for food, beverages and tobacco as a whole (EUR 42 700). Average personnel costs in the manufacture of these oils and fats were also relatively high at EUR 34 100 per employee for the EU-25.

⁽¹⁶⁾ EU average, 2003; the Netherlands and Sweden, 2002; excluding Denmark, Estonia, Greece, Latvia, Luxembourg and Malta.

Over half of the value added (54.0 %) generated by the manufacture of vegetable and animal oils and fats in the EU-25 came from production in Germany, Spain and Italy. Hungary, Spain and Cyprus were relatively specialised in this activity, as it contributed twice as much to national industrial value added as the EU average.

The production index of vegetable and animal oils and fats (NACE Group 15.4) in the EU-25 rose sharply in 1997 (growth of 14.7 %) to a relative peak, but contracted significantly in 1999 (down 10.7 %). Since then, there were fluctuations and a modest downward trend in output (an average decline of 1.2 % per annum). This contraction reflects contrasting developments for crude oils and fats (NACE Class 15.41) and refined oils and fats (NACE Class 15.42); there was a sharp decline in output of the former (down by an annual average of 4.7 % since 2000), but increases in output for the latter (up on average by 1.0 % per annum from 2000 to 2005). According to FEDIOL ⁽¹⁷⁾, the decline in the production of crude oils has been concentrated in the Netherlands, Belgium, Spain and the United Kingdom (see Table 2.20).

The EU-25 had a trade deficit in vegetable and animal oils and fats (CPA Group 15.4) to the value of EUR 5.8 billion in 2003. This was the second largest deficit among the CPA groups of the food, beverages and tobacco products (CPA Subsection DA). Imports of these oils and fats were valued at EUR 8.2 billion in 2003, with over half (55.0 %) of these coming from Argentina and Brazil. The vast majority of imports (almost 90 %) were of crude oils and fats, the largest part of which was soya for animal compound feed.

⁽¹⁷⁾ FEDIOL (EC Seed Crushers' and Oil Processors' Federation), more information at <http://www.fediol.be>.

GRAIN MILL AND STARCH PRODUCTS (NACE GROUP 15.6)

The EU-25 generated EUR 6.0 billion of value added in the manufacture of grain mill and starch products in 2003, representing 3.1 % of the total value added for the food, beverages and tobacco sector (NACE Subsection DA). A little under a quarter (23.0 %) of the value added was generated in the United Kingdom. These activities employed 107 900 people across the EU-25, representing 2.4 % of the workforce in the food, beverages and tobacco sector. Hungary was relatively specialised in the manufacture of grain mill and starch products; this activity contributed over twice as much to industrial value added in Hungary than the EU-25 average in 2003.

Apparent labour productivity was EUR 55 800 per person employed in the manufacture of grain mill and starch products in 2003, considerably higher than the food, beverages and tobacco manufacturing average. As average personnel costs were relatively high (EUR 31 200 per employee in 2003), wage adjusted labour productivity (178.9 %) was only a little higher than the food, beverages and tobacco sectoral average.

During the period between 1995 and 2005, there have been two distinct developments in the output of grain mill and starch products. There was a clear expansion in the production index of this activity until 2000, since when there has been relatively little overall change.

Table 2.21

Manufacture of grain mill products, starches and starch products (NACE Group 15.6)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	United Kingdom (1 385.1)	23.0	Germany (16.0)	14.8	Hungary (0.8)	Hungary (0.7)
2	France (1 033.2)	17.1	France (14.5)	13.5	Latvia (0.6)	Lithuania (0.6)
3	Germany (1 002.5)	16.6	United Kingdom (14.2)	13.1	Netherlands (0.6)	Latvia (0.5)
4	Italy (574.5)	9.5	Poland (13.4)	12.4	Slovakia (0.6)	Netherlands (0.5)
5	Netherlands (394.4)	6.5	Italy (10.4)	9.6	United Kingdom (0.6)	Poland (0.5)

(1) Estonia, Lithuania and Sweden, 2002; Greece, Cyprus, Luxembourg and Malta, not available.

(2) Sweden, provisional; Estonia and Lithuania, 2002; Greece, Cyprus, Luxembourg and Malta, not available.

(3) Estonia, Lithuania and Sweden, 2002; Greece, Cyprus, Ireland, Luxembourg and Malta, not available.

(4) Sweden, provisional; Estonia and Lithuania, 2002; Greece, Cyprus, Ireland, Luxembourg and Malta, not available.

Source: Eurostat (SBS)

PREPARED ANIMAL FEED
(NACE GROUP 15.7)

The manufacture of animal feed covers both the production of compound feed for farm animals and the production of prepared pet food. According to FEFAC ⁽¹⁸⁾, compound feed production in the EU-25 was 143.3 million tonnes in 2005 (see Table 2.22), of which 33 % was pig feed, 32 % was poultry feed and 27 % cattle feed.

According to short-term statistics, between 1995 and 2001, there was growth in the output of animal feed as a whole in the EU-25, albeit with some annual fluctuations. After 2001, however, there were year-on-year decreases in the production index that took the level of production in 2005 back to that of 1995.

The manufacture of animal feed in the EU-25 employed 130 000 people in 2003 and generated EUR 7.0 billion of value added, the largest share (around 70 %) being generated by prepared feeds for farm animals (NACE Class 15.71). The major producers of animal feed in the EU-25 were France, Germany, Spain and the United Kingdom. Nevertheless, Lithuania was the most specialised in relative terms, as these activities contributed a little over 3.5 times the EU-25 average to national industrial value added in 2003; the Netherlands, Hungary and Cyprus were also relatively specialised.

⁽¹⁸⁾ FEFAC (European Feed Manufacturers' Federation), more information at <http://www.fefac.org>.

Table 2.22

Production of compound feed, 2005 (thousand tonnes) (1)

	EU-25	Main EU-25 producers
Total	143 338	
Pig feed	47 336	(Spain 18.7 %, Germany 15.8 %, France 13.6 %)
Poultry	45 970	(France 19.6 %, United Kingdom 13.7 %, Italy 11.7 %)
Cattle feed	38 010	(Spain 16.3 %, Germany 16.1 %, France 11.8 %)
Others	8 957	(Spain 19.3 %, France 17.5 %, United Kingdom 14.3 %)
Milk replacers	1 756	:
Dry pet food	1 309	:

(1) Estimates.

Source: FEFAC, <http://www.fefac.org>

2.6: BEVERAGES

NACE Group 15.9 covers both alcoholic and non-alcoholic beverages. As such, the data presented in this subchapter include mineral waters, soft drinks, beer, wine and spirits. However, they do not include fruit and vegetable juices (NACE Class 15.32) or the processing of tea and coffee (NACE Class 15.86).

There are considerable differences in (apparent) consumption levels of beverages between Member States (see Table 2.23), which in large part reflect cultural differences, production patterns, and in the case of bottled water, also partly reflect the quality of tap water. In some Member States, beer is the most consumed alcohol drink (such as in the Czech Republic) and in others it is wine (as in France and Italy). It is interesting to note, however, that the consumption of wine and spirits in the EU as a whole has been decreasing steadily for a number of years (European Commission ⁽¹⁹⁾).

In June 2006, the European Commission announced plans ⁽²⁰⁾ to try to reform the wine subsector and, at the time of writing, plans to deliver a legislative proposal by the end of 2006. In view of market imbalances and changes in qualitative consumer demand, the European Commission views the key objectives for the wine subsector, among others, as the need to improve competitiveness, rationalise production structures, and modernise all levels from bottling to marketing.

STRUCTURAL PROFILE

The beverages sector (NACE Group 15.9) of the EU-25 generated EUR 33.8 billion of value added in 2003. Within food, beverages and tobacco manufacturing (NACE Subsection DA) as a whole, this represented the second largest share (17.7 %) at the NACE group level. The manufacture of beer (NACE Class 15.96) generated the largest value added (39.8 %) at the NACE class level within the EU-25's beverages sector (see Figure 2.8), followed by the manufacture of mineral water and soft drinks (NACE Class 15.98), the manufacture of distilled potable alcoholic beverages (NACE Class 15.91) and wines (NACE Class 15.93). The beverages sector was also a major employer, engaging 436 900 people throughout the EU-25. This was the equivalent of almost one in every ten people working within food, beverages and tobacco manufacturing as a whole (9.7 % in 2003).

⁽¹⁹⁾ DG Health (June 2006), Alcohol in Europe, <http://ec.europa.eu/health-eu/>.

⁽²⁰⁾ COM(2006) 319.

Table 2.23

Consumption of beverages per capita (litres per year)

	Pure alcohol, 2003 (1)	Spirits (pure alcohol), 2003 (1)	Wine, 2003 (2)	Beer, 2004 (3)	Carbonates, 2003	Bottled water, 2003 (2)
BE	11	1.4	25	93	104	134
CZ	16	3.8	11	157	130	87
DK	12	1.1	32	90	78	17
DE	13	2.0	24	116	82	125
EE	12	4.9	6	:	34	25
EL	9	1.6	22	39	59	59
ES	12	2.4	34	78	102	133
FR	12	2.4	55	33	42	142
IE	13	1.9	15	108	120	26
IT	10	0.4	51	30	53	198
CY	11	3.9	:	58	:	:
LV	10	6.1	7	:	28	37
LT	10	3.7	7	81	36	26
LU	18	1.6	56	107	:	:
HU	14	3.5	32	:	69	58
MT	7	0.7	10	:	:	:
NL	10	1.5	22	78	73	19
AT	13	1.4	29	109	90	101
PL	8	1.3	2	75	41	48
PT	11	1.4	53	62	53	84
SI	12	0.4	44	84	:	58
SK	12	3.5	11	:	74	64
FI	9	2.1	9	84	60	16
SE	7	0.9	17	52	71	20
UK	11	1.8	18	101	99	23

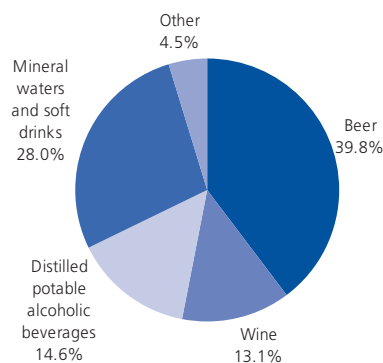
(1) Estimated amount of pure ethanol, as calculated from official statistics on local production, sales, imports and exports, taking into account stocks and home production.

(2) Apparent consumption based on sales.

(3) Greece, Spain and Luxembourg, 2003.

Sources: for pure alcohol and spirits - World Health Organisation, estimates of pure ethanol for those over 15 years old, <http://www.euro.who.int/hfad/b>; for wine - International Organisation of Vine and Wine, <http://www.oiv.int>; for beer - The Brewers of Europe, <http://www.brewersofeurope.org> (except for Czech Republic, Slovakia and Cyprus) and Kirin Brewery, <http://www.kirin.co.jp/english> (for Czech Republic, Slovakia and Cyprus); for carbonates - Union of EU Soft Drinks Associations, <http://www.unesda-cisda.org>; for bottled water - European Federation for Bottled Waters, <http://www.efbw.org>

Figure 2.8

Manufacture of beverages
(NACE Group 15.9)Breakdown of sectoral value added,
EU-25, 2003 (%)

Source: Eurostat (SBS)

Table 2.24

Manufacture of beverages (NACE Group 15.9)**Value added and employment: ranking of the top 5 Member States, 2003**

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (5 692.4)	16.8	Germany (78.2)	17.9	Latvia (5.9)	Cyprus (5.8)
2	United Kingdom (5 429.2)	16.1	United Kingdom (54.0)	12.4	Cyprus (5.9)	Malta (2.8)
3	France (4 880.7)	14.4	Spain (52.3)	12.0	Poland (5.4)	Latvia (2.0)
4	Spain (4 029.5)	11.9	France (47.4)	10.8	Malta (5.3)	Lithuania (2.0)
5	Poland (2 552.1)	7.5	Italy (37.4)	8.6	Lithuania (4.0)	Spain (1.9)

(1) Malta and Sweden, 2002; Greece, not available.

(2) Sweden, provisional; Malta, 2002; Greece, not available.

(3) Malta and Sweden, 2002; Greece and Ireland, not available.

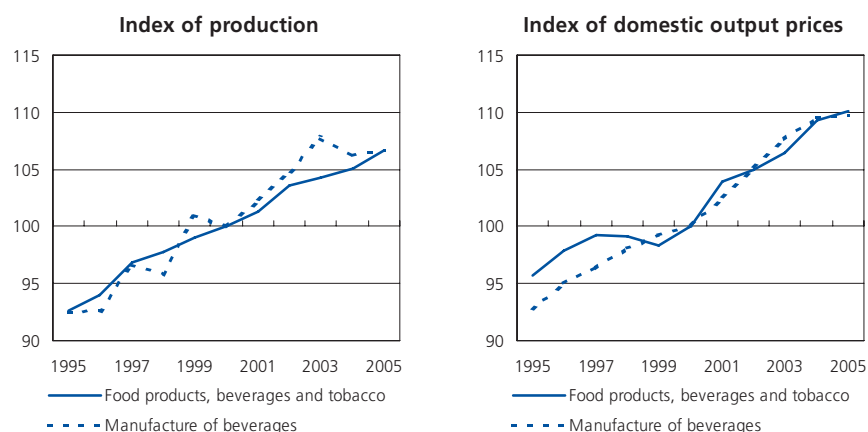
(4) Sweden, provisional; Malta, 2002; Greece and Ireland, not available.

Source: Eurostat (SBS)

A little under half (47.3 %) of the value added generated by beverages in the EU-25 in 2003, came from Germany (EUR 5.7 billion), the United Kingdom (EUR 5.4 billion) and France (EUR 4.9 billion). However, the proportion of industrial value added accounted for by beverages manufacturing in these Member States was no more than about the same as the EU-25 average, or indeed significantly less in the case of Germany. According to this share, Latvia, Cyprus and Poland were the Member States that were the most specialised in the manufacture of beverages, generating two and a half to three times as high a share of industrial value added in this sector as the EU-25 average.

Over the period between 1995 and 2005, there was an upward trend in the production index of beverages in the EU-25. There were relatively strong increases in output in 1997 (up 4.4 %), 1999 (up 5.3 %) and 2003 (up 2.8 %), followed in each case by relatively small declines (all between 0.8 % and 1.4 %). At the NACE class level the strongest expansion in output over the reference period was noted for mineral waters and soft drinks (average annual growth of 2.7 %), although recently output fell back from a peak in 2003. In the case of wine, output has stabilised at relatively high levels since 2002. In the case of beer, annual output was relatively stable, although a little down on its peak of 1995.

Figure 2.9

Manufacture of beverages (NACE Group 15.9)
Evolution of main indicators, EU-25 (2000=100)

Source: Eurostat (STS)

COSTS, PRODUCTIVITY AND PROFITABILITY

Average personnel costs within food, beverages and tobacco manufacturing ⁽²¹⁾ were highest in 2003 for those working in the beverages sector, an average of EUR 35 300 per employee. Nevertheless, high apparent labour productivity (EUR 77 400 per person employed) more than compensated for this, and the wage adjusted labour productivity ratio for beverages (219.5 %) was higher than any of the other nine NACE groups ⁽²²⁾ within food, beverages and tobacco manufacturing. Both measures of productivity were substantially above the average for food, beverages and tobacco manufacturing in almost all of the Member States ⁽²³⁾, the exception being for wage adjusted productivity in Cyprus. The profitability of beverages manufacturing, as measured by the gross operating rate, was also highest (15.3 %) within food, beverages and tobacco manufacturing (an average 9.9 %) in 2003.

⁽²¹⁾ Tobacco, not available.

⁽²²⁾ Vegetable and animal oils and fats (NACE Group 15.4), 2002; manufacture of tobacco products (NACE Division 16), not available.

⁽²³⁾ Malta and Sweden, 2002; Greece, not available.

EXTERNAL TRADE

The value of extra-EU-25 exports of beverages (CPA Group 15.9) grew to EUR 14.5 billion in 2005, representing a 29.5 % share of the value of extra-EU-25 exports of all food, beverages and tobacco (CPA Subsection DA). The key export market for EU beverages in 2005 was the United States (42.1 % in value terms), as this single export market dwarfed the next largest market, Japan (7.3 %). The value of the imports of beverages fell sharply from the level recorded in 2004 to EUR 3.1 billion in 2005, the lowest level since 2000, reflecting a steep decline in wine imports (CPA Class 15.93). The largest part of the trade surplus of EUR 11.3 billion for the beverages sector in 2005 (see Table 2.26) came from distilled alcoholic beverages, with other significant contributions from wine, beer and mineral waters and soft drinks.

Among the Member States, France recorded the largest trade surplus (intra- and extra-EU) in beverages in 2005 (EUR 7.6 billion) principally from wine, followed by Italy (EUR 2.8 billion) almost entirely from wine, and Austria (EUR 1.1 billion) entirely from mineral water and soft drinks.

Table 2.25

Manufacture of beverages (NACE Group 15.9)

Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	7.1	84.7	15.3	77.4	35.3	219.5	15.3
1	Latvia (19.4)	Italy (90.0)	Malta (35.2)	Ireland (290.9)	Ireland (58.1)	Poland (752.6)	Poland (47.6)
2	Lithuania (14.0)	Czech Republic (88.3)	Austria (25.4)	Netherlands (129.9)	Netherlands (51.9)	Ireland (500.5)	Malta (40.0)
3	Poland (10.0)	Portugal (87.6)	Cyprus (24.2)	France (103.0)	Belgium (51.0)	Latvia (397.5)	Ireland (34.9)
4	Estonia (9.2)	France (87.6)	Sweden (21.0)	United Kingdom (100.6)	Denmark (47.5)	Czech Republic (309.5)	Latvia (32.8)
5	Austria (9.0)	Slovakia (87.4)	Slovenia (20.0)	Denmark (99.9)	France (47.2)	Malta (293.3)	Czech Republic (22.0)

(1) Malta and Sweden, 2002; Belgium and Greece, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Malta and Sweden, 2002; Greece, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Malta and Sweden, 2002; Greece, not available.

Source: Eurostat (SBS)

Table 2.26

Beverages (CPA Group 15.9)

External trade, EU-25, 2005

	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Beverages	14 467	1.5	3 137	0.3	11 330	461.1
Distilled alcoholic beverages	5 619	0.6	852	0.1	4 767	659.3
Ethyl alcohol	49	0.0	192	0.0	-143	25.5
Wines	4 637	0.5	1 539	0.1	3 097	301.2
Cider and other fruit wines	45	0.0	17	0.0	28	268.1
Other non-distilled fermented beverages	119	0.0	4	0.0	115	2 744.5
Beer made from malt	1 730	0.2	242	0.0	1 488	716.0
Malt	655	0.1	1	0.0	654	71 135.9
Mineral waters and soft drinks	1 614	0.2	290	0.0	1 324	555.9

Source: Eurostat (Comext)

2.7: TOBACCO

NACE Division 16 covers the manufacture of all tobacco products, namely, cigarettes, cigarette tobacco, cigars, pipe tobacco, chewing tobacco and snuff.

The number of smokers in the European Union has fallen sharply over the past three years, according to a Special Eurobarometer survey for the European Commission released in May 2006 ⁽²⁴⁾. The situation varies across Member States with particularly strong declines in the United Kingdom, France and Spain, but little change in Austria or Greece. There have been a number of recent policy actions that may further reduce the number of smokers. Among them, the tobacco advertising Directive (2003/33/EC) has been in effect since 31 July 2005 ⁽²⁵⁾ (see Subchapter 22.4 for more details). The European Commission considers this to be one of the most effective ways of reducing smoking. In addition, more Member States have introduced or passed bills banning smoking in public places; after Ireland and Italy, full or partial bans have been introduced in Malta, the Netherlands, Sweden, Spain, Belgium and Scotland (with other parts of the United Kingdom, as well as Germany also committed in the near future).

⁽²⁴⁾ Special Eurobarometer 239.

⁽²⁵⁾ At the time of writing, it should be noted that the directive had not yet been transposed into national law in Germany and Luxembourg and only partially so in the Czech Republic, Italy, Hungary and Spain.

Table 2.27

Production value of selected other food products (CPA Division 16), EU-25, 2004 (EUR million)

	Prodcom code	
Cigars, cheroots and cigarillos containing tobacco or mixtures of tobacco and tobacco substitutes (excl. tobacco duty)	16.00.11.30	1 336
Cigarettes containing tobacco or mixtures of tobacco and tobacco substitutes (excl. tobacco duty)	16.00.11.50	13 968
Manufactured tobacco, extracts and essences, other homogenised or reconstituted tobacco, n.e.s.	16.00.12.90	478

Source: Eurostat (PRODCOM)

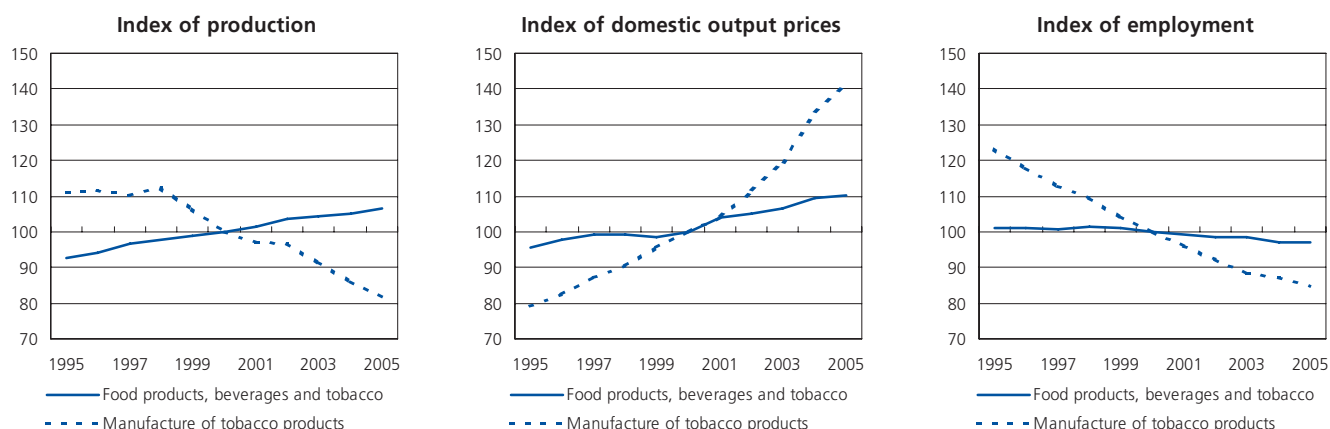
STRUCTURAL PROFILE

The tobacco manufacturing sector (NACE Division 16) in the EU-25 generated EUR 10.0 billion of value added in 2003, contributing 5.2 % to the total value added for food, beverages and tobacco manufacturing (NACE Subsection DA). In total, 776 billion cigarettes and 11 billion cigars containing tobacco were produced within the EU-25, according to PRODCOM data. Over two thirds (70.7 %) of the value added for the EU-25 tobacco sector came from Poland (21.0 %), the Netherlands (17.4 %), the United Kingdom (17.1 %) and Germany (15.1 %). The tobacco sector was relatively small in terms of numbers of people employed (60 000 in 2003), just under half of whom (48.0 %) were employed in the four aforementioned Member States. Poland and the Netherlands were relatively specialised in tobacco manufacturing activities, with the proportion of value added from this sector in their respective national industrial economies significantly higher than the EU-25 average.

Since 1998, there have been consecutive annual reductions in the production index of tobacco products (NACE Division 16), at an average rate of decline of 4.4 % per annum. In contrast, there has been a steeper rate of price increase over the period from 1995 to 2005. Prices have increased every year during this period at an average rate of 6.0 % per annum, with higher duties and taxes on tobacco being an important contributory factor.

Figure 2.10

Manufacture of tobacco products (NACE Division 16)
Evolution of main indicators, EU-25 (2000=100)



Source: Eurostat (STS)

COSTS, PRODUCTIVITY AND PROFITABILITY

Apparent labour productivity for the tobacco sector was very high at EUR 167 000 per person employed in 2003 ⁽²⁶⁾, both in comparison to the food, beverages and tobacco and industrial averages. Profitability as measured by the gross operating rate was 10.0 % for the EU-25's tobacco manufacturing sector in 2003, almost the same as for the food, beverages and tobacco sector as a whole (9.9 %). There were considerable differences, however, between Member States. This measure of profitability was substantially lower than the industrial average in some countries in 2003 (particularly in the United Kingdom, Germany and France) but more than double (such as in the Netherlands and Spain) or five times (in the case of Poland) the industrial average in others.

⁽²⁶⁾ EU average, 2003; Denmark and Italy, 2002; excluding the Czech Republic, Greece, Cyprus, Latvia, Lithuania, Luxembourg, Malta, Austria, Slovenia, Slovakia and Sweden.

EXTERNAL TRADE

EU-25 trade in tobacco products (CPA Division 16) was relatively small in 2005. Although exports of tobacco products rebounded strongly in 2005 to EUR 1.9 million, they represented only 3.8 % of the value of extra-EU-25 exports of food, beverages and tobacco products (CPA Subsection DA) as a whole. The main extra-EU-25 export markets for tobacco products in 2005 were Turkey (11.2 % of the total), Japan (6.0 %) and Taiwan (5.6 %).

Table 2.28

Manufacture of tobacco products (NACE Division 16)

Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (2)	Wage adjusted labour productivity (%) (2)	Gross operating rate (%) (3)
EU-25	3.1	88.4	11.6	166.7	48.4	374.8	10.0
1	Hungary (9.8)	Belgium (93.6)	Spain (23.3)	Netherlands (374.1)	United Kingdom (75.3)	Poland (2 112.4)	Poland (76.0)
2	Poland (9.8)	France (93.1)	United Kingdom (21.5)	Ireland (346.0)	Ireland (73.8)	Netherlands (684.4)	Portugal (31.8)
3	Portugal (8.0)	Italy (90.6)	Denmark (19.5)	Poland (316.2)	Germany (67.6)	Ireland (468.8)	Netherlands (26.1)
4	Ireland (6.4)	Germany (90.1)	Portugal (19.2)	United Kingdom (303.4)	Netherlands (54.7)	United Kingdom (403.0)	Spain (23.1)
5	Denmark (5.8)	Netherlands (87.6)	Hungary (18.0)	Denmark (185.7)	France (54.4)	Denmark (393.4)	Ireland (12.4)

(1) Denmark, Italy and the United Kingdom, 2002; Belgium, the Czech Republic, Greece, Cyprus, Latvia, Lithuania, Luxembourg, Malta, Austria, Slovenia, Slovakia and Sweden, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Denmark and Italy, 2002; the Czech Republic, Greece, Cyprus, Latvia, Lithuania, Luxembourg, Malta, Austria, Slovenia, Slovakia and Sweden, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Denmark and Italy, 2002; the Czech Republic, Greece, Cyprus, Latvia, Lithuania, Luxembourg, Malta, Austria, Slovenia, Slovakia and Sweden, not available; EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

Table 2.29

Manufacture of food products and beverages (NACE Division 15)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million)	797 069	29 296		19 809	146 447	901		76 613	142 794	21 884	94 717					9 817	
Production (EUR million)		27 384		18 278	133 518	790		71 941	128 923	19 476	90 726					8 534	
Value added at factor cost (EUR million)	181 220	5 652		4 602	33 802	182		16 353	28 824	7 150	18 776					1 980	
Gross operating surplus (EUR million)	78 668	2 359		1 672	11 351	71		7 611	9 893	5 308	9 311					939	
Purchases of goods and services (EUR million)		23 455		15 471	109 737	711		61 987	112 520	14 308	75 992					7 858	
Gross investment in tangible goods (EUR million) (2)		1 089		924	4 539	61		3 699	4 966	456	3 791					462	
Number of persons employed (thousands)	4 434	98		85	855	19		376	649	49	441		35			139	
Personnel costs (EUR million)	102 552	3 293		2 930	22 452	111		8 742	18 931	1 842	9 465					1 041	
App. labour productivity (EUR thous./pers. emp.)	40.9	57.6		54.1	39.5	9.8		43.5	44.4	144.6	42.6					14.3	
Average personnel costs (EUR thous./employee)	24.8	37.3		34.9	27.6	6.0		24.8	31.0	37.5	29.7					7.7	
Wage adjusted labour productivity (%)	164.5	154.6		154.7	142.9	162.8		175.3	143.5	385.9	143.5					184.9	
Gross operating rate (%)	9.9	8.1		8.4	7.8	7.9		9.9	6.9	24.3	9.8					9.6	
Investment per person employed (EUR thousand) (2)		11.7		10.9	5.3	3.3		9.8	7.6	9.2	8.6					3.3	
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million)	47 696		27 309	11 133		2 624	8 989		100 356	2 123		5 233					
Production (EUR million)	41 923		24 939	10 328		2 255	8 132		91 256	1 887		4 839					
Value added at factor cost (EUR million)	8 772		6 900	2 412		369	2 146		29 423	321		912					
Gross operating surplus (EUR million)	3 758		4 384	1 094		131	800		14 589	151		494					
Purchases of goods and services (EUR million)	38 618		21 737	8 761		2 246	6 999		67 464	1 897		5 004					
Gross investment in tangible goods (EUR million) (4)	1 381		1 281	674		161	424		4 537	247		683					
Number of persons employed (thousands)	130		439	105		47	40		484	102		200					
Personnel costs (EUR million)	5 015		2 517	1 318		238	1 390		14 834	170		418					
App. labour productivity (EUR thous./pers. emp.)	67.3		15.7	23.0		7.9	53.7		60.8	3.1		4.6					
Average personnel costs (EUR thous./employee)	39.6		6.2	13.0		5.1	35.3		31.0	1.8		2.1					
Wage adjusted labour productivity (%)	170.0		251.9	176.5		154.5	152.3		196.1	175.6		213.7					
Gross operating rate (%)	7.9		16.1	9.8		5.0	8.9		14.5	7.1		9.4					
Investment per person employed (EUR thousand) (3)	10.6		2.9	6.4		3.4	10.6		9.3	2.4		3.4					

(1) Denmark, Italy and Slovakia, 2002. (2) Belgium, 2002. (3) The United Kingdom, 2002.
Source: Eurostat (SBS)

Table 2.30

Manufacture of tobacco products (NACE Division 16)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million) (2)	74 000	1 727		1 641	19 007	0		1 314	12 352	1 748	10 593					1 127	
Production (EUR million)		1 688		1 640	14 306	0		1 301	9 948	1 632	8 930					1 112	
Value added at factor cost (EUR million) (2)	10 000	239		257	1 510	0		538	628	275	352					140	
Gross operating surplus (EUR million)		138		192	709	0		303	404	216	100					91	
Purchases of goods and services (EUR million)		1 482		271	7 262	0		771	3 033	275	2 430					220	
Gross investment in tangible goods (EUR million) (3)		36		19	174	0		24	41	21	61					26	
Number of persons employed (thousands) (2)	60	2		1	12	0		5	4	1	8		0			2	
Personnel costs (EUR million) (2)	2 700	101		65	802	0		234	223	59	252					48	
App. labour productivity (EUR thous./pers. emp.)		103.8		185.7	127.1			99.6	153.0	346.0	42.5					67.4	
Average personnel costs (EUR thous./employee)		45.0		47.2	67.6			43.7	54.4	73.8	30.6					23.3	
Wage adjusted labour productivity (%)		230.7		393.4	188.1			227.9	281.3	468.8	138.8					289.4	
Gross operating rate (%) (2)	10.0	8.0		11.7	3.7			23.1	3.3	12.4	0.9					8.1	
Investment per person employed (EUR thousand) (3)		11.9		14.0	14.6			4.4	10.0	26.7	7.4					12.7	
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million)	5 684		2 641	404			108		12 792	509		673					
Production (EUR million)	5 481		2 675	408			91		12 421	520		681					
Value added at factor cost (EUR million)	1 744		2 101	181			19		1 710	78		49					
Gross operating surplus (EUR million)	1 483		2 007	129			6		1 286	28		24					
Purchases of goods and services (EUR million)	1 844		534	219			88		1 546	245		302					
Gross investment in tangible goods (EUR million) (4)	75		62	22			1		126	22		43					
Number of persons employed (thousands)	5		7	1			0		6	10		4					
Personnel costs (EUR million)	261		94	52			17		424	50		24					
App. labour productivity (EUR thous./pers. emp.)	374.1		316.2	136.6			48.9		303.4	7.6		12.1					
Average personnel costs (EUR thous./employee)	54.7		15.0	39.3			44.9		75.3	4.8		6.1					
Wage adjusted labour productivity (%)	684.4		2 112.4	347.4			108.9		403.0	156.2		197.4					
Gross operating rate (%)	26.1		76.0	31.8			5.4		10.1	5.5		3.6					
Investment per person employed (EUR thousand) (4)	16.2		9.3	16.4			3.6		21.0	2.2		10.7					

(1) Denmark and Italy, 2002. (2) EU-25, rounded estimate based on non-confidential data. (3) Belgium, 2002. (4) The United Kingdom, 2002.
Source: Eurostat (SBS)

Textiles, clothing, leather and footwear



The textiles, clothing and leather manufacturing sector in the EU is diverse in the goods that it produces; they range from traditional woollen weaves to high-tech cellulosic synthetic yarns and from industrial filters to cotton bed linen. The sector serves a broad range of specialist and mass production markets, both at home and abroad, that respond to fashion and style (such as clothes and soft furnishings) and technical specifications (such as protective wear and factory work wear).

The European textiles, clothing and leather manufacturing sector is in a state of continuous restructuring and modernisation. With the aim of trying to manage this change, various approaches and Community programmes have been put in place, such as the structural funds (2007–2013), the new globalisation adjustment fund, the European Technology Platform and the Competitiveness and Innovation Programme. Pressure for change continues to come from consumer developments, technological advances, the changes in different production costs, the growth in retailers' purchasing power, environmental issues on chemical use and wastewater discharge (see Chapter 5 on the many regulatory issues being addressed and the 1996 IPPC Directive, and the ongoing development of the REACH chemicals policy in particular) and the emergence of important international competitors. The response of the sector has centred on a move to higher value added goods (such as innovative industrial textiles or niche products), the sub-contracting of labour-intensive work or relocation of production facilities (firstly towards lower labour-cost zones in central and eastern Europe – see Map 3.1 for more detail – and then to the pan-Euro-Mediterranean zone), the use of labelling to underline respect of labour and environmental regulations, and the imposition of intellectual property rights (as provided for in the European Parliament and Council Directive 2004/48/EC) to help counter large-scale copying or counterfeiting of designs, models, brands and trademarks.

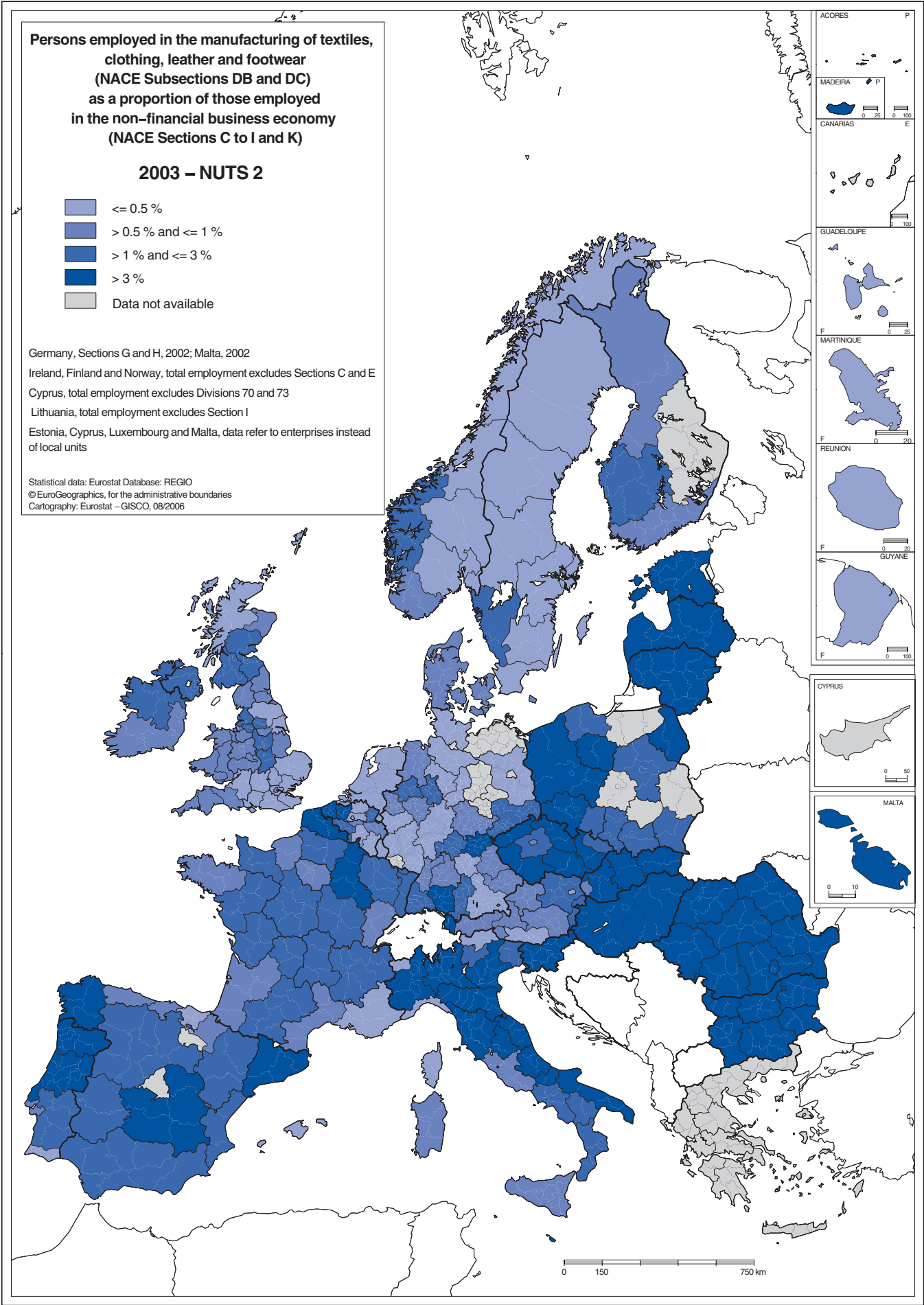
Perhaps the greatest pressure for accelerated change within the EU textiles, clothing and leather manufacturing sector now comes from international trade issues: these concern the elimination of textile and clothing import quotas that took place on 1 January 2005 and the ongoing negotiations on tariffs and non-tariff barriers (such as import charges and other taxes and duties) within the Doha Development Round of world trade talks. The issues faced have been highlighted by recent trade disputes with China, when a textile trade row began after a surge in imports (detailed in the subchapters that follow) of certain textile and clothing goods from China during the first few months of 2005. The European Commission initiated safeguard investigations, followed by the bilateral 'Shanghai' agreement with China. This agreement aims to manage the growth of some textile and clothing imports ⁽¹⁾ to between 8 % and 12.5 % per annum until the end of 2007, while enabling the affected segments of the EU's industrial sector (largely clustered in Greece, Italy and Portugal) time to adjust. The strength of the agreement was tested as imports for some goods rose above these restraints a few months later and incurred blocks at points of entry. However, the situation was resolved and then cemented by Commission Regulation (EC) No 1478/2005 of 12 September 2005 which amended common rules for imports of certain textile products. More recently, the European Commission has imposed punitive tariff duties on leather shoes from China and Vietnam after concluding that these countries had been paying hidden subsidies to their respective footwear industries, thereby allowing them to send goods to Europe at markedly lower prices than those in Asia.

⁽¹⁾ The agreement covers the following categories: t-shirts, pullovers, men's trousers, blouses, dresses, brassieres, flax yarn, cotton fabrics, bed linen, and table and kitchen linen.

This chapter covers the manufacture of textiles, clothing, fur and leather goods, as defined by NACE Subsections DB and DC, hereafter referred to as textiles, clothing and leather manufacturing. The manufacture of textiles (NACE Division 17) is dealt with in the first subchapter, while the manufacture of wearing apparel and the dressing and dyeing of fur (NACE Division 18), hereafter called the manufacture of clothing, is the subject of the second subchapter. The final subchapter concentrates on the manufacture of leather and leather products including that of footwear (as covered by NACE Division 19), hereafter referred to as leather manufacturing.

NACE

- 17: manufacture of textiles;
- 17.1: preparation and spinning of textile fibres;
- 17.2: textile weaving;
- 17.3: finishing of textiles;
- 17.4: manufacture of made-up textile articles, except apparel;
- 17.5: manufacture of other textiles;
- 17.6: manufacture of knitted and crocheted fabrics;
- 17.7: manufacture of knitted and crocheted articles;
- 18: manufacture of wearing apparel; dressing and dyeing of fur;
- 18.1: manufacture of leather clothes;
- 18.2: manufacture of other wearing apparel and accessories;
- 18.3: dressing and dyeing of fur; manufacture of articles of fur;
- 19: tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear;
- 19.1: tanning and dressing of leather;
- 19.2: manufacture of luggage, handbags and the like, saddlery and harness;
- 19.3: manufacture of footwear.



Box 3.1: end of the Agreement on Textiles and Clothing

Most of the world's trade is governed by rules adopted through the World Trade Organisation (WTO), of which the general agreement on tariffs and trade (GATT) is one of the most important. It is a multilateral treaty intended to help reduce trade barriers between signatory countries and to promote trade through tariff concessions. Before 1995, however, trade in textiles and clothing was organised on the basis of bilateral agreements that set quotas for exports from developing countries to industrial countries under a special trade regime outside normal GATT rules. These quotas were negotiated bilaterally and were governed by the rules of the Multifibre Arrangement (MFA), which permitted selective quantitative restrictions when surges in imports of particular products caused, or threatened to cause, serious damage to textiles or clothing manufacturing in the importing country.

From 1 January 1995, international trade in textiles and clothing underwent a fundamental change, as a ten-year transitional programme was agreed under the auspices of the WTO, namely, the Agreement on Textiles and Clothing (ATC). The ATC was a transitional instrument to oversee the integration of textile and clothing products into normal GATT rules, by means of progressively removing quotas. As of 1 January 2005 textile and clothing products were opened up to free trade.

Table 3.1
Manufacture of textiles, clothing and leather products (NACE Subsections DB and DC)
Structural profile, EU-25, 2003

	Value added (EUR million)	Share of industrial value added (%)	Number of persons employed (thousands)	Share of industrial employment (%)
Textiles, clothing and leather products (1)	66 000	3.9	3 000	8.5
Textiles (1)	33 000	1.9	1 170	3.3
Clothing (1)	22 100	1.3	1 200	3.4
Leather	11 581	0.7	517	1.5

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

Source: Eurostat (SBS)

STRUCTURAL PROFILE

The textiles, clothing and leather manufacturing sector of the EU-25 (NACE Subsections DB and DC) generated EUR 66.0 billion of value added in 2003 and employed 3.0 million people (see Table 3.1). Within industry as a whole (NACE Sections C to E), the textiles, clothing and leather manufacturing sector was considerably more significant in terms of employment (8.5 % of total industrial employment in 2003) than in terms of value added (3.9 % of industrial value added in 2003).

Within the textiles, clothing and leather manufacturing sector, textile manufacturing (covering the activities within NACE Division 17) accounted for half of the value added generated in 2003. The manufacture of clothing (as defined by the activities in NACE Division 18) generated about one third of the value added of the sector as a whole and was the second largest activity in these terms. In terms of employment, however, a slightly higher proportion of workers within the sector were engaged in the manufacture of clothing than textiles in 2003. By both measures, the manufacture of leather and leather products (NACE Division 19) was the smallest subsector within the textiles, clothing and leather manufacturing sector.

In each of the three subsectors within the textiles, clothing and leather manufacturing sector, Italy was the principal manufacturing Member State both in terms of value added and employment. A little over one third (34.1 %) of the value added generated by the textiles, clothing and leather manufacturing sector as a whole in the EU-25 came from Italy in 2003 (EUR 22.5 billion). The other main textiles, clothing and leather manufacturing countries within the EU-25 were France (a 12.5 % share of the EU-25 value added), Germany (12.2 %), Spain (10.1 %) and the United Kingdom (9.8 %). In relative terms, however, Portugal, Lithuania and Estonia were more specialised (even) than Italy in textiles, clothing and leather manufacturing (see Table 3.2), which contributed more than a tenth of industrial value added in 2003, more than double the EU-25 average (3.9 %).

Table 3.2
Manufacture of textiles, clothing and leather products (NACE Subsections DB and DC)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Italy (22 479.8)	34.1	Italy (757.5)	25.2	Portugal (14.9)	Portugal (30.8)
2	France (8 247.0)	12.5	Poland (298.9)	10.0	Lithuania (11.4)	Lithuania (23.5)
3	Germany (8 046.9)	12.2	Portugal (284.9)	9.5	Estonia (10.7)	Estonia (18.8)
4	Spain (6 695.6)	10.1	Spain (279.6)	9.3	Italy (10.1)	Italy (15.4)
5	United Kingdom (6 481.3)	9.8	France (227.4)	7.6	Luxembourg (7.7)	Malta (14.9)

(1) Hungary, Malta, Slovakia and Sweden, 2002; Denmark, Greece, Cyprus, Latvia, Austria, not available.

(2) Sweden, provisional; Hungary, Malta and Slovakia, 2002; Denmark, Greece, Cyprus and Austria, not available.

(3) Slovakia and Sweden, 2002; Denmark, Greece, Ireland, Cyprus, Latvia, Hungary, Malta and Austria, not available.

(4) Sweden, provisional; Hungary, Malta and Slovakia, 2002; Denmark, Greece, Ireland, Cyprus and Austria, not available.

Source: Eurostat (SBS)

The map on page 66 shows the contribution of the textiles, clothing and leather manufacturing sector to employment within the non-financial business economy (NACE Sections C to I and K) of each region. The most specialised region (at the level of detail shown in the map) was Norte (Portugal) and there were a number of specialist regions in Italy. The map also shows the concentration of specialist textiles, clothing and leather regions in central and eastern Europe, particularly in Romania and Bulgaria, but also certain regions of Slovakia and Hungary, Slovenia and the Baltic Member States (which are each considered as a single region at the level of detail in the map).

The marked downward trend in the index of production for the textiles, clothing and leather manufacturing sector continued during the period 1995 to 2005 (with an average decline of 4.3 % per annum), with some acceleration towards the end of this period (declines of more than 6 % were recorded in three of the last four years): this was in sharp contrast to the generally upward trend for industry as a whole - see Figure 3.1.

Between 1995 and 2003, the output price index for textiles, clothing and leather manufacturing increased at a similar pace to the average for industry as a whole. However, the strength of competition is probably the main reason why output prices for textiles, clothing and leather manufacturing did not respond to higher energy prices in 2004 and 2005 in the same way as many other industrial activities.

Small and medium-sized enterprises (SMEs), which employed less than 250 people, dominated the textiles, clothing and leather manufacturing sector in the EU-25. SMEs employed 2.1 million people throughout the EU-25 in 2003 (78.1 % of the total workforce) and generated EUR 48.3 billion of value added (72.9 % of the total).

Figure 3.1
 Manufacture of textiles, clothing and leather products (NACE Subsections DB and DC)
 Evolution of main indicators, EU-25 (2000=100)

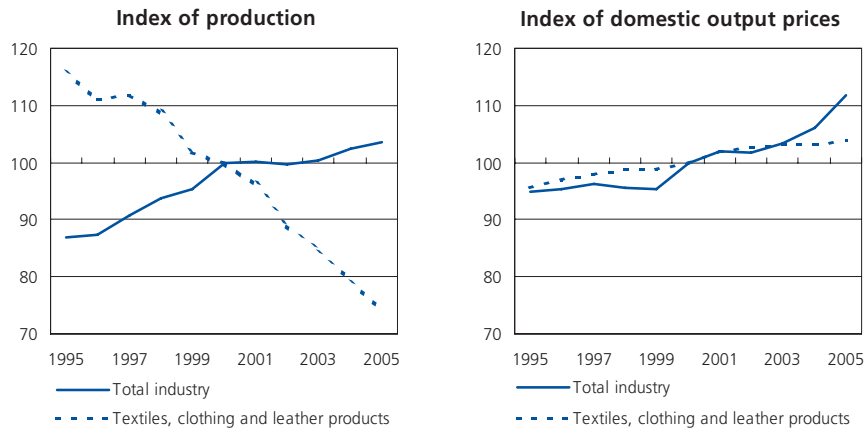
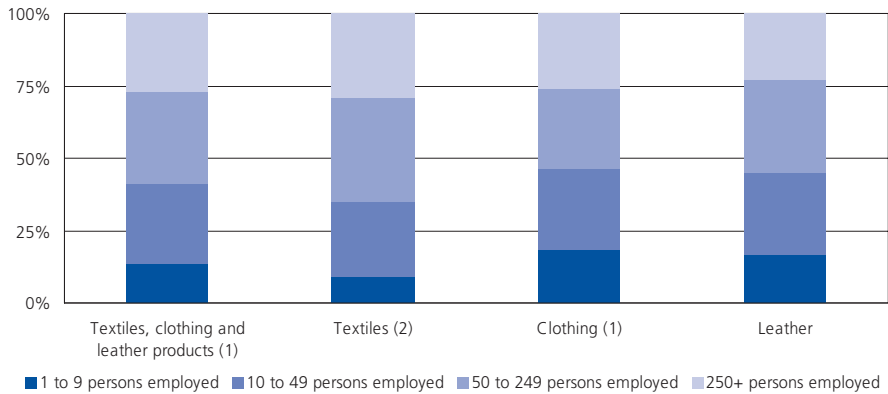


Figure 3.2
 Manufacture of textiles, clothing and leather products (NACE Subsections DB and DC)
 Share of value added by enterprise size class, EU-25, 2003 (%)



(1) Rounded estimates based on non-confidential data.
 (2) Rounded estimate based on non-confidential data for 1 to 9 persons employed.
 Source: Eurostat (SBS)

Table 3.3

Manufacture of textiles, clothing and leather products (NACE Subsections DB and DC)
Labour force characteristics, 2005

	Female		Full-time		Breakdown by age (% share of total)		
	Proportion of those employed (%) (1)	Index (industry=100) (1)	Proportion of those employed (%) (2)	Index (industry=100) (2)	< 30 years (3)	30-49 years	50+ years
EU-25	64.5	224.7	89.9	97.3	18.6	59.2	22.2
BE	51.6	212.4	83.5	93.8	14.5	66.5	19.0
CZ	76.1	213.8	95.3	97.7	16.0	56.6	27.4
DK	56.0	184.2	82.8	92.1	:	55.5	31.7
DE	58.4	212.4	77.7	87.8	15.0	53.1	31.9
EE	88.9	201.0	98.2	100.7	13.1	59.1	27.8
EL	55.4	214.3	97.1	99.0	14.6	60.0	25.4
ES	53.7	216.8	91.3	95.9	19.6	56.6	23.8
FR	59.2	207.0	88.1	93.8	11.4	61.6	27.1
IE	58.6	199.0	84.0	88.7	:	53.5	:
IT	61.2	214.8	88.3	94.6	18.0	61.5	20.5
CY	65.3	211.5	86.1	91.8	:	51.1	41.7
LV	87.2	210.9	92.9	96.4	12.9	62.5	24.6
LT	87.6	187.4	98.2	100.4	19.1	63.6	17.3
LU	:	:	97.3	104.1	:	:	:
HU	79.5	211.1	93.3	95.9	21.3	55.5	23.2
MT	59.0	253.7	97.5	102.0	57.9	:	:
NL	43.3	191.3	61.3	83.9	13.4	64.4	22.2
AT	55.1	218.0	81.5	90.6	25.0	55.9	19.1
PL	73.3	236.3	94.0	97.7	20.0	65.3	14.7
PT	71.2	174.7	96.0	98.9	28.8	56.6	14.5
SI	74.5	206.7	95.1	99.0	13.9	71.6	14.4
SK	80.9	223.4	99.1	100.1	20.2	61.9	17.9
FI	73.6	257.9	92.3	97.2	15.0	53.2	38.4
SE	45.9	184.1	78.2	86.7	:	52.6	35.1
UK	52.3	208.6	81.6	89.4	16.6	51.4	31.9

(1) Malta, 2004.

(2) Luxembourg, 2004.

(3) Finland, 2004

Source: Eurostat (LFS)

LABOUR FORCE CHARACTERISTICS

The textiles, clothing and leather manufacturing sector is the only industrial sector (among the NACE subsections within Sections C to E) that employs more women than men in the EU-25 as a whole; almost two thirds (64.5 %) of the sector's workforce were women in 2005. This characteristic was common to almost all of the Member States (see Table 3.3), but particularly distinctive in the majority of Member States that joined the EU in 2004.

Given the high proportion of women employed in the textiles, clothing and leather manufacturing sector, it is interesting to note that only a relatively small proportion of the workers in this sector were engaged on a part-time basis in the EU-25 (10.1 % as a whole in 2005 compared with an industrial average of 7.6 %), given that many activities with a high proportion of women in the workforce also record high part-time rates.

COSTS, PRODUCTIVITY AND PROFITABILITY

Average personnel costs in the textiles, clothing and leather manufacturing sector were EUR 20 000 per employee in 2003 (see Table 3.4), the lowest figure among the industrial subsections and EUR 12 600 per employee lower than the industrial average. Nevertheless, as a proportion of total operating expenditure, personnel costs accounted for an average of 21.3 % within the EU ⁽²⁾. In all Member States for which data are available ⁽³⁾, with the exception of Luxembourg, average personnel costs in this sector were below the national industrial average. These figures support the notion of a low-cost, labour intensive textiles, clothing and leather manufacturing sector in the EU.

⁽²⁾ EU average, 2003; Hungary, Malta, Slovakia and Sweden, 2002; excluding Denmark, Greece, Cyprus, Latvia and Austria.

⁽³⁾ Hungary, Malta, Slovakia and Sweden, 2002; Denmark, Greece, Cyprus, Latvia, and Austria, not available.

Table 3.4

Manufacture of textiles, clothing and leather products (NACE Subsections DB and DC)**Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003**

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	3.4	78.7	21.3	24.0	20.0	130.0	8.4
1	Malta (8.3)	Luxembourg (82.9)	Slovakia (31.9)	Luxembourg (223.9)	Luxembourg (73.5)	Luxembourg (304.6)	Luxembourg (27.0)
2	Slovakia (8.0)	Italy (82.1)	Lithuania (31.5)	Belgium (44.7)	Netherlands (35.0)	Malta (170.2)	Malta (17.6)
3	Lithuania (6.2)	Belgium (81.3)	Hungary (29.8)	Netherlands (44.2)	Belgium (32.5)	United Kingdom (153.6)	United Kingdom (13.7)
4	Portugal (5.4)	Poland (81.2)	Malta (29.7)	Germany (40.2)	Sweden (32.0)	Belgium (137.4)	Poland (11.5)
5	Czech Republic (5.2)	Slovenia (78.4)	Finland (28.3)	Finland (39.9)	Germany (31.6)	Estonia (135.2)	Finland (11.4)

(1) France, Hungary, Malta, Slovakia and Sweden, 2002; Belgium, Denmark, Greece, Cyprus, Latvia and Austria not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Hungary, Malta, Slovakia and Sweden, 2002; Denmark, Greece, Cyprus, Latvia and Austria not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Hungary, Malta, Slovakia and Sweden, 2002; Denmark, Greece, Cyprus, Latvia and Austria not available; EU-25, rounded estimate based on non-confidential data. Source: Eurostat (SBS)

Apparent labour productivity in the textiles, clothing and leather manufacturing sector of the EU-25 was EUR 24 000 per person employed in 2003, about half the industrial average. Within the sector, the apparent labour productivity levels in the manufacture of clothing NACE Division 18) was particularly low at EUR 18 500 per person employed. Wage adjusted labour productivity for the sector was 130 % in 2003 for the EU-25, less than the industrial average of 152 %.

Among the Member States, the apparent labour productivity of the respective textiles, clothing and leather manufacturing sectors was significantly below national industrial averages in each country⁽⁴⁾ except for Luxembourg (where it was a little over three times as high as the industrial average).

The gross operating rate of the EU-25's textiles, clothing and leather manufacturing sector was 8.4 %. As such, this measure of profitability was below the average rate for industry (10.3 %) as a whole.

⁽⁴⁾ Hungary, Malta, Slovakia and Sweden, 2002; Denmark, Greece, Ireland, Cyprus, Latvia, and Austria, not available.

EXTERNAL TRADE

The value of extra-EU-25 imports of textiles, clothing and leather goods (CPA Subsections DB and DC) rose sharply to EUR 95.8 billion in 2005, the year of trade liberalisation for many of these goods. This level of imports represented 8.9 % of the value of all imports of industrial goods (CPA Sections C to E). Although the value of textiles, clothing and leather goods' exports also rose sharply to EUR 49.8 billion, the EU-25's trade deficit in these goods widened to EUR 46.0 billion in 2005. Much of the widening in this deficit resulted from an increase in the deficit for textile products (CPA Division 17) and leather goods (CPA Division 19) to EUR 7.3 billion and EUR 7.5 billion respectively in 2005. Nevertheless, by far the largest deficit (EUR 31.2 billion) remained for clothing products (CPA Division 18).

The widening trade deficit may also be explained by the rapid increase in the rate at which imports from China arrived in the EU; according to import statistics from the European Commission's Directorate General for Trade, in the first nine months of 2005 the volume of textiles and clothing goods from China rose by 40 % and the value by 45 % in current terms. Overall, China's market share in textiles, clothing and leather goods' imports to the EU-25 rose to 31.4 % in 2005.

The growth in imports of footwear to the EU-25 from China and Vietnam is the subject of anti-dumping measures. The value of imports of footwear from China in 2005 was 170 % higher in current prices than in 2004, reaching EUR 4.8 billion. China and Vietnam have tightened their grip on the EU's footwear market as their shares of EU-25 imports of footwear were 39.1 % and 17.1 % respectively.

Among the Member States, Italy had the largest trade (intra- and extra-EU combined) surplus (EUR 16.1 billion) in textiles, clothing and leather goods in 2005. This surplus, however, narrowed progressively between 2000 and 2005, for both extra-EU-25 partners (EUR 3.7 billion in 2005) and intra-EU-25 partners (EUR 12.4 billion). Trade surpluses recorded for Belgium (EUR 2.2 billion) and Portugal (EUR 1.5 billion) also narrowed after 2000, although in the case of the former due to a widening deficit in extra-EU-25 trade and in the case of the latter principally due to a narrowing of the intra-EU-25 trade surplus.

Table 3.5

Textiles and textile products; leather and leather products (CPA Subsections DB and DC)**External trade, EU-25, 2005**

	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Textiles, clothing and leather products	49 760	5.0	95 794	8.9	-46 034	51.9
Textiles	23 121	2.3	30 464	2.8	-7 343	75.9
Clothing	14 516	1.5	45 754	4.2	-31 238	31.7
Leather	12 123	1.2	19 576	1.8	-7 453	61.9

Source: Eurostat (Comext)

3.1: TEXTILES

This subchapter deals with the manufacture of textiles and includes processes such as spinning, weaving and the finishing of products, as classified within NACE Division 17. Unlike previous editions of this publication, the manufacture of knitted articles has been included in this subchapter to provide an overview with complete coverage of NACE Groups 17.1 to 17.7.

Expenditure on textiles (mainly household textiles and knitwear) was equal to only 0.5 % of total household expenditure within the EU-25 in 2004 (see Figure 3.3). However, the sector is of great importance for other downstream manufacturers, providing intermediate products like woven fabrics for clothing manufacturing and industrial textiles.

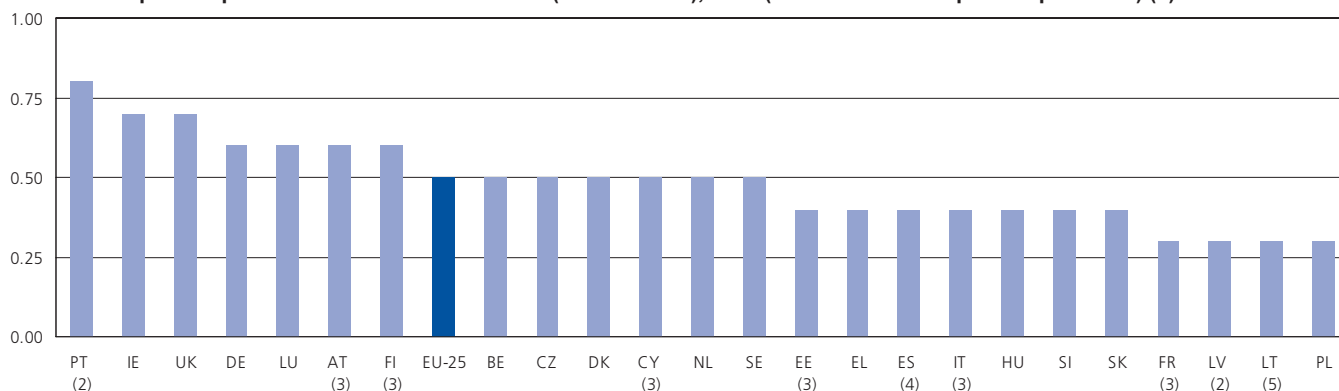
STRUCTURAL PROFILE

The textile manufacturing sector (NACE Division 17) in the EU-25 employed 1.2 million people and generated EUR 33.0 billion of value added in 2003. Within the sector, the manufacture of other textiles (NACE Group 17.5, which includes the manufacture of carpets and rugs, rope and non-woven articles) was the largest activity in terms of value added (EUR 8.0 billion), followed by the activity of textile weaving (NACE Group 17.2, EUR 7.0 billion). By far the smallest activity within the sector in terms of value added was the manufacture of knitted and crocheted fabrics (NACE Group 17.6, EUR 1.6 billion).

The textile manufacturing sector in Italy generated EUR 10.0 billion of value added in 2003, a little less than a third (30.2 %) of the EU-25 total and more than double the contribution of the second largest textile manufacturing country, Germany (14.0 %). The activities of the textiles manufacturing sectors in the Baltic Member States, as well as Italy, Portugal and Luxembourg (2002) generated between 4.0 % and 6.8 % of national industrial (NACE Sections C to E) value added in 2003, more than double the EU-25 average (1.9 %).

Figure 3.3

Final consumption expenditure on household textiles (COICOP 05.2), 2004 (% of total consumption expenditure) (1)



(1) Malta, not available.

(2) 2003.

(3) 2005.

(4) 2002.

(5) 2001.

Source: Eurostat (National accounts)

Table 3.6

Manufacture of textiles (NACE Division 17)

Structural profile, EU-25, 2003

	Value added (EUR million)	Share of industrial value added (%)	Number of persons employed (thousands)	Share of industrial employment (%)
Textiles (1)	33 000	1.9	1 170	3.3
Preparation and spinning of textile fibres (2)	3 890	0.2	140	0.4
Textile weaving (3)	7 000	0.4	225	0.6
Finishing of textiles	4 325	0.3	130	0.4
Manufacture of made-up textile articles, except apparel	5 169	0.3	209	0.6
Manufacture of other textiles (3)	8 000	0.5	230	0.7
Manufacture of knitted and crocheted fabrics	1 650	0.1	58	0.2
Manufacture of knitted and crocheted articles	3 612	0.2	174	0.5

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

(2) Number of persons employed and related share, rounded estimates based on non-confidential data.

(3) Value added and related share, rounded estimates based on non-confidential data.

Source: Eurostat (SBS)

Table 3.7

Manufacture of textiles (NACE Division 17)

Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Italy (9 982.3)	30.2	Italy (285.9)	24.4	Luxembourg (6.8)	Portugal (9.4)
2	Germany (4 631.8)	14.0	Germany (116.8)	10.0	Portugal (5.7)	Estonia (7.9)
3	United Kingdom (3 828.0)	11.6	Spain (105.0)	9.0	Estonia (5.5)	Lithuania (6.4)
4	France (3 756.5)	11.4	France (104.8)	9.0	Italy (4.5)	Belgium (5.9)
5	Spain (2 905.9)	8.8	United Kingdom (101.9)	8.7	Lithuania (4.2)	Latvia (5.8)

(1) Luxembourg, Hungary, Malta and Sweden, 2002; Greece, not available.

(2) Sweden, provisional; Luxembourg, Hungary and Malta, 2002; Greece, not available.

(3) Luxembourg, Hungary, Malta and Sweden, 2002; Greece and Ireland, not available.

(4) Sweden, provisional; Luxembourg, Hungary and Malta, 2002; Greece and Ireland, not available.

Source: Eurostat (SBS)

Table 3.8

Manufacture of textiles (NACE Division 17)

Labour force characteristics, 2005

	Female		Full-time		Breakdown by age (% share of total)		
	Proportion of those employed (%)	Index (industry=100)	Proportion of those employed (%) (1)	Index (industry=100) (1)	< 30 years (2)	30-49 years	50+ years (3)
EU-25	53.0	184.7	90.5	98.0	16.8	59.1	24.0
BE	45.0	185.4	86.1	96.8	15.9	67.2	16.9
CZ	71.4	200.5	96.4	98.9	16.4	55.5	28.1
DK	40.7	134.0	91.2	101.4	:	53.9	36.5
DE	52.8	192.0	81.0	91.5	14.1	54.5	31.4
EE	84.2	190.4	96.5	98.9	17.1	56.8	32.3
EL	43.1	166.7	98.5	100.4	13.4	63.7	22.9
ES	38.6	155.5	95.5	100.2	15.0	59.9	25.1
FR	47.5	166.1	89.7	95.5	8.9	61.8	29.4
IE	:	:	85.7	90.5	:	:	:
IT	52.9	185.7	89.0	95.3	17.3	61.8	20.9
CY	:	:	:	:	:	:	:
LV	74.8	180.8	99.0	102.7	22.1	57.3	33.0
LT	76.4	163.5	97.9	100.1	:	68.7	21.6
LU	:	:	100.0	107.0	:	:	:
HU	69.4	184.4	92.8	95.4	21.5	57.9	20.6
MT	:	:	:	:	:	:	:
NL	32.0	141.7	70.4	96.3	16.5	64.2	19.3
AT	42.1	166.7	87.0	96.7	:	58.5	24.6
PL	55.0	177.4	97.3	101.1	19.0	64.3	16.7
PT	60.0	147.1	95.1	97.9	28.1	56.6	15.3
SI	73.4	203.6	98.6	102.7	18.6	66.6	14.8
SK	67.3	185.9	100.0	101.1	18.9	52.9	28.2
FI	67.1	235.4	91.0	95.8	:	54.4	:
SE	41.3	165.7	79.1	87.7	:	53.7	36.1
UK	44.9	179.0	83.3	91.2	15.6	50.5	33.9

(1) Luxembourg, 2004.

(2) Estonia and Latvia, 2004.

(3) Austria, 2004.

Source: Eurostat (LFS)

During the period 1995 to 2005, there were two distinct developments in the production index of the EU-25's textiles manufacturing activity. Between 1995 and 2000, there was a relatively small decline in output compared with

that for textiles, clothing and leather manufacturing (NACE Subsections DB and DC) as a whole, with rises in 1997 and 2000 partially offsetting declines in other years. After 2000, however, there was a steady and steep

decline in the production index of textiles manufacturing (an average rate of 4.2 % per annum), a pattern reflected within six of the seven NACE groups covered by this subchapter (the exception being the output of other

Table 3.9

Manufacture of textiles (NACE Division 17)**Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003**

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	4.1	77.4	22.6	29.0	22.0	130.0	9.0
1	Malta (40.7)	Poland (87.9)	Malta (41.9)	Luxembourg (130.4)	Luxembourg (44.3)	Luxembourg (294.5)	Malta (36.2)
2	Latvia (15.8)	Luxembourg (86.4)	Ireland (30.2)	Denmark (50.9)	Denmark (37.7)	Malta (232.3)	Luxembourg (20.9)
3	Lithuania (8.4)	Slovenia (85.3)	Finland (29.5)	Finland (48.1)	Netherlands (34.8)	Poland (158.7)	Latvia (14.3)
4	Portugal (7.1)	Belgium (80.2)	Slovakia (29.1)	Belgium (47.1)	Finland (33.7)	Latvia (158.3)	Finland (13.9)
5	Czech Republic (6.5)	Italy (80.1)	Cyprus (29.0)	Netherlands (46.8)	Belgium (33.0)	Estonia (157.1)	United Kingdom (12.9)

(1) Hungary, Malta and Sweden, 2002; Belgium, Greece and Luxembourg, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Luxembourg, Hungary, Malta and Sweden, 2002; Greece, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Luxembourg, Hungary, Malta and Sweden, 2002; Greece, not available; EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

Table 3.10

Textiles (CPA Division 17)**External trade, EU-25, 2005**

	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Textiles	23 121	2.3	30 464	2.8	-7 343	75.9
Yarn and thread	1 621	0.2	2 309	0.2	-688	70.2
Fabrics	7 286	0.7	4 310	0.4	2 976	169.0
Made-up articles, except apparel	6 077	0.6	12 182	1.1	-6 104	49.9
Other textiles	4 965	0.5	2 762	0.3	2 203	179.7
Knitted or crocheted fabrics	1 370	0.1	561	0.1	809	244.3
Knitted and crocheted articles	1 784	0.2	8 338	0.8	-6 554	21.4

Source: Eurostat (Comext)

textiles – NACE Group 17.5 – which declined at a much slower rate). Nevertheless, the decline in the output of textiles after 2000 was slower than for textiles, clothing and leather manufacturing as a whole, where the index of production fell on average by 5.7 % per annum during the period 2000 to 2005.

Although the majority of the workforce in the textiles manufacturing sector were women (53.0 % in 2005), the proportion was less than that for textiles, clothing and leather manufacturing as a whole (64.5 %). In the Baltic Member States, as well as the Czech Republic, Slovenia and Hungary the female proportion of the textiles workforce remained at or above 70 % of the total workforce.

COSTS, PRODUCTIVITY AND PROFITABILITY

The apparent labour productivity of the EU-25's textiles manufacturing sector (NACE Division 17) was EUR 29 000 per person employed on average across the EU-25 in 2003. Within the sector, there was a significant spread in apparent labour productivity among the seven NACE groups that make up the sector; the lowest level (EUR 20 800 per person) being recorded for the manufacture of knitted and crocheted articles (NACE Group 17.7) and the highest (EUR 35 800, EU ⁽⁵⁾ average) for the manufacture of other textiles (NACE Group 17.5).

⁽⁵⁾ EU average, 2003; Luxembourg and Sweden, 2002; excluding Greece, Cyprus and Malta.

Personnel costs in the textiles manufacturing sector were EUR 22 000 per employee in 2003 on average across the EU-25. This figure was a little higher than the average for textiles, clothing and leather manufacturing (NACE Subsections DB and DC) but about EUR 10 000 per employee lower than the industrial (NACE Sections C to E) average. Average personnel costs in the textiles sector were below the industrial average (up to a third lower) in all Member States ⁽⁶⁾, except Luxembourg (2002) where average personnel costs were the same as the industrial average.

As an indicator of profitability, the gross operating rate of the EU-25 textiles manufacturing sector shows that the gross operating surplus was equal to some 9.0 % of turnover in 2003, a share that was slightly higher than that for the activities of textiles, clothing and leather manufacturing as a whole (8.4 %).

⁽⁶⁾ Luxembourg, Hungary, Malta and Sweden, 2002; Greece and Ireland, not available.

EXTERNAL TRADE

Extra-EU-25 trade of textile products (CPA Groups 17.1 to 17.7) increased considerably in 2005: the value of extra-EU exports rose sharply to EUR 23.1 billion and the value of extra-EU imports, particularly from China (see Table 3.11), even more to EUR 30.5 billion. The widening of the trade deficit for textile products as a whole to EUR 7.3 billion in 2005 from EUR 4.6 billion in 2004 is explained largely by the EUR 2.0 billion widening of the trade deficit (to EUR 6.1 billion in 2005) for made-up articles, except apparel (CPA Group 17.4). The value of imports of made-up articles, except apparel more than doubled to EUR 12.2 billion. The largest trade deficit, however, among the seven CPA groups within this subchapter was EUR 6.6 billion for knitted and crocheted articles (CPA Group 17.7).

In contrast, the EU-25's trade surplus for other textiles n.e.c. (CPA Group 17.5) continued to grow, doubling from its 2000 level to EUR 2.2 billion in 2005, principally from the fall in the value of imports of carpets and rugs. Woven textile products (CPA Group 17.2) had the largest trade surplus (EUR 3.0 billion), however, among the textile products groups that make up this CPA division. The trade surplus in woven textile products in 2005 was markedly lower, nevertheless, than its recent peak level (recorded in 2002), as a result of a sharp decline in extra-EU exports.

The value of textile product exports from Italy (EUR 12.5 billion) and the United Kingdom (EUR 12.4 billion) were higher than for any other Member State in 2005 and represented a joint 38.3 % share of EU-25 Member States' exports (intra- and extra-EU-25). In the case of the United Kingdom, the value of exports to non-member countries was one half (49.9 %) of the value of total textile exports, a slightly higher proportion than in the case of Italy (43.3 %).

Table 3.11
EU-25 import levels for selected textile imports from China, 2005
(% increase relative to 2004)

	Shanghai agreement import levels	Actual import levels Jan - Sep 2005
Table and kitchen linen	154	129
Flax or ramie yarn	167	234
Bed linen	177	189
Cotton fabrics	188	86

Source: European Commission, Directorate-General Trade; Eurostat (Comext)

The United Kingdom was also the largest importer of textile products (EUR 17.1 billion), accounting for one quarter (25.0 %) of EU-25 imports, considerably more than the next highest share, which was for Germany (15.9 %). Italy registered the largest trade surplus (EUR 6.0 billion) for textile products among the Member States, with Belgium being the only other Member State with a significant trade surplus (EUR 2.2 billion). In contrast, the United Kingdom recorded by far the largest trade deficit (EUR 4.7 billion) in these products in 2005.

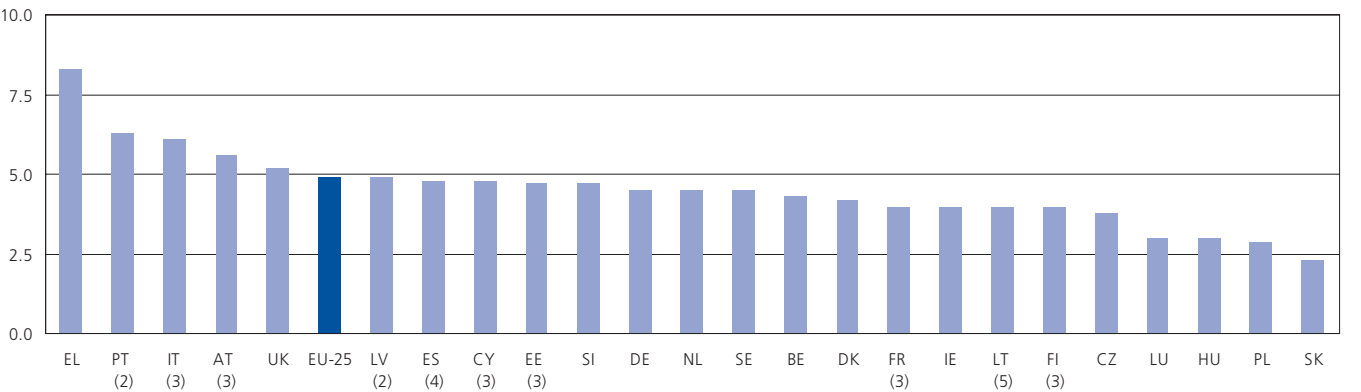
3.2: CLOTHING

This subchapter contains information on various clothing manufacturing activities (hereafter referred to as clothing manufacturing), as defined by NACE Division 18: the manufacture of leather clothes, work wear, outerwear, underwear, and articles of fur.

The market for clothing within the EU has often been considered as mature. However, this perception is changing as EU-25 clothing manufacturers try to respond to the challenges posed by greater global competition, changing consumer patterns as the EU-25 population ages, and the number of households (particularly single person ones) grows, and a falling

proportion of household expenditure spent on clothing (down from 5.5 % in 1995 to 4.9 % in 2004) at a time when prices have been falling. Clothing manufacturers within the EU-25 are looking to harness new production techniques and develop innovative, new, value added products (incorporating new yarn forms and fibres that may respond to elements like light,

Figure 3.4
Final consumption expenditure on clothing (COICOP 03.1), 2004 (% of total consumption expenditure) (1)



(1) Malta, not available.
(2) 2005.
(3) 2002.
(4) 2003.
(5) 2001.
Source: Eurostat (National accounts)

Table 3.12

Manufacture of clothing (NACE Division 18)
Structural profile, EU-25, 2003

	Value added (EUR million)	Share of industrial value added (%)	Number of persons employed (thousands)	Share of industrial employment (%)
Clothing (1)	22 100	1.3	1 200	3.4
Leather clothes	313	0.0	18	0.1
Other wearing apparel and accessories (1)	21 400	1.3	1 160	3.3
Fur and articles of fur (1)	:	:	18	0.1

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

Source: Eurostat (SBS)

Table 3.13

Manufacture of clothing (NACE Division 18)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Italy (6 977.7)	31.6	Italy (277.8)	23.2	Lithuania (6.8)	Lithuania (16.2)
2	France (3 094.2)	14.0	Poland (171.9)	14.3	Malta (6.3)	Portugal (14.6)
3	Germany (2 507.9)	11.3	Portugal (135.5)	11.3	Portugal (6.2)	Malta (9.2)
4	Spain (2 472.8)	11.2	Spain (112.7)	9.4	Estonia (4.3)	Estonia (9.1)
5	United Kingdom (2 120.5)	9.6	France (83.3)	6.9	Latvia (3.7)	Latvia (7.9)

(1) Luxembourg, Malta and Sweden, 2002; Greece, not available.

(2) Sweden, provisional; Luxembourg and Malta, 2002; Greece, not available.

(3) Luxembourg, Malta and Sweden, 2002; Greece and Ireland, not available.

(4) Sweden, provisional; Luxembourg and Malta, 2002; Greece and Ireland, not available.

Source: Eurostat (SBS)

heat, humidity, bacteria - so-called 'smart' clothes - or conduct electric currents that could provide a range of services - so called 'intelligent' clothes) for different segments of the market as a way of meeting these challenges.

STRUCTURAL PROFILE

The clothing manufacturing sector (NACE Division 18) in the EU-25 generated EUR 22.1 billion of value added in 2003, which represented almost one third (33.1 %) of the value added generated by the activities of textiles, clothing and leather manufacturing as a whole (NACE Subsections DB and DC). The sector is dominated by the manufacture of other wearing apparel and accessories (NACE Group 18.2), which provided almost all (96.8 %) of the value added generated within the sector and almost all (97.0 %) of the 1.2 million people in the workforce of the sector. The remaining activities of the manufacture of leather clothes (NACE Group 18.1) and dressing and dyeing of fur; manufacture of articles of fur (NACE Group 18.3) were of similar, small size in terms of their respective workforces and value added.

The clothing manufacturing sector in Italy was the largest within the EU-25, generating EUR 7.0 billion value added in 2003, a little under one third (31.6 %) of the total for the

EU-25, and employing almost one quarter (23.2 %) of the EU-25's workforce (see Table 3.13). After Italy, France, Germany, Spain and the United Kingdom were the Member States with the next largest clothing manufacturing sectors, each generating between EUR 3.1 billion and EUR 2.1 billion of value added. The importance of the clothing manufacturing sector within the industrial economy was greatest, however, in Lithuania where it contributed 6.8 % to national, industrial value added in 2003, a much higher proportion than the EU-25 average (1.3 %). In a similar vein, all of the Baltic Member States, as well as Malta (2002), Portugal and Italy were all relatively specialised in clothing manufacturing activities.

During the period 1995 to 2005 there was a sharp and continuous decline in the EU-25 output within the clothing manufacturing sector (an average decline in the production index of 6.3 % per annum). This was a faster rate of decline than that for textiles, clothing and leather manufacturing (NACE Subsections DB and DC) as a whole (-4.3 %). Within clothing manufacturing, the development of the production index for the manufacture of other wearing apparel and accessories (NACE Group 18.2) matched that of clothing manufacturing as a whole,

unsurprising, given its dominance. There was a sharper decline in the output of the relatively small activity of the dressing and dyeing of fur; manufacture of articles of fur (NACE Group 18.3) between 1996 and 1998, followed by a temporary period of stability until 2000 (unlike the situation for clothing manufacturing as a whole), before a further period of steep decline (an average loss of 11.2 % per annum from 2000 to 2005). Among the Member States, the Baltic Member States and the Czech Republic stood out, as their respective indices of production for clothing manufacturing remained almost unchanged between 2000 and 2005. In contrast, clothing manufacturing output in France more than halved over the same period, declining at an average annual rate of 15.5 %.

Among all the industrial NACE divisions, the clothing manufacturing sector (NACE Division 18) had the highest proportion of women in the workforce; in 2005, almost eight out of ten (79.5 %) of those employed in the EU-25 were female. In the Baltic Member States, the Czech Republic and Slovakia, this proportion rose to 90 % or more.

Table 3.14

Production value of selected items of apparel (CPA Groups 18.1-18.4), EU-25, 2004
(EUR million)

	Prodcom code(s)	
Men's and boys' trousers and breeches of denim (excl. knitted or crocheted, for industrial or occupational wear)	18.22.24.42	1 027
Men's and boys' shirts; under-shirts (1)	18.23.11.10 and 18.23.21.11	1 556
Women's and girls' blouses; shirts and shirt-blouses	18.23.13.10 and 18.23.23.15	1 251
Brassieres	18.23.25.30	1 217
T-shirts; singlets and vests of knitted or crocheted cotton (incl. bodies with a capped or very small sleeve)	18.23.30.30	1 741

(1) Estimated.

Source: Eurostat, PRODCOM

Table 3.15

Manufacture of clothing (NACE Division 18)
Labour force characteristics, 2005

	Female		Full-time		Breakdown by age (% share of total)		
	Proportion of those employed (%) (1)	Index (industry=100) (1)	Proportion of those employed (%) (2)	Index (industry=100) (2)	< 30 years (3)	30-49 years	50+ years
EU-25	79.5	277.1	88.4	95.7	19.9	59.0	21.1
BE	78.7	323.8	74.3	83.4	:	66.3	:
CZ	89.7	252.1	94.3	96.7	15.1	62.6	22.3
DK	77.2	253.7	72.0	80.1	:	57.4	:
DE	69.3	251.9	71.0	80.2	16.6	51.6	31.8
EE	96.4	218.0	98.8	101.2	14.9	59.5	25.6
EL	62.3	240.9	96.6	98.4	15.6	60.3	24.1
ES	76.5	308.8	87.7	92.1	23.0	52.6	24.5
FR	73.4	256.9	83.8	89.3	11.3	59.2	29.5
IE	70.7	240.3	82.3	86.9	:	:	:
IT	76.0	266.6	85.3	91.3	18.5	60.8	20.7
CY	79.2	256.7	84.8	90.5	:	56.6	40.2
LV	94.4	228.1	89.2	92.5	15.5	63.9	20.6
LT	93.5	200.1	98.4	100.6	23.0	61.4	15.7
LU	:	:	:	:	:	:	:
HU	84.6	224.8	93.0	95.7	21.3	54.8	23.9
MT	:	:	97.6	102.1	:	:	:
NL	75.5	333.7	51.9	70.5	:	61.9	:
AT	79.0	312.7	73.8	82.0	27.9	51.1	:
PL	85.4	275.3	92.6	96.2	20.5	65.2	14.3
PT	88.6	217.4	95.7	98.5	29.2	56.2	14.6
SI	81.3	225.6	91.3	95.1	11.8	75.3	13.0
SK	89.6	247.3	98.6	99.6	22.5	61.8	15.7
FI	86.1	301.6	93.1	98.0	:	47.3	43.5
SE	67.0	264.1	78.1	85.5	:	60.2	:
UK	63.2	252.0	78.1	85.6	18.9	52.5	28.6

(1) Sweden, 2004.

(2) The Netherlands and Sweden, 2004.

(3) Austria, 2004.

Source: Eurostat (LFS)

COSTS, PRODUCTIVITY AND PROFITABILITY

The apparent labour productivity of the EU-25's clothing manufacturing sector (NACE Division 18) was EUR 18 500 per person employed in 2003, a little over one fifth (22.9 %) less than the average level for textiles, clothing and leather goods manufacturing

(NACE Subsections DB and DC) as a whole. Indeed, this was the lowest level of apparent labour productivity within the industrial economy among the NACE divisions and EUR 31 100 less than the industrial average. These characteristics were common to most of the Member States, although in Germany, France and Ireland, the apparent labour

productivity of the clothing manufacturing sector was slightly above the average for textiles, clothing and leather goods manufacturing.

Table 3.16

Manufacture of clothing (NACE Division 18)**Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003**

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	2.7	79.0	21.0	18.5	14.4	128.0	8.6
1	Slovakia (8.7)	Belgium (85.2)	Slovenia (47.5)	Denmark (46.1)	Denmark (37.0)	United Kingdom (163.0)	Latvia (18.0)
2	Latvia (5.7)	Italy (82.4)	Slovakia (43.0)	Germany (42.4)	Netherlands (36.4)	Ireland (160.4)	United Kingdom (14.1)
3	Portugal (4.6)	Germany (81.2)	Lithuania (38.8)	Ireland (38.5)	Luxembourg (32.0)	Malta (151.8)	Ireland (13.1)
4	Denmark (4.5)	Sweden (80.4)	Luxembourg (38.1)	France (37.2)	Germany (30.8)	Latvia (150.2)	Malta (13.0)
5	Poland (4.4)	France (80.0)	Latvia (37.1)	Belgium (35.1)	Belgium (30.4)	Germany (137.8)	Lithuania (11.5)

(1) France, Malta and Sweden, 2002; Belgium, Greece and Luxembourg, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Luxembourg, Malta and Sweden, 2002; Greece, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Luxembourg, Malta and Sweden, 2002; Greece, not available; EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

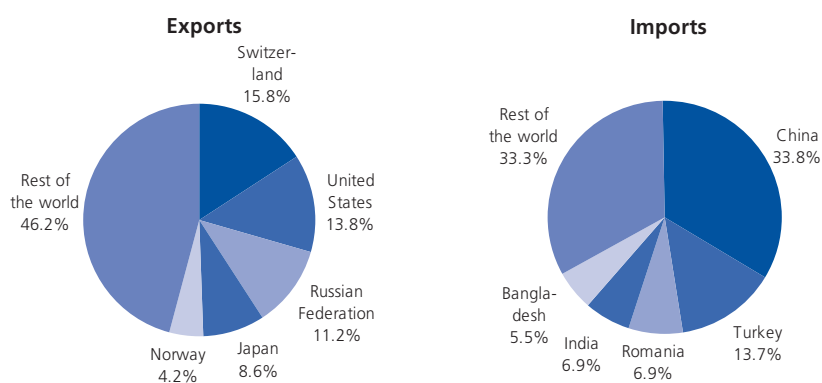
Average personnel costs in the EU-25's clothing manufacturing sector were EUR 14 400 per person employed in 2003. This was the lowest level among the three NACE divisions that make up textiles, clothing and leather goods manufacturing (NACE Subsection DB and DC).

The wage adjusted labour productivity ratio provides information on the proportion of personnel costs per employee that were covered by value added per person employed. For the EU-25, the wage adjusted productivity ratio for clothing manufacturing was 128 % in 2003, similar to the average rate for textiles, clothing and leather goods manufacturing. In the Netherlands, Slovenia and Sweden (2002), however, the wage adjusted productivity level in the clothing manufacturing sector was between 5 % and 8 % below parity (100 %) in 2003, while in Luxembourg it was considerably lower at 49.4 % (2002). The gross operating rate, a measure of profitability, for the EU-25's clothing manufacturing sector was 8.6 % in 2003, similar to that recorded for textiles, clothing and leather goods manufacturing as a whole. Among the Member States, the gross operating rate was slightly negative in Slovenia and strongly negative in Luxembourg (2002), indicating that value added failed to cover personnel costs.

EXTERNAL TRADE

EU imports of clothing (CPA Division 18) were valued at EUR 45.8 billion in 2005 (a rise of 2.8 % on the level of 2004), continuing the growth trend apparent since 2000. Although there was also an increase in the value of clothing exports to non-member countries to EUR 14.5 billion (a rise of 3.1 % on the level of 2004), the trade deficit widened to EUR 31.2 billion in 2005.

Figure 3.5

**Wearing apparel; furs (CPA Division 18)
Share in extra-EU trade, 2005 (%)**

Source: Eurostat (Comext)

Table 3.17

EU-25 import levels for selected clothing imports from China, 2005 (% increase relative to import levels for 2004)

	Shanghai agreement import levels	Actual import levels Jan - Sep 2005
Outwear		
Men's trousers	429	574
Pullovers	251	533
Dresses	302	314
Underwear		
Brassières	153	116
T-shirts	247	253
Blouses	269	284

Source: European Commission, Directorate-General Trade; Eurostat (Comext)

Table 3.18

Unit prices for selected clothing imports to the EU-25 from China and all other countries, 2005 (% increase relative to 2004)

	Price of Chinese imports Jan - Sep 2005	Price of all imports (excl. China) Jan - Sep 2005
Outwear		
Men's trousers	-21.5	3.8
Pullovers	-31.7	-2.0
Dresses	-59.9	5.4
Underwear		
Brassières	-26.0	16.2
T-shirts	-36.2	-7.2
Blouses	-26.8	2.3

Source: European Commission, Directorate-General Trade; Eurostat (Comext)

At a more detailed level, the largest clothing trade deficits (at the CPA class level) in 2005 were recorded for outerwear (CPA Class 18.22) and underwear (CPA Class 18.23), where deficits reached EUR 14.4 billion and EUR 12.9 billion respectively.

Italy recorded a trade surplus of EUR 4.1 billion for clothing products in 2005, by far the largest among the Member States. The next highest trade surpluses were registered for Portugal and Poland at EUR 0.8 billion. There were also smaller surpluses in most of the Member States that joined the EU in 2004 (the Czech Republic and Cyprus being the exceptions).

The relatively modest change in the value of clothing imports to the EU-25 from non-member countries masks not only a stark change in the source of those imports but also considerable changes in volumes and unit prices. Clothing imports to the EU-25 from China accounted for 34 % of the market in 2005, reaching the share that the Chinese authorities and the European Commission had estimated in August 2005 would be reached by the end of the Shanghai Agreement in 2007. Greater imports from China often displaced imports from other Asian countries (like Hong Kong, Indonesia and Bangladesh), as well as some North African countries and also Romania. This dominant position of Chinese products in the EU-25 market for clothing imports was achieved through a strong growth in import volumes (often beyond the negotiated Shanghai Agreement levels), while average unit prices fell (see Tables 3.17 and 3.18).

3.3: LEATHER AND FOOTWEAR

This subchapter covers the leather and leather products manufacturing sector of NACE Division 19, hereafter referred to as leather manufacturing. It includes tanning and dressing, as well as the manufacture of luggage, handbags and footwear.

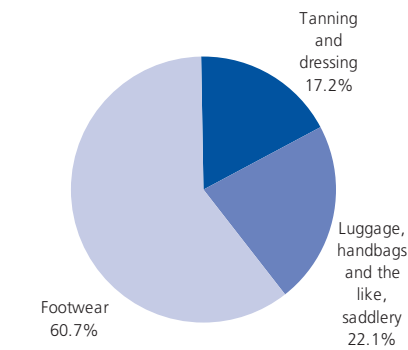
Trade aside, some of the other important issues for the European tanning activity concern the availability, quality and yield of hides and skins (bovine and ovine) as well as reducing the impact on the environment. According to the Confederation of National Associations of Tanners and Dressers of the EU (COTANCE), tanning activity in Europe has reduced the use of water in the tanning process, the discharge of chromium and also pollution in wastewater (7). Nevertheless, the use of chemicals remains important in the production of some leather goods, so this industry will be affected by the EU's new chemical legislation (REACH) - see Chapter 5 for more details - which at the time of writing is expected to be adopted by the end of 2006. With a view to these issues, new Community-funded research is being conducted into cost effective bio-manufacturing processes.

(7) Available at http://www.euroleather.com/tanweek_brochure.htm.

STRUCTURAL PROFILE

The leather manufacturing sector (NACE Division 19) in the EU-25 generated EUR 11.6 billion of value added in 2003, representing 17.4 % of the total value added of the textiles, clothing and leather manufacturing (NACE Subsections DB and DC) sector. A little under half (47.7 %) of the value added of the leather manufacturing sector came from Italy (EUR 5.5 billion). Both Italy and Portugal were relatively specialised in leather manufacturing, across all parts of the sector in the case of Italy, but focussed particularly on footwear (NACE Group 19.3) in Portugal; the value added generated by the leather manufacturing sector in these two Member States contributed 2.5 % and 3.0 % respectively to national industrial value added in 2003, much higher than the EU-25 average (0.7 %).

Figure 3.6
Manufacture of leather and leather products (NACE Division 19)
Breakdown of sectoral value added, EU-25, 2003 (%)



Source: Eurostat (SBS)

Table 3.19

Manufacture of leather and leather products (NACE Division 19)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Italy (5 519.8)	47.7	Italy (193.8)	37.4	Portugal (3.0)	Portugal (6.7)
2	France (1 396.3)	12.1	Portugal (62.3)	12.0	Italy (2.5)	Italy (3.9)
3	Spain (1 316.9)	11.4	Spain (61.8)	12.0	Slovenia (1.4)	Slovakia (3.6)
4	Germany (907.2)	7.8	Poland (41.8)	8.1	Slovakia (1.5)	Slovenia (2.9)
5	Portugal (665.5)	5.7	France (39.4)	7.6	Malta (1.3)	Spain (2.3)

(1) Malta, Slovakia and Sweden, 2002; Denmark, Greece, Cyprus, Latvia and Austria, not available.

(2) Sweden, provisional; Malta and Slovakia, 2002; Denmark, Greece, Cyprus and Austria, not available.

(3) Malta, Slovakia and Sweden, 2002; Denmark, Greece, Ireland, Cyprus, Latvia and Austria, not available.

(4) Sweden, provisional; Malta and Slovakia, 2002; Denmark, Greece, Ireland, Cyprus and Austria, not available.

Source: Eurostat (SBS)

Apart from a small rise in output in 1997, the production index of leather manufacturing in the EU-25 declined steadily and sharply over the period between 1995 and 2005 (an average annual fall of 5.5 %). After 2000, the rate of decline in leather manufacturing output accelerated, principally as a result of falling output for footwear (an average decline of 9.4 % per annum between 2000 and 2005).

A small majority of the EU-25's workforce in the leather manufacturing sector were women (53.0 % in 2005), significantly less than the proportion recorded for textiles, clothing and leather manufacturing as a whole (64.5 %). In Hungary, Estonia and Slovakia the female proportion of the workforce was situated between 70 % and 75 %, while in Greece and Spain women were in the minority (about 40 % of the workforce).

COSTS, PRODUCTIVITY AND PROFITABILITY

Both average personnel costs (EUR 17 100 per employee) and apparent labour productivity (EUR 22 400 per person employed) within the EU-25's leather manufacturing sector were below the average for textiles, clothing and leather manufacturing in 2005. Indeed, the apparent labour productivity of the leather manufacturing sector was less than half the level recorded for the EU-25 industrial average, and between 35 % and 70 % lower than national industrial averages across all of the Member States for which information was available ⁽⁸⁾.

⁽⁸⁾ Malta, Slovakia and Sweden, 2002; Denmark, Greece, Ireland, Cyprus, Latvia, Luxembourg and Austria, not available.

The wage adjusted productivity ratio for the EU-25's leather manufacturing sector was 130.7 %, a similar level to that recorded for textiles, clothing and leather manufacturing as a whole. The gross operating rate of 7.8 % in 2005 was lower, however, than the EU-25 average (8.4 %) for the textiles, clothing and leather manufacturing. This characteristic was noted for the majority of the Member States, although not in Germany, France, Ireland, the Netherlands or the United Kingdom.

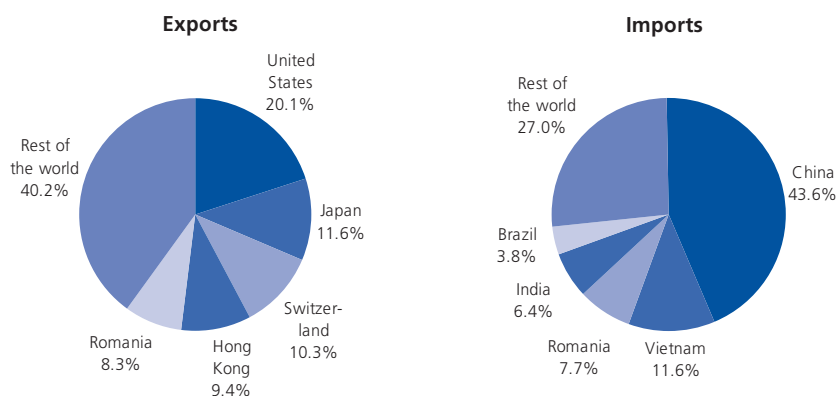
EXTERNAL TRADE

Imports of leather and leather products (CPA Division 19) from non-member countries increased by 9.6 % to a value of EUR 19.6 billion in 2005. Most of this rise could be attributed to footwear (CPA Group 19.3) imports from China (the subject of anti-dumping procedures from the European Commission). Empowered by Council Regulation No 384/96, the European Commission imposed duties on certain types of

shoes (excluding children's shoes and hi-tech sports shoes) from China (with duties of up to 19.4 %) and Vietnam (duties of up to 16.8 %) between April and August 2006.

Although the value of EU-25 exports to non-member countries (about half of which were attributable to Italy) remained steady at EUR 12.1 billion in 2005, the trade deficit in these goods widened to EUR 7.5 billion (25 % higher than in 2004). Only four Member States had a trade surplus for leather goods, although the surplus of EUR 6.1 billion for Italy was considerably greater than those recorded for Belgium, Portugal and Slovakia.

Figure 3.7
Leather and leather products (CPA Division 19)
Share in extra-EU trade, 2005 (%)



Source: Eurostat (Comext)

Table 3.20

Manufacture of textiles (NACE Division 17)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million) (2)	110 000	6 867	1 773	1 039	14 847	288	:	9 470	14 173	416	36 074	33	172	333	537	683	56
Production (EUR million)	:	6 620	1 688	1 010	13 787	282	:	9 261	13 735	379	35 768	31	168	326	527	610	54
Value added at factor cost (EUR million) (2)	33 000	1 818	555	359	4 632	88	:	2 906	3 757	128	9 982	12	62	101	169	197	34
Gross operating surplus (EUR million) (3)	10 594	595	220	101	924	32	:	801	661	9	3 508	4	25	23	112	27	20
Purchases of goods and services (EUR million)	:	4 963	1 259	686	10 084	201	:	6 827	10 492	276	26 081	21	113	230	362	481	20
Gross investment in tangible goods (EUR million)	:	:	104	34	425	12	:	345	363	11	1 585	0	24	26	:	45	14
Number of persons employed (thousands) (2)	1 170	39	58	7	117	11	:	105	105	4	286	1	11	19	1	35	1
Personnel costs (EUR million) (2)	23 600	1 223	334	258	3 708	56	:	2 105	3 095	119	6 474	9	38	77	57	171	14
App. labour productivity (EUR thous./pers. emp.) (2)	29.0	47.1	9.5	50.9	39.6	7.7	:	27.7	35.8	29.2	34.9	15.7	5.9	5.2	130.4	5.7	27.0
Average personnel costs (EUR thous./employee) (2)	22.0	33.0	6.1	37.7	32.7	4.9	:	21.3	29.9	27.8	26.6	11.6	3.7	4.0	44.3	5.3	11.6
Wage adjusted labour productivity (%) (2)	130.0	142.7	156.4	135.0	121.2	157.1	:	129.8	119.9	105.1	131.0	135.3	158.3	128.9	294.5	106.6	232.3
Gross operating rate (%) (2)	9.0	8.7	12.4	9.7	6.2	11.1	:	8.5	4.7	2.0	9.7	11.1	14.3	7.0	20.9	3.9	36.2
Investment per person employed (EUR thousand)	:	:	1.8	4.8	3.6	1.0	:	3.3	3.5	2.4	5.5	0.6	2.2	1.3	:	1.3	10.8
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million) (4)	2 748	2 344	2 500	4 152	1 098	274	658	1 103	10 113	400	:	818	:	:	:	490	:
Production (EUR million) (4)	2 609	2 188	2 235	4 065	675	256	643	1 023	9 433	401	:	837	:	:	:	443	:
Value added at factor cost (EUR million) (5)	800	801	696	1 267	201	84	256	359	3 828	105	:	293	:	:	:	179	:
Gross operating surplus (EUR million) (5)	240	243	308	360	45	7	92	88	1 307	42	:	111	:	:	:	43	:
Purchases of goods and services (EUR million) (4)	1 946	1 568	2 822	2 908	901	186	406	660	6 227	317	:	591	:	:	:	319	:
Gross investment in tangible goods (EUR million) (4)	67	74	144	271	41	16	33	40	329	80	:	145	:	:	:	22	:
Number of persons employed (thousands) (4)	17	18	85	87	13	18	5	10	102	35	:	98	:	:	:	4	:
Personnel costs (EUR million) (5)	561	559	388	907	155	77	170	272	2 521	63	:	183	:	:	:	136	:
App. labour productivity (EUR thous./pers. emp.) (5)	46.8	44.0	8.2	14.5	15.0	4.6	48.1	37.5	37.6	3.0	:	3.0	:	:	:	46.1	:
Average personnel costs (EUR thous./employee) (5)	34.8	31.9	5.1	10.6	11.9	4.2	33.7	32.8	25.7	1.8	:	1.9	:	:	:	35.2	:
Wage adjusted labour productivity (%) (5)	134.5	137.9	158.7	136.6	126.1	109.3	142.9	114.3	146.3	162.9	:	159.1	:	:	:	131.0	:
Gross operating rate (%) (5)	8.7	10.4	12.3	8.7	4.1	2.6	13.9	8.2	12.9	10.5	:	13.5	:	:	:	8.8	:
Investment per person employed (EUR thousand) (4)	3.9	4.1	1.7	3.1	3.0	0.9	6.2	4.2	3.2	2.3	:	1.5	:	:	:	5.6	:

(1) Luxembourg, Hungary and Malta, 2002. (2) EU-25, rounded estimate based on non-confidential data. (3) EU-25, 2002. (4) Sweden, provisional. (5) Sweden, 2002.
Source: Eurostat (SBS)

Table 3.21

Manufacture of clothing (NACE Division 18)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million) (2)	79 500	1 682	615	560	10 110	179	:	7 580	12 606	305	27 842	82	118	350	2 100	161	
Production (EUR million)	:	1 697	582	557	9 100	151	:	7 475	11 260	246	26 635	72	115	347	2 865	160	
Value added at factor cost (EUR million) (2)	22 100	316	244	151	2 508	68	:	2 473	3 094	103	6 978	31	58	162	1 315	57	
Gross operating surplus (EUR million) (2)	6 860	70	64	41	772	10	:	794	700	40	2 553	9	21	40	0	60	21
Purchases of goods and services (EUR million)	:	1 413	385	408	7 478	110	:	5 132	9 566	197	20 692	51	63	192	1 676	94	
Gross investment in tangible goods (EUR million) (3)	:	36	13	24	103	7	:	175	186	5	957	1	6	14	:	30	2
Number of persons employed (thousands) (2)	1 200	9	50	3	59	13	:	113	83	3	278	2	14	49	0	63	3
Personnel costs (EUR million) (2)	15 200	246	180	110	1 736	58	:	1 678	2 394	63	4 425	22	37	122	1 255	36	
App. labour productivity (EUR thous./pers. emp.) (2)	18.5	35.1	4.9	46.1	42.4	5.2	:	21.9	37.2	38.5	25.1	12.8	4.1	3.3	15.8	5.0	17.5
Average personnel costs (EUR thous./employee) (2)	14.4	30.4	4.6	37.0	30.8	4.4	:	16.4	29.6	24.0	19.8	11.0	2.7	2.5	32.0	4.3	11.5
Wage adjusted labour productivity (%) (2)	128.0	115.2	105.0	124.3	137.8	116.2	:	134.0	125.6	160.4	126.6	115.5	150.2	131.6	49.4	115.9	151.8
Gross operating rate (%) (2)	8.6	4.2	10.4	7.3	7.6	5.6	:	10.5	5.6	13.1	9.2	10.5	18.0	11.5	-9.8	6.0	13.0
Investment per person employed (EUR thousand) (3)	:	3.5	0.3	7.2	1.7	0.5	:	1.6	2.0	1.8	3.4	0.4	0.4	0.3	:	0.5	0.6
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million) (4)	616	953	1 951	3 951	267	253	577	351	6 370	675	:	1 658	:	:	:	153	:
Production (EUR million) (4)	544	799	1 863	3 774	243	238	484	303	5 504	656	:	1 642	:	:	:	145	:
Value added at factor cost (EUR million) (5)	165	257	751	1 360	124	114	193	96	2 121	255	:	770	:	:	:	50	:
Gross operating surplus (EUR million) (5)	50	38	218	267	-2	10	52	34	899	65	:	240	:	:	:	16	:
Purchases of goods and services (EUR million) (4)	448	704	1 240	2 604	139	139	391	206	4 118	437	:	970	:	:	:	103	:
Gross investment in tangible goods (EUR million) (4)	7	16	77	171	9	21	10	6	95	62	:	165	:	:	:	2	:
Number of persons employed (thousands) (4)	5	10	172	136	14	28	6	3	64	147	:	329	:	:	:	1	:
Personnel costs (EUR million) (5)	115	219	534	1 093	126	105	142	62	1 222	189	:	530	:	:	:	34	:
App. labour productivity (EUR thous./pers. emp.) (5)	34.5	26.4	4.4	10.0	8.9	4.0	35.0	26.9	33.3	1.7	:	2.3	:	:	:	48.7	:
Average personnel costs (EUR thous./employee) (5)	36.4	25.0	3.8	8.5	9.7	3.7	27.6	29.1	20.4	1.4	:	1.6	:	:	:	33.1	:
Wage adjusted labour productivity (%) (5)	94.9	105.5	113.7	118.2	92.4	109.3	126.9	92.2	163.0	128.5	:	144.2	:	:	:	147.0	:
Gross operating rate (%) (5)	8.2	4.0	11.1	6.8	-0.6	3.9	9.0	9.8	14.1	9.7	:	14.5	:	:	:	10.8	:
Investment per person employed (EUR thousand) (4)	1.5	1.6	0.4	1.3	0.6	0.7	1.7	1.6	1.5	0.4	:	0.5	:	:	:	2.0	:

(1) Luxembourg and Malta, 2002. (2) EU-25, rounded estimate based on non-confidential data. (3) Belgium and France, 2002. (4) Sweden, provisional. (5) Sweden, 2002.
Source: Eurostat (SBS)

Table 3.22

Manufacture of leather and leather products (NACE Division 19)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million)	46 181	355	222	:	3 547	50	:	5 173	4 266	63	25 046	:	:	38	0	301	36
Production (EUR million)	:	346	216	:	3 145	47	:	5 125	3 742	55	24 580	:	:	36	0	243	36
Value added at factor cost (EUR million)	11 581	82	76	:	907	15	:	1 317	1 396	20	5 520	:	:	11	0	103	12
Gross operating surplus (EUR million)	3 605	25	10	:	268	3	:	340	346	8	1 946	:	:	3	0	8	4
Purchases of goods and services (EUR million)	:	264	150	:	2 581	36	:	3 921	2 821	46	19 507	:	:	27	0	189	23
Gross investment in tangible goods (EUR million) (2)	:	7	7	:	69	5	:	106	106	2	535	:	:	1	0	7	1
Number of persons employed (thousands)	517	2	13	:	24	2	:	62	39	1	194	:	1	3	0	19	1
Personnel costs (EUR million)	7 976	57	66	:	639	12	:	977	1 050	12	3 574	:	:	8	0	95	8
App. labour productivity (EUR thous./pers. emp.)	22.4	41.7	5.6	:	37.8	6.1	:	21.3	35.5	36.0	28.5	:	:	4.0	:	5.3	15.9
Average personnel costs (EUR thous./employee)	17.1	31.9	5.4	:	28.1	4.8	:	16.8	27.1	22.6	22.2	:	:	3.1	:	5.0	11.1
Wage adjusted labour productivity (%)	130.7	130.5	104.3	:	134.5	126.4	:	126.8	130.7	159.5	128.6	:	:	130.4	:	105.5	143.0
Gross operating rate (%)	7.8	7.1	4.3	:	7.6	6.5	:	6.6	8.1	12.2	7.8	:	:	7.0	:	2.8	10.0
Investment per person employed (EUR thousand) (2)	:	2.9	0.5	:	2.9	2.0	:	1.7	2.5	3.1	2.8	:	:	0.5	:	0.4	0.9
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million) (3)	324	:	745	2 299	368	255	214	175	1 408	169	:	645	:	:	:	52	:
Production (EUR million) (3)	289	:	703	2 232	330	257	209	158	1 295	132	:	642	:	:	:	48	:
Value added at factor cost (EUR million) (4)	100	:	219	666	85	85	79	44	533	33	:	263	:	:	:	14	:
Gross operating surplus (EUR million) (4)	32	:	74	140	3	26	22	8	247	7	:	90	:	:	:	1	:
Purchases of goods and services (EUR million) (3)	219	:	542	1 624	278	182	140	114	858	137	:	417	:	:	:	38	:
Gross investment in tangible goods (EUR million) (3)	7	:	24	82	11	23	4	3	19	6	:	68	:	:	:	2	:
Number of persons employed (thousands) (3)	2	:	42	62	8	17	2	2	13	21	:	116	:	:	:	0	:
Personnel costs (EUR million) (5)	68	:	144	526	82	60	58	37	285	28	:	173	:	:	:	13	:
App. labour productivity (EUR thous./pers. emp.) (4)	44.6	:	5.2	10.7	11.3	5.1	33.1	30.3	39.8	1.6	:	2.3	:	:	:	36.1	:
Average personnel costs (EUR thous./employee) (5)	34.4	:	4.2	8.7	11.1	3.6	25.1	31.2	22.1	1.4	:	1.5	:	:	:	32.8	:
Wage adjusted labour productivity (%) (4)	129.6	:	123.1	122.6	101.4	142.7	131.5	97.0	180.0	121.0	:	149.0	:	:	:	109.9	:
Gross operating rate (%) (4)	9.8	:	10.0	6.1	0.9	10.0	10.3	4.2	17.6	5.4	:	13.9	:	:	:	2.7	:
Investment per person employed (EUR thousand) (3)	3.3	:	0.6	1.3	1.5	1.4	1.7	2.2	1.4	0.3	:	0.6	:	:	:	4.4	:

(1) Malta, Slovakia and Romania, 2002. (2) Belgium and France, 2002. (3) Sweden, provisional. (4) Sweden and Bulgaria, 2002. (5) Sweden, 2002.

Source: Eurostat (SBS)

Wood and paper



The Global Forest Resources Assessment (FRA 2005) of the FAO ⁽¹⁾ estimates that the area of forests and wooded land in the EU-25 was 166 million hectares in 2005, representing 36 % of the EU-25's territory. Since 1990, the area of forests and wooded land in the EU-25 has increased by an average of about one million hectares a year, making it one of the few regions in the world where the area of forestry land has been increasing.

According to the European Commission, 80 % of wood used in the EU-25 industrial processing and energy sectors is supplied domestically, using only 65 % of annual forest wood growth. Nevertheless, according to the Confederation of European Paper Industries (CEPI) ⁽²⁾, access

to affordable raw materials remains one of the key issues for European wood and paper enterprises, particularly in the first processing stages of the production chain. Some of this apparent paradox is explained by the increased use of forests for other functions (for carbon sequestration, for nature management and conservation, for recreation and for biomass in energy production), and may also be explained by changing global economic conditions (brought about by low cost competition and the issue of illegal logging). These issues of sustainability, the multifunctional role of forests and competitiveness are the focus of the June 2006 Communication of the European Commission ⁽³⁾ on an EU Forest Action Plan.

⁽³⁾ COM(2006) 302 final.

⁽¹⁾ Food and Agriculture Organization of the United Nations, <http://www.fao.org/forestry>

⁽²⁾ Confederation of European Paper Industries (CEPI), <http://www.cepi.org>

Table 4.1

Top ten enterprise (groups) in forest and paper activities, EU-25, 2005 (EUR million) (1)

		World ranking (sales)	Sales	Net income	Return on capital employed (%) (2)
Stora Enso	FI	3	13 188	-126	5.6
Svenska Cellulosa	SE	5	10 363	47	4.6
UPM	FI	7	9 348	261	6.8
Metsäliitto	FI	10	8 643	-50	0.4
Anglo American (Mondi)	UK	12	5 590	238	6.3
Smurfit Kappa	IE	17	4 213	-177	3.6
Sequana Capital	FR	18	4 067	356	1.4
DS Smith	UK	31	2 375	57	6.8
Cartiere Burgo	IT	34	2 202	69	1.7
Holmen	SE	41	1 754	135	5.3

(1) All figures reported for calendar year 2005, except DS Smith which is the year to 30 April 2005.

(2) Calculated as net income before unusual items, minority interest and interest expense, on an after-tax basis, divided by average total assets less average non-interest-bearing current liabilities.

Source: PricewaterhouseCoopers 2006 Global Forest and Paper Industry Survey, available at: <http://www.pwc-global.com/forestry>

This chapter covers some of the so-called forest-based activities: more specifically the manufacture of wood and wood products (classified under NACE Division 20) and the manufacture of pulp, paper and paper products (found under NACE Division 21). The former includes all stages of wood processing that follow on from the activity of forestry, while the latter covers downstream activities that use by-products from the initial processing of wood. Together, these activities are referred to, hereafter, as the wood and paper manufacturing sector. It is important to underline that this sector does not include forestry activities, which are not covered within this publication.

NACE

- 20: manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials;
- 20.1: sawmilling and planing of wood; impregnation of wood;
- 20.2: manufacture of veneer sheets; manufacture of plywood, laminboard, particle board, fibre board and other panels and boards;
- 20.3: manufacture of builders' carpentry and joinery;
- 20.4: manufacture of wooden containers;
- 20.5: manufacture of other products of wood; manufacture of articles of cork, straw and plaiting materials;
- 21: manufacture of pulp, paper and paper products;
- 21.1: manufacture of pulp, paper and paperboard;
- 21.2: manufacture of articles of paper and paperboard.

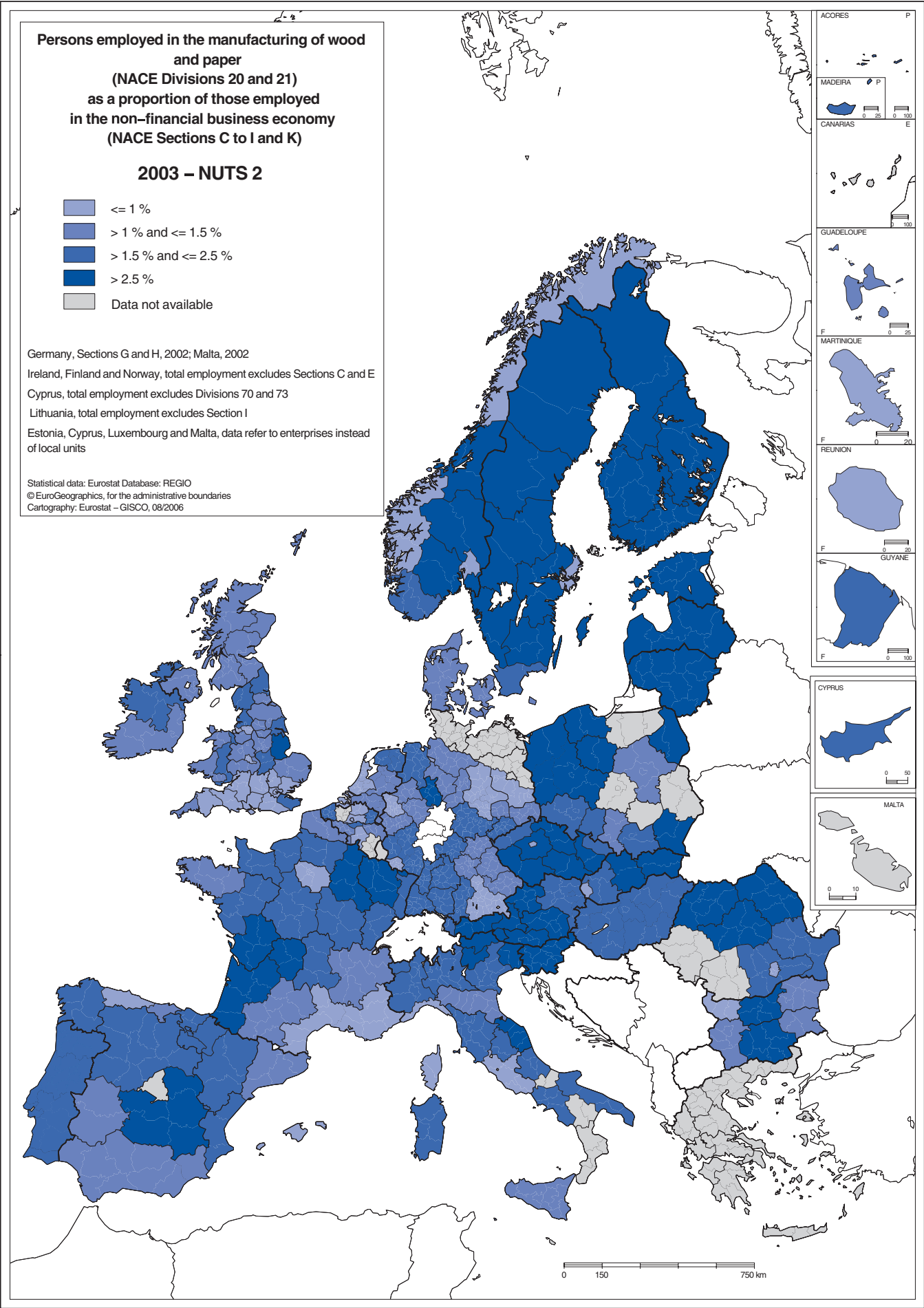


Table 4.2

Manufacture of wood and wood products; pulp, paper and paper products (NACE Divisions 20 and 21)
Structural profile, EU-25, 2003 (1)

	Value added (EUR million)	Share of industrial value added (%)	Number of persons employed (thousands)	Share of industrial employment (%)
Wood and wood products; pulp, paper and paper products	75 000	4.4	1 910	5.4
Wood and wood products	32 400	1.9	1 190	3.4
Pulp, paper and paper products	42 600	2.5	728	2.1

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

Table 4.3

Manufacture of wood and wood products; pulp, paper and paper products (NACE Divisions 20 and 21)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (15 447.1)	20.6	Germany (307.1)	16.1	Latvia (17.5)	Latvia (19.2)
2	Italy (9 288.1)	12.4	Italy (259.6)	13.6	Finland (15.1)	Finland (15.0)
3	United Kingdom (8 677.9)	11.6	France (180.2)	9.4	Estonia (13.0)	Estonia (13.8)
4	France (8 294.7)	11.1	United Kingdom (173.4)	9.1	Sweden (12.9)	Lithuania (10.4)
5	Sweden (6 302.2)	8	Poland (168.2)	8.8	Austria (7.8)	Sweden (10.3)

(1) Luxembourg and Sweden, 2002; Greece and Malta, not available.
 (2) Sweden, provisional; Luxembourg, 2002; Greece and Malta, not available.
 (3) Luxembourg and Sweden, 2002; Greece, Ireland and Malta, not available.
 (4) Sweden, provisional; Luxembourg, 2002; Greece, Ireland and Malta, not available.
 Source: Eurostat (SBS)

The pulp, paper and paper products subsector is dominated by multinational corporations, particularly from the Nordic Member States and North America (see Table 4.1 for the ranking of the largest enterprise (groups) in the EU's forest-based activities). Consolidation within this sector in Europe continued in 2005 with a merger between Jefferson Smurfit (Ireland) and Kappa Packaging (the Netherlands). In contrast, the wood and wood products subsector is characterised as predominantly private-owned, with relatively small-scale enterprises scattered across local or national markets.

STRUCTURAL PROFILE

The wood and paper manufacturing sector (NACE Divisions 20 and 21) of the EU-25 generated EUR 75.0 billion of value added in 2003, equivalent to 4.4 % of industrial (NACE Sections C to E) value added, while it employed 1.9 million people (5.4 % of the industrial workforce).

Although the manufacture of pulp, paper and paper products (NACE Division 21) in the EU-25 was larger than the manufacture of wood and wood products (NACE Division 20) in terms of value added (EUR 42.6 billion compared with EUR 32.4 billion) it was smaller in terms of employment, representing only 38.0 % of employment in the wood and paper products manufacturing sector.

Among the Member States ⁽⁴⁾, Germany generated the largest proportion (20.6 %) of value added in the EU-25's wood and paper manufacturing sector in 2003, followed by Italy, the United Kingdom, and France (between 12.4 % and 11.1 %). However, Latvia, Finland, Estonia and Sweden were the most specialised in wood and paper products manufacturing in terms of the relative contribution of this sector to national, industrial value added, accounting for shares between 17.5 % and 12.9 % - see Table 4.3.

The map on page 84 shows the contribution of the wood and paper products manufacturing sector to employment within the non-financial business economy (NACE Sections C to I and K) of each region. The most specialised regions (at the level of detail shown in the map) in the EU-25 were in Finland and Sweden. There was also strong specialisation in the Baltic Member States and Slovenia (each considered as one region at the level of detail in the map), as well as in several regions of Poland, the Czech Republic, Austria, Italy, France and Romania.

⁽⁴⁾ Luxembourg and Sweden, 2002; Greece and Malta, not available.

The production indices for wood and wood products manufacturing on the one hand, and pulp, paper and paper products manufacturing on the other, followed a broadly similar upward trend during the period between 1995 and 2005 (average increases of 1.4 % and 1.5 % per annum respectively – see Figure 4.1). For both of these activities, output growth was strongest in the period through until 2000, despite moderate falls in 1996. The flatter trend to output growth in the period since 2000 was clearest for the manufacture of wood and wood products (an average rate of growth of 0.4 % per annum), for which there was a slow recovery from a reduction in the production index in 2001. There was also a decline in the output of pulp, paper and paper products manufacturing in 2001, although there was an immediate rebound in 2002. The subsequent growth in output, however, was checked in 2005, as a decline of 0.8 % was registered.

By contrast, the index of domestic output prices for the manufacture of wood and wood products was quite different to that of pulp, paper and paper products. The output price index of wood and wood products increased relatively slowly and steadily over the period between 1995 and 2005 (an average increase of 0.5 % per annum), despite some small declines in 1996 and 1999. There was a rollercoaster development to the output price index for the manufacture of pulp, paper and paper products, however, with a strong decline in 1996 to a low in 1999, before an equally rapid rebound in 2000 to a relative peak in 2001. Since 2001 there was a relatively gentle decline in domestic output prices, which slipped back to below their 1995 level. Over the 10 years presented in Figure 4.1 there was a decline in the output price index of 0.3 % per annum on average for pulp, paper and paper products manufacturing, one of only a handful of industrial NACE divisions that registered a decline in prices over this period.

The EU-25's pulp, paper and paper products subsector (NACE Division 21) is dominated by large enterprises (defined as having 250 or more persons employed). These large enterprises generated 61.6 % of the total value added in 2003, a much higher proportion than that generated by large enterprises in the wood and wood products (NACE Division 20) subsector (21.2 %), although only slightly higher than the industrial (NACE Sections C to E) average (57.6 %). The proportion of value added generated by small and medium-sized enterprises (employing less than 250 people) in the wood and wood products subsector was 78.8 % – see Figure 4.2; this was the third highest contribution of SMEs to the value added of any industrial NACE division ⁽⁵⁾ in 2003, behind only other mining and quarrying (NACE Division 14) and recycling (NACE Division 37).

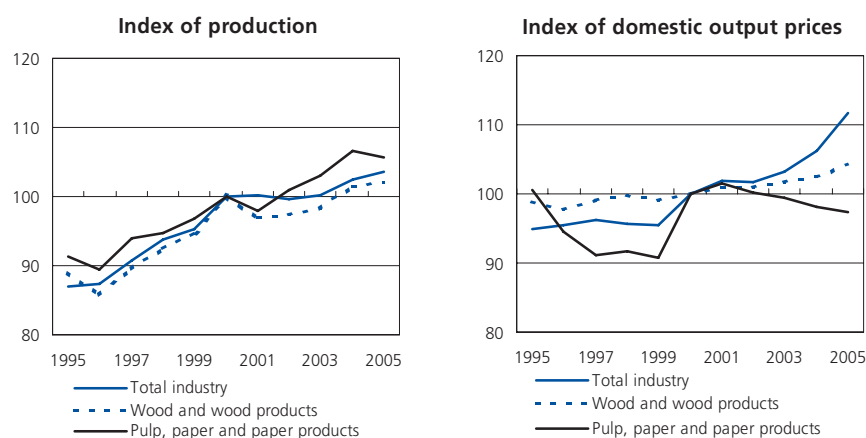
LABOUR FORCE CHARACTERISTICS

A significantly higher proportion of the workforce in the wood and paper manufacturing (NACE Divisions 20 and 21) sector of the EU-25 were male than was the case for industry (NACE Sections C to E) as a whole in 2005 (80.5 % compared with 71.3 %). This characteristic was common across all of the Member States for which data are available ⁽⁶⁾ and was particularly evident in Lithuania (see Table 4.4). The proportion of men working in the manufacture of wood and wood products (NACE Divisions 20) subsector was particularly high at 84.7 %.

⁽⁵⁾ NACE Divisions 12 and 16, not available.

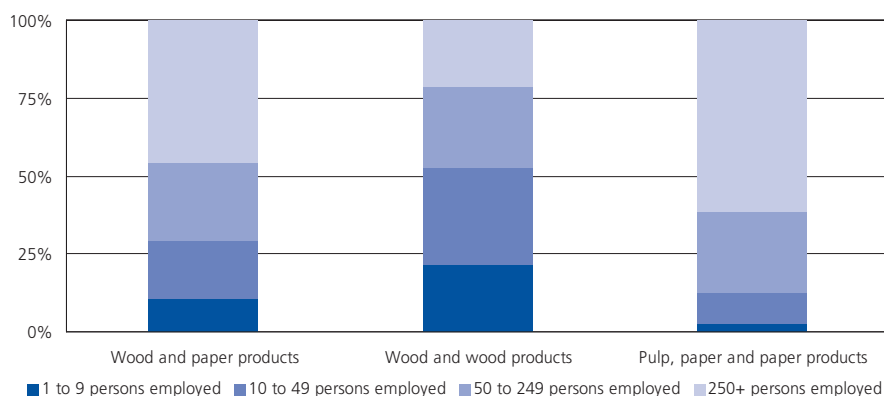
⁽⁶⁾ Luxembourg and Malta, not available.

Figure 4.1
Manufacture of wood and wood products; pulp, paper and paper products
(NACE Divisions 20 and 21)
Evolution of main indicators, EU-25 (2000=100)



Source: Eurostat (STS)

Figure 4.2
Manufacture of wood and wood products; pulp, paper and paper products
(NACE Divisions 20 and 21)
Share of value added by enterprise size class, EU-25, 2003 (%) (1)



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

COSTS, PRODUCTIVITY AND PROFITABILITY

The apparent labour productivity of the EU-25's wood and paper manufacturing sector (NACE Divisions 20 and 21) was EUR 39 200 per person employed in 2003, about EUR 10 000 per person less than the average for industry (NACE Sections C to E) as a whole. Within the sector, however, the apparent labour productivity of the pulp, paper and paper products manufacturing subsector (EUR 59 000 per person employed) was more than double that of the wood and wood products manufacturing subsector (EUR 27 300 per person employed). In all of the Member States for which information is available ⁽⁷⁾, the

⁽⁷⁾ Luxembourg and Sweden, 2002; Greece and Malta, not available.

apparent labour productivity of the pulp, paper and paper products manufacturing subsector was considerably higher than that for wood and wood products. Furthermore, in the majority of these Member States, the apparent labour productivity of the wood and paper manufacturing sector was lower than the industrial average, the exceptions being in Luxembourg (2002), Portugal, Finland and Sweden (2002).

At EUR 27 200 per employee in 2003, EU-25 average personnel costs in this sector were lower than the industrial average by some EUR 5 400 per employee. The characteristic of lower average personnel costs for the wood and paper manufacturing sector than the industrial average was noted in each of the

Table 4.4

Manufacture of wood and wood products; pulp, paper and paper products (NACE Divisions 20 and 21)
Labour force characteristics, 2005

	Male		Full-time		Breakdown by age (% share of total)		
	Proportion of those employed (%)	Index (industry=100)	Proportion of those employed (%)	Index (industry=100)	< 30 years	30-49 years	50+ years
EU-25	80.5	113.0	93.6	101.3	23.3	55.6	21.1
BE	85.9	113.5	93.4	104.9	25.2	60.3	14.5
CZ	73.6	114.2	95.8	98.2	25.1	52.8	22.1
DK	70.7	101.6	91.9	102.2	10.5	55.5	34.0
DE	78.6	108.5	89.4	101.1	19.2	57.9	22.9
EE	73.9	132.5	96.4	98.8	25.0	48.4	26.6
EL	92.1	124.2	98.8	100.7	23.3	52.1	24.6
ES	84.9	112.9	96.8	101.6	29.5	53.0	17.6
FR	78.4	109.8	93.1	99.1	18.3	60.6	21.0
IE	83.6	118.5	96.1	101.5	36.6	46.0	:
IT	81.3	113.8	94.2	100.9	21.5	60.7	17.8
CY	88.8	128.4	97.8	104.4	18.5	61.8	19.7
LV	74.3	126.7	96.3	99.9	25.8	49.8	24.4
LT	79.8	149.8	97.0	99.1	20.7	59.1	20.3
LU	:	:	:	:	:	:	:
HU	74.8	119.9	93.7	96.4	26.2	50.1	23.7
MT	:	:	:	:	:	:	:
NL	84.5	109.2	74.4	101.9	19.2	57.1	23.7
AT	77.3	103.5	91.9	102.1	28.6	55.8	15.6
PL	84.2	122.1	95.8	99.6	34.1	51.7	14.2
PT	78.8	133.0	97.0	99.9	23.5	54.3	22.1
SI	73.5	115.0	95.8	99.7	16.6	64.7	18.7
SK	80.9	126.8	98.1	99.1	23.6	59.4	16.9
FI	78.2	109.5	96.6	101.7	17.3	54.4	28.3
SE	83.7	111.5	92.6	102.7	15.1	49.8	35.1
UK	81.4	108.7	92.3	101.1	22.7	52.3	25.0

Source: Eurostat (LFS)

Table 4.5

Manufacture of wood and wood products; pulp, paper and paper products (NACE Divisions 20 and 21)
Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	5.7	80.4	19.6	39.2	27.2	144.0	10.8
1	Slovakia (20.3)	Slovakia (89.1)	Cyprus (29.5)	Luxembourg (82.1)	Finland (43.7)	Latvia (231.1)	Poland (16.2)
2	Latvia (12.3)	Latvia (87.5)	Denmark (29.3)	Sweden (76.1)	Luxembourg (42.5)	Slovakia (206.4)	Sweden (15.6)
3	Lithuania (11.3)	Luxembourg (87.2)	Ireland (23.2)	Finland (73.8)	Belgium (42.1)	Poland (193.8)	Ireland (15.1)
4	Slovenia (10.9)	Poland (86.7)	Germany (23.0)	Belgium (69.3)	Sweden (41.0)	Luxembourg (193.3)	Latvia (14.7)
5	Poland (8.8)	Czech Republic (86.6)	United Kingdom (22.7)	Austria (60.7)	Netherlands (40.2)	Estonia (185.7)	Czech Republic (14.5)

(1) Sweden, 2002; Belgium, Greece, Luxembourg and Malta, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Luxembourg and Sweden, 2002; Greece and Malta, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Luxembourg and Sweden, 2002; Greece and Malta, not available; EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

Member States for which information was available⁽⁸⁾, except Finland where average personnel costs were the highest within the EU-25 (see Table 4.5) and about 10 % above the national, industrial average. Average

personnel costs for the pulp, paper and paper products manufacturing subsector were EUR 36 200 per employee in the EU-25, almost EUR 15 500 per employee more than the figure for the wood and wood manufacturing subsector.

The gross operating rate of the wood and paper manufacturing sector of the EU-25 was 10.8 % in 2003, this measure of profitability being similar for both the wood and wood products manufacturing subsector and the pulp, paper and paper products manufacturing subsector.

⁽⁸⁾ Luxembourg and Sweden, 2002; Greece, Ireland and Malta, not available.

Table 4.6

Wood and wood products; pulp, paper and paper products (CPA Divisions 20 and 21)
External trade, EU-25, 2005

	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Wood and wood products; pulp, paper and paper products	20 891	2.1	18 687	1.7	2 204	111.8
Wood and wood products	8 104	0.8	9 657	0.9	-1 553	83.9
Pulp, paper and paper products	12 786	1.3	9 030	0.8	3 757	141.6

Source: Eurostat (Comext)

EXTERNAL TRADE

The EU-25 had a trade surplus of EUR 2.2 billion in wood and paper products (CPA Divisions 20 and 21) in 2005. This aggregated trade surplus comprised a surplus for pulp, paper and paper products (CPA Division 21) of EUR 3.8 billion and a deficit for wood and wood products (CPA Division 20) of EUR 1.6 billion (see Table 4.6). Among the Member States, Sweden and Finland had the largest trade surpluses (intra- and extra-EU trade combined) in wood and paper products in 2005 (EUR 8.3 billion and EUR 6.2 billion respectively) and the United Kingdom the largest deficit (EUR 7.1 billion).

EU-25 exports of wood and paper products to non-member countries were valued at EUR 20.9 billion in 2005, representing 2.1 % of all industrial exports (CPA Sections C to E). The principal extra-EU markets for these products were the United States (16.8 % of EU-25 exports) and Switzerland (9.8 %). Germany, Sweden and Finland accounted for the largest shares of exports (intra- and extra-EU-25 combined) in wood and paper products (18.9 %, 13.0 % and 9.1 % of the exports by all EU-25 Member States respectively in 2005). The contribution of exports of wood and paper products to industrial exports as a whole was particularly significant in 2005 in Latvia (24.6 %), Finland (15.7 %), Estonia (11.1 %) and Sweden (10.6 %).

Imports of wood and paper products from non-EU countries were valued at EUR 18.7 billion (representing 1.7 % of all industrial imports). These imports originated principally from the United States (15.2 % of EU-25 imports), Brazil (10.9 %), China (10.7 %), Canada (9.0 %) and Russia (8.7 %).

4.1: WOOD AND WOOD PRODUCTS

The wood and wood products sector is classified as NACE Division 20. It is split into five groups that cover the initial processing stages of sawing and planing of wood (NACE Group 20.1), through semi-processed wood products, such as the manufacture of boards and panels (NACE Group 20.2) and builders' carpentry and joinery (NACE Group 20.3), towards finished products such as wooden containers (NACE Group 20.4) and other wood products, including household goods made from wood (NACE Group 20.5).

Wood is a natural and renewable product that is used widely by the building and furniture-making trades (see Subchapter 15.2 and Subchapter 11.1). According to the European Commission's Directorate-General for Enterprise ⁽⁹⁾, the EU's forest-based industries procure most of their wood from domestic markets. However, the EU is also highly dependent on imports of sawn hardwood and pulp from non-member countries.

There have been some recent Community measures aimed at strengthening good forestry practice and environmental stewardship. In October 2005, the Council unanimously reached political agreement on a Council Regulation concerning the establishment of a Forest Law Enforcement, Governance and Trade (FLEGT) licensing scheme, that it is hoped will tighten controls on illegal timber imports (associated with deforestation and a loss of biodiversity). In March 2005, the European Commission Directive on phytosanitary measures for wooden packing material and dunnage came into force ⁽¹⁰⁾, with the aim of helping to safeguard the health and vitality of the EU-25's forest eco-systems against pests such as the Asian longhorn beetle and pine wood nematode.

STRUCTURAL PROFILE

The wood and wood products manufacturing sector (NACE Division 20) in the EU-25 generated EUR 32.4 billion of value added in 2003, the equivalent of 1.9 % of the industrial

(NACE Sections C to E) total. There were 1.2 million people employed in this sector in 2003, representing 3.4 % of the industrial workforce. The largest contribution (45.7 %) to the value added of the sector came from the manufacture of builder's carpentry and joinery (NACE Group 20.3), which generated EUR 15.0 billion of value added in 2003 (see Table 4.7). This subsector produces a variety of wooden building components (such as doors, window frames, parquet panels and prefabricated wooden buildings). The second largest activity, in terms of value added, was sawmilling, planing and impregnation of wood (NACE Group 20.1), the first stage in the processing of wood, which generated EUR 6.9 billion of value added in 2003 (the equivalent of 21.1 % of the sectoral total). The manufacture of veneer sheets, plywood, laminboard, particle board, fibre board and other panels and boards (NACE Group 20.2) generated a further EUR 4.6 billion of value added in 2003. These are semi-finished products used predominantly as intermediate products in the furniture or construction industries.

⁽⁹⁾ More information at http://ec.europa.eu/enterprise/forest_based/.

⁽¹⁰⁾ Directive 2004/102/EC, the latest amendment being Directive 2006/14/EC.

Table 4.7

Manufacture of wood and wood products (NACE Division 20)
Structural profile, EU-25, 2003

	Value added (EUR million)	Share of industrial value added (%)	Number of persons employed (thousands)	Share of industrial employment (%)
Wood and wood products (1)	32 400	1.9	1 190	3.4
Sawmilling and planing of wood, impregnation of wood (1)	6 930	0.4	262	0.7
Veneer sheets; plywood, panels and boards	4 575	0.3	119	0.3
Builders' carpentry and joinery (2)	15 000	0.9	550	1.6
Wooden containers (2)	2 450	0.1	90	0.3
Other wood products; cork, straw & plaiting materials (1)	3 840	0.2	169	0.5

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

(2) Value added and related share, rounded estimates based on non-confidential data.

Source: Eurostat (SBS)

Table 4.8

Production value of selected wood products (CPA Division 20), EU-25, 2004 (EUR million)

	Prodcom code(s)	
Particle board and similar board of wood unworked or sanded (excl. waferboard or oriented strand board)	20.20.13.33	2 309
Particle board and similar board of wood surfaced with melamine resin impregnated paper (excl. waferboard or oriented strand board)	20.20.13.37	3 706
Fibreboard of a density > 0.8 g/cm ³	20.20.14.13 and 20.20.14.15	2 818
Fibreboard of a density > 0.5 g/cm ³ but ≤ 0.8 g/cm ³	20.20.14.33 and 20.20.14.35	1 650
Wooden frames for paintings; photographs; mirrors or similar objects	20.51.14.10	898

Source: Eurostat (PRODCOM)

Table 4.9

Wood and wood products (CPA Division 20)
External trade, EU-25, 2005

	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Wood and wood products	8 104	0.8	9 657	0.9	-1 553	83.9
Wood, sawn, planed or impregnated	2 949	0.3	4 415	0.4	-1 465	66.8
Veneer sheets; plywood, panels and boards	2 670	0.3	2 206	0.2	464	121.0
Builders' joinery and carpentry, of wood	1 296	0.1	1 061	0.1	235	122.2
Wooden containers	367	0.0	122	0.0	245	301.3
Other wood products; cork, straw & plaiting materials	823	0.1	1 854	0.2	-1 031	44.4

Source: Eurostat (Comext)

Among the Member States, Germany had the largest wood and wood products manufacturing sector in terms of value added generated (18.8 % of the EU-25 total), followed by Italy (14.9 %) and the United Kingdom (11.5 %). However, the contribution of this sector to national, industrial value added as a whole was highest in Latvia (16.4 %) and Estonia (11.4 %) in 2003, considerably above the EU-25 average (1.9 % of industrial value added).

COSTS, PRODUCTIVITY AND PROFITABILITY

The apparent labour productivity of the wood and wood products manufacturing sector in the EU-25 was EUR 27 300 per person employed in 2003, one of the lowest productivity levels (according to this measure) among industrial NACE divisions, and EUR 22 300 per person employed below the industrial average. Average personnel costs within the wood and wood products manufacturing sector were also relatively low,

at EUR 20 700 per employee. The wage adjusted labour productivity ratio was 132 % for the EU-25's wood and wood products manufacturing sector.

EXTERNAL TRADE

The EU-25 exported wood and wood products (CPA Division 20) to the value of EUR 8.1 billion in 2005, continuing an upward trend in value terms that was apparent since 2002. The EU-25's principal export partners for these products were the United States (23.6 % of EU-25 exports), Switzerland (10.8 %) and Japan (10.6 %). The EU-25 imported wood and wood products to the value of EUR 9.7 billion in 2005, particularly from China, Russia, the United States, Brazil and Indonesia (these countries together providing just over half of all such imports). As a result of these trade flows, the EU-25 registered a trade deficit of EUR 1.6 billion in 2003 for wood and wood products (see Table 4.9).

The upward trend in the value of exports of veneer sheets, plywood, laminboard, particle board, fibre board and other panels and boards (CPA Group 20.2) continued in 2005, which saw a trade surplus of EUR 464 million, underpinning the turnaround from a trade deficit in 2000. Exports of wood, sawn, planed or impregnated (CPA Group 20.1) also grew strongly in 2005, although there was little change in the level of the trade deficit (EUR 1.5 billion) for these products. The trade deficit for other wood products (CPA Group 20.5) also widened in 2005, to reach EUR 1.0 billion.

Among the Member States, Sweden, Austria and Finland had the largest trade surpluses (between EUR 1.9 and EUR 2.2 billion each) for wood and wood products. Germany, however, was the principal exporter of wood and wood products in 2005, accounting for 16.9 % of intra- and extra-EU exports by the Member States. Germany was also the second largest importer (13.4 % of imports), after the United Kingdom (14.8 %).

4.2: PULP, PAPER AND PAPER PRODUCTS

The pulp, paper and paper products sector is broken down in the NACE classification into two groups. The first, NACE Group 21.1, covers the manufacture of pulp, paper and paperboard, through mechanical and chemical processes. These products often require further processing, as covered by the second activity, NACE Group 21.2, which includes the manufacture of corrugated, household and sanitary paper products, as well as newsprint, wallpaper and stationery.

Paper and paperboard is made predominantly in the EU-25 from waste paper and wood pulp. The main uses of the products manufactured by the pulp, paper and paper products sector are packaging, communications for printing, and specialist paper applications (for hygienic purposes, such as toilet paper, or technical purposes, such as wallpaper).

Community legislation aimed at the sector continues to be prompted by environmental considerations. The EU Greenhouse Gas Emissions Trading Scheme started in January 2005 with the aim of regulating CO₂ emissions in five key sectors, including pulp and paper. At the time of writing, the European Commission plans to consider whether to extend the scheme to other greenhouse gases (and other sectors) beyond the initial trading period of 2005–2007. A first report on the Integrated Pollution Prevention and Control (IPPC) Directive that aims to promote cleaner production processes was adopted in November 2005, stating that implementation had been slow. The targets for the recycling and recovery of packaging and packaging waste ⁽¹¹⁾ were extended in March 2005 to the Member States that joined the EU in 2004.

⁽¹¹⁾ Directive 2005/20/EC of the European Parliament and of the Council.

STRUCTURAL PROFILE

The EU-25's pulp, paper and paper products (NACE Division 21) manufacturing sector generated a value added of EUR 42.6 billion in 2003, which corresponded to 2.5 % of industrial (NACE Sections C to E) value added. The value added of the sector was fairly evenly split (48 % and 52 % respectively in 2002) between the manufacture of pulp, paper and paperboard (NACE Group 21.1) and the manufacture of articles of paper and paperboard (NACE Group 21.2). There were 728 000 persons employed in the EU-25's manufacture of pulp, paper and paper products sector in 2003, of which about one third (33.0 %) worked in the manufacture of pulp, paper and paperboard (NACE Group 21.1).

A little over one fifth (22.0 %) of the value added of the EU-25's pulp, paper and paper products manufacturing sector came from Germany in 2003 (see Table 4.10). The pulp, paper and paper products manufacturing sectors in Italy, France and the United Kingdom generated a further 10.5 % to 11.6 % each of the EU-25's value added. However, Finland and Sweden (2002) were the most specialised Member States ⁽¹²⁾ in this manufacturing activity, as pulp, paper and paper products manufacturing contributed 11.1 % and 8.9 % of national, industrial value added respectively.

⁽¹²⁾ Malta, Luxembourg, Sweden, 2002; Greece and Ireland, not available.

COSTS, PRODUCTIVITY AND PROFITABILITY

The apparent labour productivity of those employed in the pulp, paper and paper products manufacturing sector within the EU-25 was EUR 59 000 per person in 2003, which was EUR 9 400 per person more than the industrial average. The ratio was highest (between EUR 91 000 and EUR 108 000 per person employed) in Austria, Finland, Luxembourg (2002) and Sweden (2002), some of the Member States most specialised in this activity. Average personnel costs in the pulp, paper and paper products manufacturing sector were EUR 36 200 per employee in the EU-25, which was 11.0 % higher than the industrial average. Apparent labour productivity in the pulp, paper and paper products manufacturing sector was the equivalent of 162 % of average personnel costs per employee (the wage adjusted labour productivity), with the highest rates being registered in Slovakia (272.4 %) and Poland (270.1 %).

As an indicator of profitability, the gross operating rate of the pulp, paper and paper products manufacturing sector across the EU-25 was 11.0 % in 2003, with the highest rate being recorded for Portugal (18.9 %).

Table 4.10

Manufacture of pulp, paper and paper products (NACE Division 21) Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (9 361.7)	22.0	Germany (150.8)	20.7	Finland (11.1)	Finland (8.7)
2	United Kingdom (4 935.9)	11.6	France (88.3)	12.1	Sweden (8.9)	Sweden (5.1)
3	France (4 901.4)	11.5	United Kingdom (86.4)	11.9	Austria (3.8)	Netherlands (2.9)
4	Italy (4 451.8)	10.5	Italy (82.8)	11.4	Portugal (3.2)	Austria (2.7)
5	Sweden (4 377.8)	9.5	Spain (55.3)	7.6	Slovakia (2.8)	United Kingdom (2.3)

(1) Malta and Sweden, 2002; Greece and Luxembourg, not available.

(2) Sweden, provisional; Luxembourg and Malta, 2002; Greece, not available.

(3) Malta, Luxembourg and Sweden, 2002; Greece and Ireland, not available.

(4) Sweden, provisional; Luxembourg and Malta, 2002; Greece and Ireland, not available.

Source: Eurostat (SBS)

Table 4.11 Production value of selected paper products (CPA Division 21), EU-25, 2004 (EUR million)

	Prodcom code	
Newsprint in rolls or sheets	21.12.11.50	4 409
Graphic paper, paperboard: mechanical fibres <= 10%, 40 g/m ² <= weight <= 150 g/m ²	21.12.14.39	4 667
Graphic paper, paperboard: mechanical fibres > 10%	21.12.14.70	3 449
Uncoated semi-chemical fluting paper (corrugated medium); in rolls or sheets	21.12.24.00	1 865
Coated paper, for writing, printing, graphic purposes (excl. coated base, weight <= 150 g/m ²)	21.12.53.37	6 475
Light-weight coated paper for writing, printing, graphic purposes, m.f. > 10%	21.12.53.60	3 899
Cartons; boxes and cases of corrugated paper or paperboard	21.21.13.00	18 047
Toilet paper	21.22.11.10	4 893
Envelopes of paper or paperboard (1)	21.23.12.30	2 064

(1) Estimated.

Source: Eurostat (PRODCOM)

EXTERNAL TRADE

EU-25 exports of pulp, paper and paper products (CPA Division 21) were valued at EUR 12.8 billion in 2005 (see Table 4.12), remaining markedly down on the levels recorded between 2000 and 2003. However, imports of these products in 2005 (EUR 9.0 billion) also remained lower than their level in 2000. These trade flows resulted in a trade surplus of EUR 3.8 billion being recorded in 2005 for pulp, paper and paper products in the EU-25. Within this CPA Division, pulp (CPA Class 21.11) was the only CPA class in which the EU-25 recorded a trade deficit (EUR 3.5 billion). Among the six other CPA classes within this CPA division, the largest trade surplus was recorded for paper and paperboard

Exports of pulp, paper and paper products from Germany (20.1 %) and Sweden (14.5 %) accounted for a little over a third of all Member State exports (intra- and extra-EU) of these goods. The largest export markets for these products outside the EU were in the United States, Switzerland, Russia and China. Germany, along with France and the United Kingdom were the main importers of pulp, paper and paper products, accounting for 45 % of the total. Over two thirds (71.2 %) of imports of these products originating from outside the EU-25 came from North America, Brazil, Switzerland and Norway.

Table 4.12 Pulp, paper and paper products (CPA Division 21)
External trade, EU-25, 2005

	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Pulp, paper and paper products	12 786	1.3	9 030	0.8	3 757	141.6
Pulp, paper and paperboard	9 714	1.0	7 741	0.7	1 972	125.5
Articles of paper and paperboard	2 816	0.3	1 287	0.1	1 529	218.8

Source: Eurostat (Comext)

Table 4.13

Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials (NACE Division 20)
Main indicators, 2003

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million) (1)	112 000	3 349	2 367	1 817	19 893	769	:	9 825	12 377	1 069	16 566	161	1 009	528	144	931	:
Production (EUR million)	:	3 250	2 215	1 788	18 785	740	:	9 519	11 714	1 028	16 344	160	909	510	144	767	:
Value added at factor cost (EUR million) (1)	32 400	876	640	676	6 085	182	:	2 761	3 393	322	4 836	67	259	133	37	212	:
Gross operating surplus (EUR million) (1)	11 800	425	345	157	1 734	84	:	914	773	132	2 306	20	147	50	16	72	:
Purchases of goods and services (EUR million)	:	2 450	1 786	1 176	13 803	591	:	7 251	8 832	751	11 913	97	784	403	107	716	:
Gross investment in tangible goods (EUR million) (2)	:	246	81	92	499	58	:	368	443	37	843	8	111	60	1	69	:
Number of persons employed (thousands) (1)	1 190	14	79	14	156	18	:	108	92	7	177	3	33	29	1	32	:
Personnel costs (EUR million) (1)	20 600	451	295	519	4 352	98	:	1 847	2 620	190	2 530	46	111	83	21	139	:
App. labour productivity (EUR thous./pers. emp.) (1)	837	62.3	8.1	47.7	38.9	10.0	:	25.6	36.9	47.7	27.4	19.5	7.8	4.6	63.6	6.6	:
Average personnel costs (EUR thous./employee) (1)	20.7	36.6	6.4	37.2	30.6	5.5	:	19.4	29.6	29.0	22.9	16.5	3.4	2.9	36.6	4.9	:
Wage adjusted labour productivity (%) (1)	132.0	170.3	126.4	128.3	127.0	183.9	:	132.1	124.7	164.8	119.4	118.7	229.8	156.5	173.7	134.3	:
Gross operating rate (%) (1)	10.6	12.7	14.6	8.6	8.7	10.9	:	9.3	6.2	12.3	13.9	12.6	14.6	9.5	10.9	7.8	:
Investment per person employed (EUR thousand) (2)	:	18.0	1.0	6.5	3.2	3.2	:	3.4	4.8	5.5	4.8	2.5	3.3	2.1	1.8	2.1	:
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million) (3)	2 577	5 845	3 835	3 365	559	410	5 668	7 801	10 343	228	:	1 189	:	:	:	2 403	:
Production (EUR million) (3)	2 458	5 720	3 675	3 258	529	365	5 608	7 637	9 650	210	:	1 126	:	:	:	2 239	:
Value added at factor cost (EUR million) (4)	837	1 756	1 060	799	185	74	1 292	1 924	3 742	39	:	277	:	:	:	685	:
Gross operating surplus (EUR million) (4)	219	640	574	303	49	18	403	608	1 651	14	:	145	:	:	:	146	:
Purchases of goods and services (EUR million) (3)	1 737	4 206	2 702	2 654	390	335	4 543	5 643	6 551	198	:	1 006	:	:	:	1 741	:
Gross investment in tangible goods (EUR million) (3)	68	243	272	156	28	52	256	480	377	19	:	189	:	:	:	114	:
Number of persons employed (thousands) (3)	20	38	130	49	12	13	28	42	87	18	:	91	:	:	:	14	:
Personnel costs (EUR million) (4)	618	1 117	487	496	135	57	897	1 316	2 091	25	:	132	:	:	:	539	:
App. labour productivity (EUR thous./pers. emp.) (4)	41.3	46.1	8.2	16.4	15.0	5.5	46.6	45.7	43.0	2.1	:	3.0	:	:	:	47.6	:
Average personnel costs (EUR thous./employee) (4)	34.5	32.1	5.0	11.2	12.1	4.2	33.0	34.6	26.1	1.6	:	1.5	:	:	:	37.8	:
Wage adjusted labour productivity (%) (4)	119.7	143.9	163.5	147.3	124.6	131.2	141.2	132.0	164.5	137.6	:	205.0	:	:	:	125.8	:
Gross operating rate (%) (4)	8.5	10.9	15.0	9.0	8.8	4.3	7.1	8.1	16.0	6.1	:	12.2	:	:	:	6.1	:
Investment per person employed (EUR thousand) (3)	3.4	6.4	2.1	3.2	2.3	3.9	9.2	11.4	4.3	1.0	:	2.1	:	:	:	7.9	:

(1) EU-25, rounded estimate based on non-confidential data. (2) Belgium, 2002. (3) Sweden, provisional. (4) Sweden, 2002.
Source: Eurostat (SBS)

Table 4.14

Manufacture of pulp, paper and paper products (NACE Division 21)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million) (2)	153 000	4 567	1 538	1 505	31 912	97	:	11 122	20 100	845	18 482	70	62	94	149	1 064	19
Production (EUR million)	:	4 330	1 510	1 446	29 599	96	:	10 806	18 007	817	17 926	65	62	96	149	928	19
Value added at factor cost (EUR million) (2)	42 600	1 135	385	547	9 362	26	:	3 169	4 901	345	4 452	24	18	23	26	265	8
Gross operating surplus (EUR million) (2)	16 800	445	221	177	2 924	13	:	1 445	1 360	158	1 899	10	11	11	15	123	3
Purchases of goods and services (EUR million)	:	3 360	1 173	964	22 397	69	:	8 078	14 820	501	14 026	47	45	75	121	820	11
Gross investment in tangible goods (EUR million) (3)	:	471	88	77	1 886	5	:	624	1 114	25	901	5	6	4	:	60	0
Number of persons employed (thousands) (2)	728	15	20	8	151	2	:	55	88	5	83	1	2	2	0	16	0
Personnel costs (EUR million) (2)	25 800	689	164	370	6 438	13	:	1 724	3 541	188	2 553	14	7	12	12	142	5
App. labour productivity (EUR thous./pers. emp.) (2)	59.0	75.8	19.1	66.4	62.1	14.9	:	57.3	55.5	71.6	53.8	29.0	10.5	10.2	107.1	16.8	22.6
Average personnel costs (EUR thous./employee) (2)	36.2	46.8	8.5	45.1	43.0	7.5	:	31.7	40.2	39.1	33.7	16.7	4.2	5.3	47.8	9.1	14.2
Wage adjusted labour productivity (%) (2)	162.0	162.0	224.0	147.3	144.3	199.1	:	180.6	138.3	183.0	159.3	173.5	248.7	191.9	224.2	185.1	159.1
Gross operating rate (%) (2)	11.0	9.8	14.4	11.8	9.2	13.2	:	13.0	6.8	18.7	10.3	14.7	16.9	11.8	9.8	11.6	15.5
Investment per person employed (EUR thousand) (3)	:	32.7	4.3	9.3	12.5	2.6	:	11.3	12.6	5.1	10.9	5.3	3.8	2.0	:	3.8	0.1
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million) (4)	5 766	5 091	3 087	2 228	597	819	14 017	12 323	16 627	244	:	484	:	:	:	2 043	:
Production (EUR million) (4)	5 363	4 790	2 967	2 266	581	750	13 675	12 104	15 180	235	:	467	:	:	:	1 964	:
Value added at factor cost (EUR million) (5)	1 671	1 633	829	699	147	176	3 581	4 378	4 936	43	:	94	:	:	:	597	:
Gross operating surplus (EUR million) (5)	618	782	546	421	52	112	1 820	2 471	1 691	15	:	47	:	:	:	197	:
Purchases of goods and services (EUR million) (4)	4 077	3 558	2 337	1 578	451	653	10 725	8 235	11 648	213	:	406	:	:	:	1 552	:
Gross investment in tangible goods (EUR million) (4)	204	367	236	244	89	173	658	726	950	28	:	56	:	:	:	60	:
Number of persons employed (thousands) (4)	24	18	38	12	6	9	38	41	86	13	:	18	:	:	:	8	:
Personnel costs (EUR million) (5)	1 053	851	283	278	95	65	1 967	1 907	3 245	28	:	47	:	:	:	400	:
App. labour productivity (EUR thous./pers. emp.) (5)	70.2	91.7	21.6	56.2	24.5	20.0	93.5	107.7	57.2	3.4	:	5.2	:	:	:	74.5	:
Average personnel costs (EUR thous./employee) (5)	44.5	47.9	8.0	22.6	16.1	7.3	51.4	47.0	38.1	2.3	:	2.7	:	:	:	50.0	:
Wage adjusted labour productivity (%) (5)	157.9	191.4	270.1	248.8	152.6	272.4	182.0	228.9	150.1	149.2	:	195.5	:	:	:	149.2	:
Gross operating rate (%) (5)	10.7	15.4	17.7	18.9	8.8	13.6	13.0	20.2	10.2	6.0	:	9.6	:	:	:	9.6	:
Investment per person employed (EUR thousand) (4)	8.6	20.6	6.2	19.6	14.9	19.5	17.2	17.9	11.0	2.2	:	3.1	:	:	:	7.5	:

(1) Luxembourg and Malta, 2002. (2) EU-25, rounded estimate based on non-confidential data. (3) Belgium, 2002. (4) Sweden, provisional. (5) Sweden, 2002.
Source: Eurostat (SBS)

Chemicals, rubber and plastics



The chemicals, rubber and plastics manufacturing sector covers the manufacture of basic organic and inorganic chemicals, pharmaceutical products and pesticides and rubber tyres and plastic tubes.

The main raw materials used within this manufacturing sector include oils, minerals, metals and certain agricultural products (such as natural rubber and fats). Many of the key ingredients for chemical, rubber and plastic goods are derived from fractions of hydrocarbons from the oil industry which are subsequently cracked by petro-chemical enterprises. In this way, the chemicals, rubber and plastics sector has been particularly susceptible to sharply higher material and processing costs due to the uncertainty surrounding oil and gas markets in 2005/06 (see Subchapter 13.1).

The main legislative challenge for the chemicals, rubber and plastics sector is the adoption of the European Commission's proposed REACH (Registration, Evaluation and

Authorisation of Chemical substances) system ⁽¹⁾. This environmental and social policy initiative aims to improve the protection of human health and the environment through the better and earlier identification of the properties of chemical substances. Following a long period of negotiation, the European Council reached a common position on 27 June 2006. A second reading, at which final agreement may be reached, is currently planned before the end of 2006. The chemicals, rubber and plastics sector also has to consider other environmental and social legislation, for example, that relating to pesticides and biocides (in July 2006, the European Commission issued a new proposal for a regulation on plant protection products under the thematic strategy ⁽²⁾ on the sustainable use of pesticides), waste and water, climate change and air pollution, and allocations of CO₂ emissions during the period 2008–2012 under the Emissions Trading Scheme.

⁽¹⁾ COM(2003) 644.

⁽²⁾ COM(2006) 372.

The manufacture of chemicals, rubber and plastics are covered by NACE Subsections DG and DH; the first of these two subsections also includes the manufacture of man-made fibres.

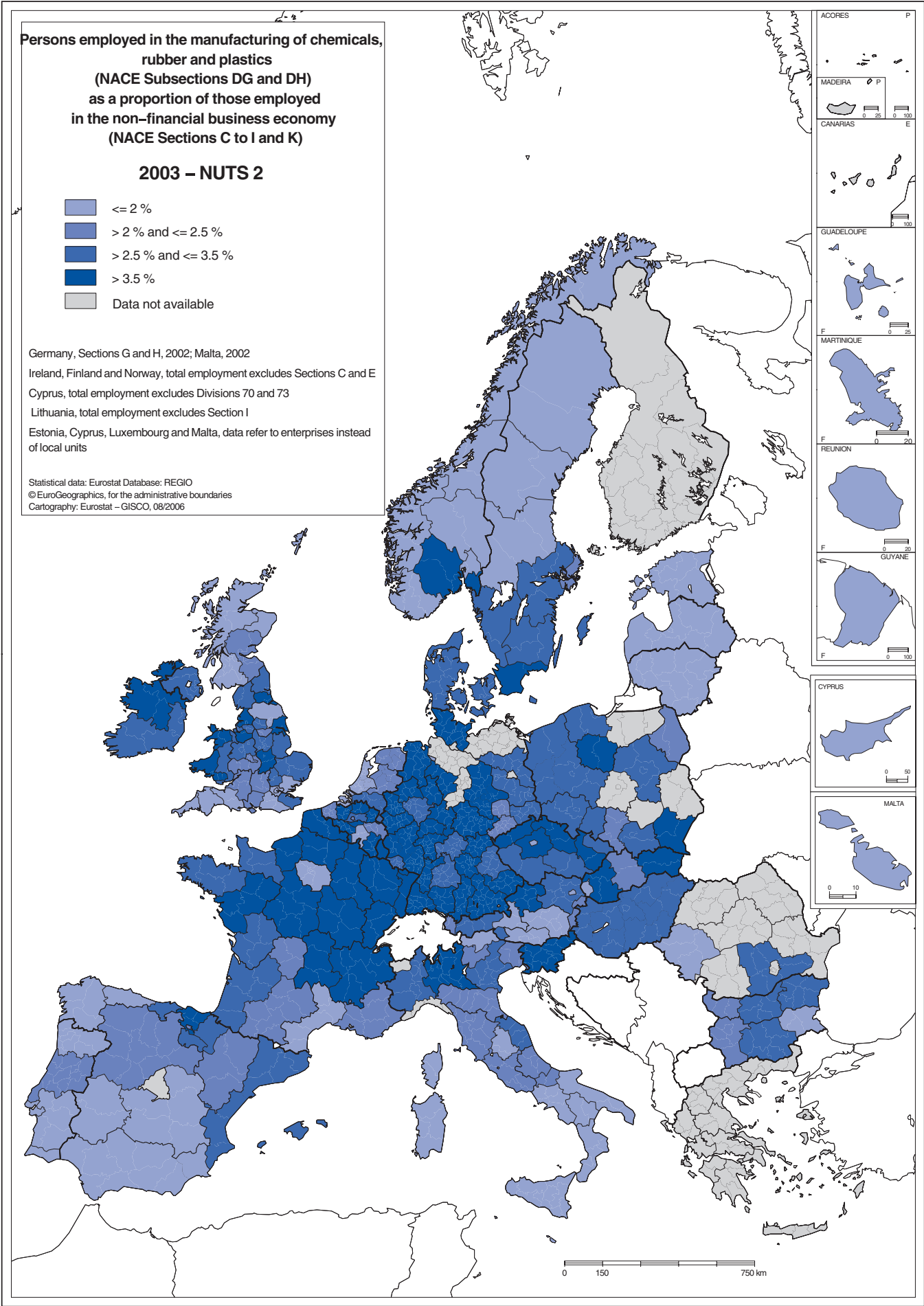
NACE

- 24: manufacture of chemicals and chemical products;
- 24.1: manufacture of basic chemicals;
- 24.2: manufacture of pesticides and other agro-chemical products;
- 24.3: manufacture of paints, varnishes and similar coatings, printing ink and mastics;
- 24.4: manufacture of pharmaceuticals, medicinal chemicals and botanical products;
- 24.5: manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations;
- 24.6: manufacture of other chemical products;
- 24.7: manufacture of man-made fibres;
- 25: manufacture of rubber and plastic products;
- 25.1: manufacture of rubber products;
- 25.2: manufacture of plastic products.

Table 5.1
Top ten chemical enterprise (groups) in the EU-25, 2005

		World ranking	Chemical sales (EUR million)	Chemical sales as a proportion of total sales (%)
BASF	DE	2	35 077	82
Royal Dutch / Shell	UK / NL	3	28 102	11
Total	FR	5	22 319	16
Bayer	DE	8	16 585	61
BP	UK	9	16 563	8
Degussa	DE	14	11 748	100
Ineos Group	UK	17	9 957	100
Akzo Nobel	NL	18	9 442	73
Air Liquide	FR	20	9 145	88
ICI	UK	23	8 498	100

Source: Chemical and engineering news, 24th July 2006, 84(30), p14, <http://pubs.acs.org/cen>



Many of the largest global chemical companies have their headquarters in the EU-25 (see Table 5.1) and according to CEFIC (the European Chemistry Industry Council) the EU-25 accounted for about one third of global chemical sales in 2004 (see Figure 5.1). It is planned that a pan-EU response to the various challenges outlined above will be channelled through the European Technology Platform for Sustainable Chemistry (SusChem) that has been established and supported by the EU's 7th Framework Programme for Research and Technological Development (FP7) which is due to begin in January 2007. The SusChem Action Plan is being discussed at the time of writing, and is likely to cover research programmes on industrial biotechnology for eco-efficiency, materials technology for the discovery of new materials with tailored properties, and reaction and process design. According to CEFIC, R&D expenditure by the sector (excluding, it should be noted, pharmaceuticals) within the EU-15 has fallen from 2.4 % of sales in 1998 to 1.8 % in 2004, behind the corresponding rates of 1.9 % in the United States and 2.6 % in Japan.

Figure 5.1
World chemical sales, 2004 (EUR billion) (1)

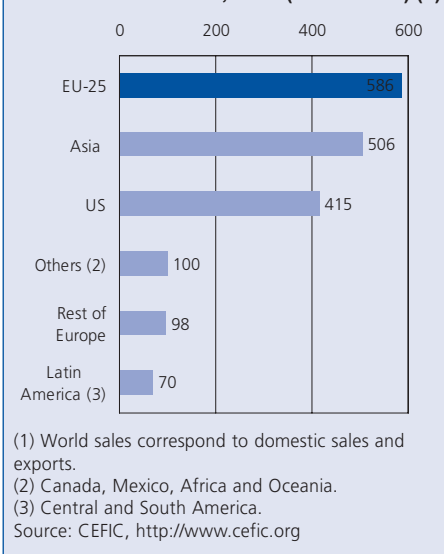
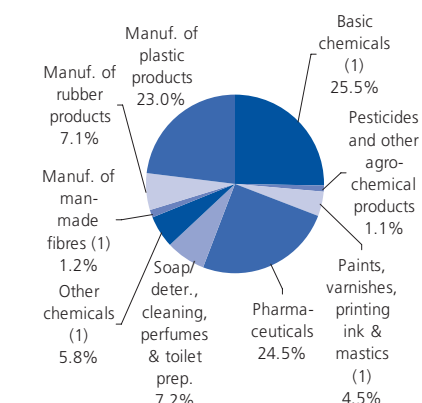


Figure 5.2
Manufacture of chemicals and chemical products; rubber and plastic products (NACE Subsections DG and DH)
Breakdown of sectoral value added, EU-25, 2003 (%)



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

STRUCTURAL PROFILE

The chemicals, rubber and plastics manufacturing sector (NACE Subsections DG and DH) in the EU-25 generated EUR 241.0 billion of value added in 2003, representing 14.2 % of industrial (NACE Sections C to E) value added (see Table 5.2). The sector employed 3.6 million people, about one in ten of the industrial workforce.

The value added generated by the activities of chemical, chemical products and man-made fibres manufacturing (NACE Subsection DG) accounted for the vast majority (70.0 %) of the sectoral total. Indeed, the activities of basic chemical manufacturing (NACE Group 24.1) and pharmaceutical manufacturing (NACE Group 24.4) together accounted for one half (50.0 %) of the value added generated within

the chemicals, rubber and plastics manufacturing sector as a whole. Within the activities of rubber and plastic products manufacturing (NACE Subsection DH), the principal activity was plastics manufacturing (NACE Group 25.2) which generated a little under one quarter (23.0 %) of the value added generated by the whole of the chemicals, rubber and plastics manufacturing sector.

Among the EU-25 Member States, Germany was by far the leading producer of chemicals, rubbers and plastics, accounting for one quarter (25.2 %) of the value added generated for the EU-25 as a whole in 2003 (see Table 5.3). The contribution of value added generated by the chemicals, rubber and plastics manufacturing sector to industrial value added was particularly high in Belgium (22.8 %) and

Luxembourg (21.4 %). Nonetheless, it seems likely that Ireland was the most specialised Member State in these activities, based on the limited data available; the chemicals, rubber and plastics sector accounted for 42.5 % of Irish manufacturing (NACE Section D only) value added ⁽³⁾, considerably more than the shares for the EU-25 as a whole (15.8 %), Belgium (25.3 %) or Luxembourg (23.6 %).

⁽³⁾ The relatively high proportion of Irish manufacturing value added that is accounted for by the chemicals, plastics and rubber sector may reflect foreign ownership of enterprises, outsourcing of activities, and accounting practices of multinational enterprises. Note that this observation applies throughout this chapter, where Ireland consistently reports very high levels of value added and related indicators (apparent labour productivity, wage adjusted labour productivity, the gross operating surplus, and the gross operating rate).

Table 5.2
Manufacture of chemicals and chemical products; manufacture of rubber and plastic products (NACE Subsections DG and DH)
Structural profile, EU-25, 2003

	Value added (EUR million)	Share of industrial value added (%)	Number of persons employed (thousands)	Share of industrial employment (%)
Chemicals and chemical products; rubber and plastic products (1)	241 000	14.2	3 560	10.1
Basic chemicals; pesticides and other agro-chemical products (2)	64 000	3.8	614	1.7
Pharmaceuticals, medicinal chemicals and botanical products	59 246	3.5	576	1.6
Miscellaneous chemical products (1)	42 000	2.5	640	1.8
Man-made fibres (2)	3 000	0.2	53	0.2
Rubber products	17 058	1.0	359	1.0
Plastic products	55 534	3.3	1 310	3.7

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

(2) Value added and related share, rounded estimates based on non-confidential data.

Source: Eurostat (SBS)

Table 5.3

Manufacture of chemicals and chemical products; manufacture of rubber and plastic products (NACE Subsections DG and DH)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (60 786.4)	25.2	Germany (867.7)	24.4	Belgium (22.8)	Luxembourg (18.9)
2	France (36 577.5)	15.2	France (533.6)	15.0	Luxembourg (21.4)	Belgium (14.9)
3	United Kingdom (32 446.1)	13.5	United Kingdom (456.0)	12.8	Slovenia (19.1)	France (12.8)
4	Italy (25 278.6)	10.5	Italy (414.4)	11.6	Netherlands (16.0)	United Kingdom (12.2)
5	Ireland (16 414.7)	6.8	Spain (263.7)	7.4	France (15.6)	Netherlands (12.1)

(1) Malta and Sweden, 2002; Greece, not available.

(2) Sweden, provisional; Malta, 2002; Greece, not available.

(3) Malta and Sweden, 2002; Greece and Ireland, not available.

(4) Sweden, provisional; Malta, 2002; Greece and Ireland, not available.

Source: Eurostat (SBS)

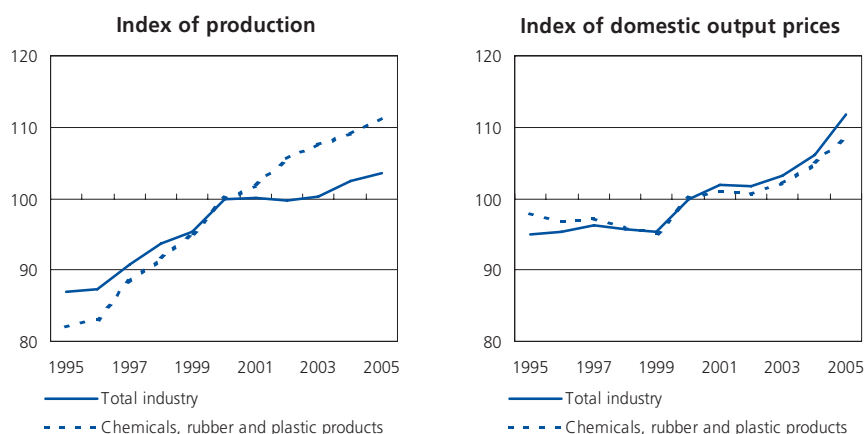
The map on page 94 shows the contribution of the chemicals, rubber and plastics manufacturing sector to employment within the non-financial business economy (NACE Sections C to I and K) of each region. Most regions in Germany and several regions in France, Belgium and the United Kingdom, as well as Luxembourg and Slovenia (which are considered as one region at the level of detail shown in the map) were among the most specialised in this sector in terms of employment.

During the period 1995 to 2005 there was a steady and continuous rise in the production index of chemicals, rubber and plastics manufacturing (NACE Subsections DG and DH), with an average rate of increase of 3.1 % per annum. For most of this period, the rate of growth in the production index of chemicals, rubber and plastics manufacturing outpaced that of industry as a whole, especially during the period between 2001 and 2003 when industry as a whole went through a period of stagnation. Indeed, it was only in 2004 that the output growth for industry as a whole was greater than that of chemicals, rubber and plastics manufacturing (for the first time in more than a decade).

At the NACE group level of detail within the chemicals, rubber and plastics manufacturing sector, there were contrasting developments in production indices. The fastest rate of output expansion in the EU-25 between 1995 and 2005 was the 5.6 % per annum average growth recorded for pharmaceuticals (NACE Group 24.4). There was also strong growth, averaging 4.2 % per annum for the production index of basic chemical manufacturing (NACE Group 24.1). In contrast, there was an annual average decline of 1.5 % per annum for the output of pesticides and other agro-chemical products (NACE Group 24.2) over the period 1995 to 2005, although most of this decline occurred after 2001. The fastest rate of contraction in output was an average reduction

Figure 5.3

Manufacture of chemicals and chemical products; rubber and plastic products (NACE Subsections DG and DH)
Evolution of main indicators, EU-25 (2000=100)



Source: Eurostat (STS)

of 3.0 % per annum for man-made fibres (NACE Group 24.7). Most of this decline was confined to the period between 2000 and 2005 (when an average reduction of 6.0 % per annum was registered).

Annual changes in the domestic output price index for chemicals, rubber and plastics manufacturing (NACE Subsections DG and DH) followed a very similar pattern to the industrial average during the period 1998 to 2005, albeit with a sharper acceleration in the industrial price index in 2004 and 2005. It was only in the period between 1995 and 1998, however, that there was a considerable divergence in trends, as the domestic output price index for the manufacture of chemicals, rubber and plastics declined while the industrial average was stable. These differences at the two ends of the selected reference period explain why the rate of increase (1.1 % per year on average) for the output price index of chemicals, rubber and plastics manufacturing between 1995 and 2005 was lower than the industrial average (1.6 % per year).

Almost exactly two thirds (66.5 %) of the value added generated by the EU-25's chemicals, rubber and plastics sector came from large enterprises (employing more than 250 persons); this was a much higher proportion than the industrial (NACE Sections C to E) average of 57.6 %. In contrast, micro and small enterprises (employing between 1 and 49 persons) accounted for a very low share (11.5 %) in comparison with an industrial average of 21.6 %. Among the Member States, the situation in Latvia was in stark contrast to that for the EU-25 as a whole, as the proportion of the value added generated by large enterprises accounted for about one third (32.6 %) of the total for the chemicals, rubber and plastics sector, a considerably lower proportion than the national, industrial average (49.2 %) for large enterprises.

Table 5.4

Manufacture of chemicals and chemical products; manufacture of rubber and plastic products (NACE Subsections DG and DH)
Labour force characteristics, 2005

	Male		Full-time		Breakdown by age (% share of total)		
	Proportion of those employed (%)	Index (industry=100)	Proportion of those employed (%)	Index (industry=100)	< 30 years	30-49 years	50+ years
EU-25	67.9	95.2	93.5	101.2	20.1	59.0	21.0
BE	71.9	95.0	86.4	97.0	20.9	61.6	17.6
CZ	59.7	92.7	98.1	100.6	22.3	55.2	22.5
DK	60.1	86.3	91.9	102.2	19.1	56.7	24.2
DE	68.7	94.7	91.5	103.4	17.6	58.6	23.8
EE	55.8	100.1	100.0	102.5	21.1	61.4	:
EL	67.7	91.2	99.4	101.3	17.4	62.3	20.3
ES	72.0	95.7	96.7	101.5	23.6	57.6	18.9
FR	64.9	90.8	95.3	101.4	19.2	61.0	19.8
IE	61.9	87.8	95.5	100.9	30.9	55.7	13.4
IT	70.0	97.9	94.7	101.4	19.7	63.4	16.8
CY	53.0	76.6	97.4	103.9	26.7	39.4	33.9
LV	48.0	81.8	97.3	100.9	21.7	51.9	26.4
LT	72.9	136.9	100.0	102.2	:	59.0	:
LU	87.0	106.6	96.6	103.0	12.8	68.1	19.0
HU	59.1	94.7	98.8	101.6	20.3	52.0	27.7
MT	66.0	85.5	90.3	94.5	:	:	:
NL	79.1	102.2	77.1	105.5	16.0	63.5	20.6
AT	68.1	91.1	91.6	101.8	22.7	58.8	18.5
PL	64.5	93.5	96.5	100.3	24.0	59.8	16.2
PT	64.2	108.4	99.3	102.2	30.2	51.8	18.1
SI	57.0	89.2	96.4	100.4	22.9	58.5	18.5
SK	64.9	101.7	98.8	99.9	18.0	57.1	24.9
FI	67.9	95.0	97.5	102.7	20.1	57.3	22.7
SE	63.2	84.2	90.7	100.6	15.8	56.0	28.2
UK	70.6	94.3	92.7	101.5	20.5	55.7	23.8

Source: Eurostat (LFS)

LABOUR FORCE CHARACTERISTICS

The proportion of men working in the EU-25's chemicals, rubber and plastics manufacturing sector (NACE Subsections DG and DH) was slightly lower (67.9 %) than the industrial (NACE Sections C to E) average (71.3 %) in 2005. Within the sector, the proportion of men working in chemicals, chemical products and man-made fibres manufacturing (NACE Subsection DG) was notably lower (64.7 %) than the corresponding share working in rubber and plastic products manufacturing (NACE Subsection DH, 72.2 %) in 2005.

The proportion of men working in the chemicals, rubber and plastics manufacturing sectors in Cyprus (53.0 %) and Latvia (48.0 %) were particularly low, both in comparison to other Member States and in comparison to their own total industry averages (see Table 5.4). In contrast, the proportion of men working in the chemicals, rubber and plastics manufacturing sector in Lithuania (72.9 %) was much higher than the national, industrial average (53.3 %).

The age profile of the workforce in the chemicals, rubber and plastics sector was broadly similar to the profile across industry as a whole for the EU-25. There was also a comparable rate of full-time employment in the sector, 93.5 % compared with 92.4 % for industry as a whole.

COSTS, PRODUCTIVITY AND PROFITABILITY

Average personnel costs in the EU-25's chemicals, rubber and plastics sector were EUR 39 900 per employee in 2003, some 22.4 % higher than the industrial (NACE Sections C to E) average. However, within the sector, average personnel costs in chemicals, chemical products and man-made fibres manufacturing were particularly high (EUR 48 300 per employee) in comparison to rubber and plastics manufacturing (EUR 30 300 per employee).

Apparent labour productivity in the chemicals, rubber and plastics sector was a little over one third higher (36.7 %) than the industrial average at EUR 67 800 of added value per

person employed in 2003. Within the sector, the apparent labour productivity of those working in the EU-25's manufacture of basic chemicals (NACE Group 24.1, EUR 105 000) and the manufacture of pharmaceuticals (NACE Group 24.4, EUR 102 900) was particularly high. In contrast, the apparent labour productivity of plastics products manufacturing (NACE Group 25.2) and rubber products manufacturing (NACE Group 25.1) were below the industrial average.

The gross operating rate (a measure of productivity) for the EU-25's chemicals, rubber and plastics manufacturing sector was 12.3 % in 2003 (see Figure 5.4), higher than the industrial average (10.3 %). Within the sector, however, the gross operating rate of rubber and plastic products manufacturing (10.4 %) was much closer to the industrial average than that of chemicals, chemical products and man-made fibres manufacturing (13.0 %).

Table 5.5

Manufacture of chemicals and chemical products; manufacture of rubber and plastic products (NACE Subsections DG and DH)
Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	5.0	81.0	19.0	67.8	39.9	170.0	12.3
1	Malta (15.3)	Ireland (90.8)	Malta (35.1)	Ireland (491.8)	Belgium (62.0)	Ireland (1 112.9)	Ireland (48.6)
2	Hungary (14.7)	Lithuania (90.2)	Denmark (27.8)	Belgium (118.1)	Netherlands (51.1)	Latvia (249.8)	Latvia (20.9)
3	Latvia (11.0)	Estonia (87.9)	Cyprus (24.3)	Netherlands (101.4)	Denmark (50.3)	Hungary (230.4)	Slovenia (19.0)
4	Slovenia (10.5)	Slovakia (87.7)	Germany (23.9)	Denmark (87.2)	Germany (50.1)	Poland (227.5)	Hungary (17.7)
5	Czech Republic (9.9)	Netherlands (87.4)	Sweden (23.0)	Luxembourg (79.5)	Luxembourg (49.3)	Czech Republic (218.9)	Denmark (17.5)

(1) Latvia, Malta and Sweden, 2002; Belgium and Greece, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Malta and Sweden, 2002; Greece not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Malta and Sweden, 2002; Greece, not available; EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

EXTERNAL TRADE

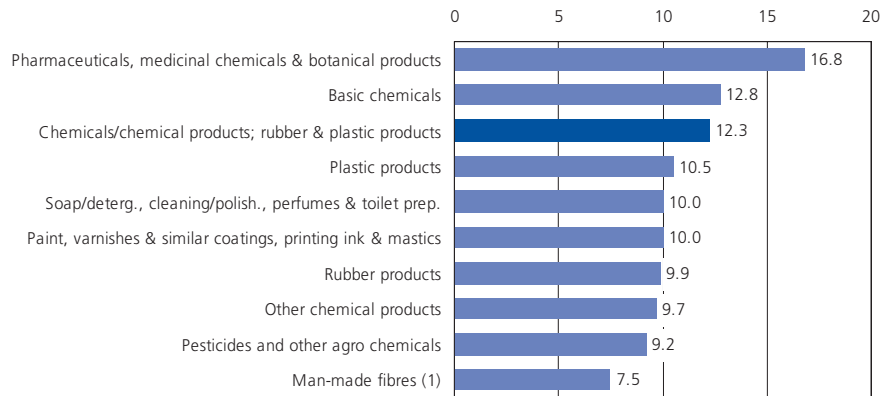
The EU-25's trade surplus in chemical, rubber and plastic products (CPA Subsections DG and DH) reached EUR 67.8 billion in 2005. The widening trade surplus in these products (up 62.8 % overall since 2000) reflects the fact that exports have been growing at a faster pace than imports. The value of exports was EUR 180.7 billion in 2005 and the value of imports EUR 112.8 billion (see Table 5.6). The main trade partners in chemical, rubber and plastic products were the United States and Switzerland; they represented both the principal market destinations for exports (27.9 % and 9.8 % respectively) and the principal origin of imports (29.3 % and 19.6 % respectively).

Among the Member States, Germany was the largest exporter of chemical, rubber and plastic goods, valued at EUR 119.4 billion in 2005 (this represented 21.7 % of the EU-25 total for intra- and extra-EU-trade). Belgium, France, the United Kingdom and the Netherlands were the other main exporters (together accounting for 46.4 % of total exports of these goods).

Germany recorded a significant trade surplus in these products in 2005 (EUR 31.3 billion), with much of this coming from the extra-EU-25

Figure 5.4

Chemicals and chemical products; rubber and plastic products (NACE Subsections DG and DH)
Gross operating rate, EU-25, 2003 (%)



(1) 2002.

Source: Eurostat (SBS)

market (EUR 21.1 billion). The largest trade surplus in these goods, however, was recorded in Ireland (EUR 32.5 billion in 2005) with much of this surplus centred on the intra-EU-25 market (EUR 20.1 billion). According to PharmaChemical Ireland ⁽⁴⁾, nine of the top ten

⁽⁴⁾ PharmaChemical Ireland, <http://www.ibec.ie/Sectors/PCMF/webipcmf.nsf/wHome?OpenForm>.

global pharmaceutical manufacturers have operations in the country. The importance of chemical, rubber and plastic goods to the Irish economy is underlined by the fact that they represented 49.2 % of all industrial exports in 2005. These goods were also a significant contributor to the industrial exports of Belgium (33.1 % of the total in 2005), when compared with the EU-25 average of 18.2 %.

Table 5.6

Chemicals, chemical products and man-made fibres; rubber and plastic products (CPA Subsections DG and DH)
External trade, EU-25, 2005

	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Chemicals, chemical products and man-made fibres; rubber and plastic products	180 681	18.2	112 837	10.5	67 844	160.1
Basic chemicals; pesticides and other agro-chemical products	54 610	5.5	41 036	3.8	13 574	133.1
Pharmaceuticals, medicinal chemicals and botanical products	61 716	6.2	34 660	3.2	27 056	178.1
Miscellaneous chemical products	36 167	3.6	15 952	1.5	20 215	226.7
Man-made fibres	1 755	0.2	1 885	0.2	-130	93.1
Rubber products	7 138	0.7	6 881	0.6	257	103.7
Plastic products	16 137	1.6	11 792	1.1	4 345	136.8

Source: Eurostat (Comext)

5.1: BASIC INDUSTRIAL CHEMICALS (INCLUDING PETROCHEMICALS), PESTICIDES AND AGROCHEMICALS

The manufacture of basic chemicals (NACE Group 24.1) covers the manufacture of petrochemicals, industrial gases, dyes, pigments and fertilizers, as well as primary forms of plastics and synthetic rubber. This subchapter also includes information on the manufacture of plant growth regulators, disinfectants and products to fight pests and diseases (NACE Group 24.2). These two NACE groups are collectively referred to as basic and agro-chemical products.

Table 5.7

Western European petrochemical production and capacity (thousand tonnes) (1)

	Production, 2005	Capacity, 2005	Share of world production, 2004 (%)
Ethylene	21 600	23 969	28.4
Propylene	15 406	17 834	32.4
Benzene	8 480	9 784	29.5

(1) EU-15, plus Norway and Switzerland.

Source: International Petrochemical Information Forum, Association of Petrochemical Producers in Europe (APPE), <http://www.petrochemistry.net>

Petrochemicals are derived from oil or natural gas and can be classified in three product categories; these are primary petrochemicals (see Table 5.7) such as olefins (for example, ethylene and propylene), aromatics (for example, benzene) and methanol, petrochemical intermediates (for example, vinyl chloride and styrene), and petrochemical products (for example, plastics, fertilizers and agro-chemicals and synthetic rubber). In this way, petrochemicals are a key input for other chemicals activities and for many downstream sectors (such as the metals, automotive and agricultural sectors), either directly or as transformed intermediate goods.

There was further consolidation within the EU-25 basic chemicals sector in 2005 (for example, the restructuring of Arkema, Bassell and Boréal) and integration with refinery enterprises, within a business environment of greater competition (from the Middle East and China in particular) and rising costs.

Recent European Community legislation targeted at petrochemical products includes European Parliament and Council Regulation (EC) No 396/2005 which set minimum residue levels of pesticides and plant protection products in human and animal food that should have been observed since 5 April 2005, and Articles 8 and 26 of European Parliament and Council Regulation (EC) No 2003/2003 which came into force in June 2005 requiring the traceability of fertilizer origin and safety measures and controls for straight ammonium nitrate fertilizers of high nitrogen content. Environmental concerns are leading to research and development in chemical processing improvements such as new reactor and separation technologies like membrane technology and the development of bio-chemicals such as sugar-based biobutanol and bio-processes.

STRUCTURAL PROFILE

The basic and agro-chemicals manufacturing sector (NACE Groups 24.1 and 24.2) in the EU-25 generated EUR 64.0 billion of added value in 2003, which equated to 3.8 % of the industrial (NACE Sections C to E) total (see Table 5.8). The sector employed 614 000 persons within the EU-25 in 2003, equating to a 1.7 % share of the industrial workforce, less than half the share recorded for value added. The vast majority of the value added (95.7 %) and employment (95.2 %) of the sector came from the basic chemicals manufacturing subsector (NACE Group 24.1).

Germany was the principal producer of both basic and agro-chemical products (a combined 29.3 % share of EU-25 value added in 2003). However, Ireland (accounting for 19.9 % of EU-25 value added), Belgium, and the Netherlands were particularly specialised in basic chemicals manufacturing⁽⁵⁾. There was little specialisation in the manufacture of agro-chemicals among Member States.

⁽⁵⁾ Sweden, 2002; Greece, Cyprus, Luxembourg and Malta, not available.

Table 5.8

**Manufacture of basic chemicals; manufacture of pesticides and other agro-chemical products (NACE Groups 24.1 and 24.2)
Structural profile, EU-25, 2003**

	Value added (EUR million)	Share of industrial value added (%)	Number of persons employed (thousands)	Share of industrial employment (%)
Basic chemicals; pesticides and other agro-chemical products (1)	64 000	3.8	614	1.7
Basic chemicals (1)	61 500	3.6	584	1.7
Industrial gases	:	:	45	0.1
Dyes and pigments	:	:	44	0.1
Other inorganic basic chemicals	4 549	0.3	62	0.2
Other organic basic chemicals	29 970	1.8	184	0.5
Fertilizers and nitrogen compounds	2 672	0.2	51	0.2
Plastics in primary forms	16 153	1.0	190	0.5
Synthetic rubber in primary forms	704	0.0	8	0.0
Pesticides and other agro-chemical products	2 767	0.2	30	0.1

(1) Value added and related share, rounded estimates based on non-confidential data.

Source: Eurostat (SBS)

There was strong growth, an average rate of 4.2 % per annum, in the EU-25's production index for basic chemicals (NACE Group 24.1) between 1995 and 2005, although there was some stability between 2002 and 2004 (see Figure 5.5). This was a faster average rate of annual growth than that for chemicals, rubber and plastics (NACE Subsections DG and DH) as a whole (3.1 %). Over the period 1995 to 2005, the production index for industrial gases (NACE Class 24.11) averaged 2.4 % per annum. The production index for plastics in a primary form (NACE Class 24.16) increased sharply in the period between 1995 and 2000 (an average of 5.8 % per year), before falling back and then rebounding back to 2000 levels in 2005. In contrast, the EU-25's production index for agro-chemical products (NACE Group 24.2) declined considerably, particularly from a peak output level in 1999, with an average decline of 4.4 % per annum since this date.

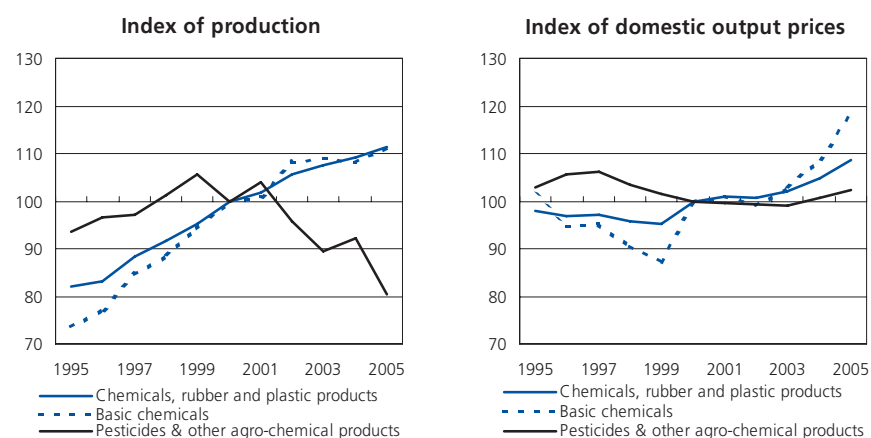
The development of EU-25 domestic output prices for basic chemicals closely followed that of oil prices. There were particularly strong output price increases in 1995 (16.2 %), 2000 (14.5 %), 2004 (6.2 %) and 2005 (8.2 %), which were all years of steeply rising oil prices.

COSTS, PRODUCTIVITY AND PROFITABILITY

Within the EU-25's basic and agro-chemicals manufacturing sector, the apparent labour productivity of basic chemicals manufacturing (EUR 105 000 per person employed) was somewhat higher than that for agro-chemicals (EUR 93 800) in 2003, but both subsectors were among the top eight most productive activities at the NACE group level within the non-financial business economy (subject to data availability), with productivity levels that were around double the industrial average (EUR 49 600 per person employed). In almost all Member States for which information is available ⁽⁶⁾, apparent labour productivity in basic chemicals manufacturing was substantially above national, industrial averages in 2003, the exceptions being Latvia and Slovakia where they were 20-25 % lower.

⁽⁶⁾ Sweden, 2002; Greece, Cyprus, Luxembourg and Malta, not available.

Figure 5.5 Manufacture of basic chemicals; manufacture of pesticides and other agro-chemical products (NACE Groups 24.1 and 24.2)
Evolution of main indicators, EU-25 (2000=100)



Source: Eurostat (STS)

EU-25 personnel costs for basic chemicals averaged EUR 52 500 per employee in 2003, while the corresponding ratio for agro-chemicals was EUR 56 100, both above the industrial average of EUR 32 600.

EXTERNAL TRADE

There was an EU-25 trade surplus of EUR 13.6 billion in basic and agro-chemicals (CPA Groups 24.1 and 24.2) in 2005 (see Table 5.9). This surplus comprised exports to non-member countries to the value of EUR 54.6 billion (representing 34.7 % of all chemicals and chemical product exports) and imports from non-member countries to the value of EUR 41.0 billion (representing 43.6 % of all chemicals and chemical product imports).

EU-25 exports of other organic basic chemicals (CPA Class 24.14) were valued at EUR 29.1 billion in 2005, over half (53.3 %) of the value of all basic and agro-chemical products. The value of EU-25 imports of other organic basic chemicals rose sharply in 2005 to EUR 22.3 billion, reflecting rising prices for oil and gas, and resulted in the trade surplus narrowing to EUR 6.9 billion in 2005. In contrast, the trade surplus for plastics in their primary form (CPA Class 24.16) continued to widen and was valued at EUR 7.5 billion in

2005. In this respect, the relatively higher added value of polymers and the relatively low share of production costs accounted for by oil should be noted. The widening trade surplus for plastics in their primary form was based on accelerating export values to EUR 15.4 billion in 2005.

Among the Member States, Belgium and Ireland were the principal exporters of other organic basic chemicals, accounting for 21.4 % and 19.4 % of EU-25 exports (extra and intra-EU-25). Indeed, the share of such exports in industrial exports was more than six times the EU-25 average in Ireland. Almost three quarters (71.0 %) of the EU-25's exports of plastics in their primary form (both intra- and extra-EU exports) came from Germany (22.4 %), Belgium (22.1 %), the Netherlands (14.7 %) and France (11.8 %).

Table 5.9 Basic chemicals; pesticides and other agro-chemical products (CPA Groups 24.1 and 24.2)
External trade, EU-25, 2005

	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Basic chemicals; pesticides and other agro-chemical products	54 610	5.5	41 036	3.8	13 574	133.1
Basic chemicals	52 334	5.3	40 101	3.7	12 234	130.5
Pesticides and other agro-chemical products	2 276	0.2	936	0.1	1 340	243.2

Source: Eurostat (Comext)

5.2: PHARMACEUTICALS

The manufacture of pharmaceuticals includes the manufacture of basic pharmaceutical products (NACE Class 24.41) and pharmaceutical preparations (NACE Class 24.42), such as medicaments, vaccines, homeopathic preparations, dental fillings, bandages and dressings.

Pharmaceutical products can be separated into those that are sold on the basis of a medicinal prescription or those that are non-prescribed and can be given over the counter as self-medication products. These two types of pharmaceutical product can either be branded or generic. When the marketing period granted by patent laws and the supplementary protection certificate expire, generics (which are copies of the original products) can be produced and sold, usually at a cheaper price.

The pharmaceuticals sector is highly regulated, with European Community legislation falling into three broad categories; these concern the guarantee of public health protection to a high level, the completion of the internal market, and the simplification of the medicines authorisation system. Among recent developments, the European Commission ⁽⁷⁾ supported in March 2006 the Common Position of the Council regarding the amended proposal on improved research, development and authorisation of medicinal products for paediatric use. In May 2006, a Regulation ⁽⁸⁾ of the European Parliament and of the Council allowing compulsory licensing of patented medicines for export to countries with public health problems was adopted. In a further move, a ruling by the European Court of Justice in May 2006 ⁽⁹⁾ may restrict the availability of so-called supplementary protection certificates for some drugs.

According to the European Federation of Pharmaceutical Industries (EFPIA), turning a newly synthesised active substance into a marketable medicinal product takes an average of 12-13 years but only three in ten of these products will produce revenues that more than cover their R&D costs (see Figure 5.6 for EFPIA figures on R&D expenditure). Recent developments have, among others, led to further consolidation within the EU-25's pharmaceutical sector, such as the July 2006 takeover of Schering AG by Bayer AG.

⁽⁷⁾ COM(2006) 118 final.

⁽⁸⁾ EC No 816/2006.

⁽⁹⁾ Case C-431/04 in respect of Massachusetts Institute of Technology.

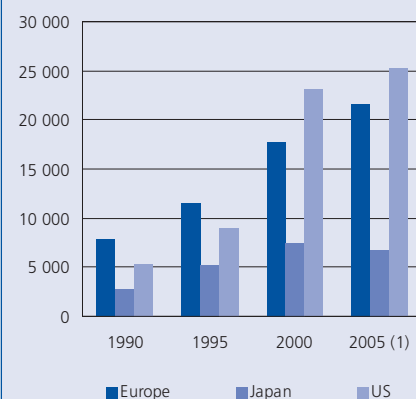
STRUCTURAL PROFILE

The pharmaceuticals manufacturing sector (NACE Group 24.4) employed 575 600 people throughout the EU-25 and generated EUR 59.2 billion of added value, almost one quarter (24.6 %) of the added value created by chemicals, rubber and plastics manufacturing (NACE Subsections DG and DH). More than four fifths (88.5 %) of the value added of the pharmaceuticals sector came from the pharmaceutical preparations manufacturing subsector (NACE Class 24.42), the remainder coming from the manufacture of basic pharmaceutical products (NACE Class 24.41).

In value added terms France (19.4 %), Germany (18.2 %) and the United Kingdom (13.6 %) were the largest producers of pharmaceutical products in the EU-25. Nevertheless, Slovenia, Sweden (2002), Belgium and Denmark were the most specialised ⁽¹⁰⁾ pharmaceutical producers (note that data for Ireland is not available) with contributions to national, industrial value added more than double the EU-25 average (3.5 %).

⁽¹⁰⁾ Lithuania, Malta and Sweden, 2002; Greece, Ireland, Cyprus and Luxembourg, not available.

Figure 5.6
Pharmaceuticals R&D expenditure
(EUR million, at current exchange rates)

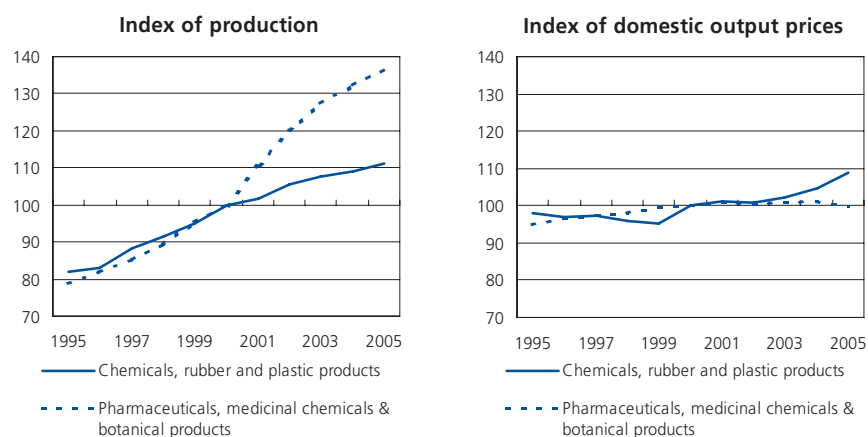


(1) Europe and US, estimates; Japan, 2004.

Source: EFPIA member associations, <http://www.efpia.org>; JPMA; PhRMA.

There was a continuous and steady rise in the EU-25's production index for pharmaceutical products between 1995 and 2005 (at an average rate of 5.6 % per annum). Apart from a couple of years (1997 and 2000) during this period, the rate of increase in pharmaceuticals manufacturing output outpaced the average for chemicals, rubber and plastics manufacturing. In contrast, perhaps due to the increased competition from generic drugs, prices for pharmaceuticals manufacturing output remained flat between 2000 and 2005, with the index for chemicals, rubber and plastics manufacturing accelerating between 2003 and 2005 (see Figure 5.7).

Figure 5.7
Manufacture of pharmaceuticals, medicinal chemicals and botanical products
(NACE Group 24.4)
Evolution of main indicators, EU-25 (2000=100)



Source: Eurostat (STS)

COSTS, PRODUCTIVITY AND PROFITABILITY

The apparent labour productivity of the EU-25's pharmaceutical manufacturing sector reached EUR 102 900 per person employed in 2003, putting it among the top eight most productive sectors (at the NACE group level) within the non-financial business economy (subject to data availability). The highest level of apparent labour productivity ⁽¹¹⁾ was in Ireland at EUR 337 800 per person employed. For most Member States the apparent labour productivity of the pharmaceuticals manufacturing sector was substantially higher than the national, industrial average (for example, three times higher in Hungary and four times the industrial average in Slovenia), but in Finland and Slovakia it was similar to the industrial average.

⁽¹¹⁾ Lithuania, Malta and Sweden, 2002; Greece, Cyprus and Luxembourg, not available.

Personnel costs per employee within the EU-25 pharmaceutical manufacturing sector averaged EUR 51 900 in 2003, which was 59.2 % above the industrial average. The derived wage adjusted labour productivity ratio for the pharmaceutical manufacturing sector was 198.4 % in 2003, almost one third (30.5 %) higher than the industrial average.

One of the highest profitability ratios (as measured by the gross operating rate) within the EU-25's industrial economy was recorded for the pharmaceutical manufacturing sector in 2003, at 16.8 %. The highest gross operating rates in this sector were recorded in Ireland, Sweden (2002), Hungary and Slovenia, all over 30 %. Gross operating rates for the pharmaceuticals manufacturing sector were higher than national, industrial averages in most Member States, with the exceptions of Lithuania (2002), Malta (2002), the Netherlands and Slovakia ⁽¹²⁾ where they were between 15 % and 50 % lower.

⁽¹²⁾ Lithuania, Malta and Sweden, 2002; Greece, Cyprus and Luxembourg, not available.

EXTERNAL TRADE

The value of exports of pharmaceutical products (CPA Group 24.4) rose sharply in 2005 (up 9.3 % on the level of 2004) to EUR 61.7 billion (see Table 5.10). These exports accounted for just over one third (34.2 %) of the value of exports of chemicals, rubber and plastic products in 2005 and 6.2 % of industrial exports. With only a moderate rise in the value of pharmaceutical imports in 2005 (3.5 % higher than in 2004), there was a further widening of the EU-25's trade surplus for these products to EUR 27.1 billion; overall, the trade surplus in pharmaceutical products grew 61.5 % between 2000 and 2005. The United States was by far the largest importer of EU-25 pharmaceutical products (accounting for 35.9 % of the market), followed by Switzerland (12.1 %).

Germany and Belgium were the principal exporters of pharmaceutical products, accounting for 19.8 % and 18.2 % respectively of the exports (intra- and extra-EU trade) of EU-25 Member States. France (11.6 %), the United Kingdom (11.5 %), and Ireland (10.2 %) were the only other Member States to account for a share greater than 10 %.

Table 5.10

Pharmaceuticals, medicinal chemicals and botanical products (CPA Group 24.4) External trade, EU-25, 2005

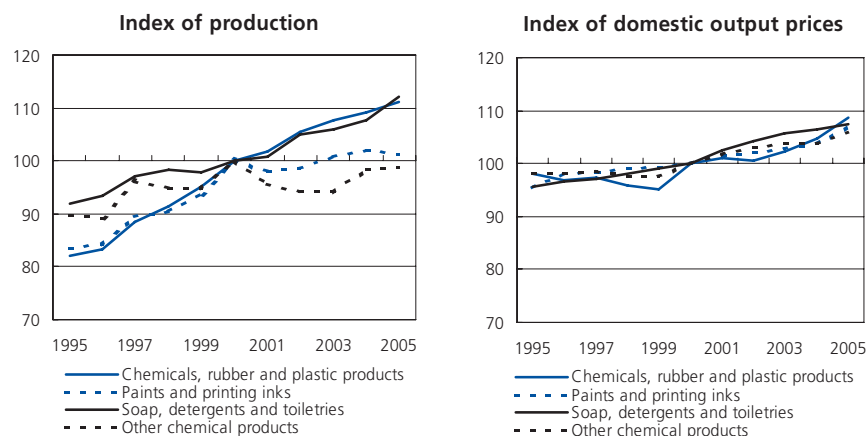
	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Pharmaceuticals, medicinal chemicals and botanical products	61 716	6.2	34 660	3.2	27 056	178.1
Basic pharmaceutical products	8 538	0.9	10 203	0.9	-1 665	83.7
Pharmaceutical preparations	52 805	5.3	24 333	2.3	28 472	217.0

Source: Eurostat (Comext)

5.3: MISCELLANEOUS CHEMICAL PRODUCTS

This subchapter covers three activities that are presented separately. The manufacture of paints, varnishes, enamels, lacquers, solvents, thinners, varnish removers, as well as printing inks (NACE Group 24.3) is the first; hereafter, referred to as paints and printing inks. The manufacture of washing and cleaning products, as well as perfumes, toiletries, cosmetics and related products (NACE Group 24.5) forms the next group; hereafter, referred to as soaps, detergents and toiletries. Finally, NACE Group 24.6 covers other chemical products, a residual grouping that includes the manufacture of photographic materials, explosives, glues and essential oils, as well as intermediate inputs for other manufacturing processes.

Figure 5.8
Miscellaneous chemical products (NACE Groups 24.3, 24.5 and 24.6)
Evolution of main indicators, EU-25 (2000=100)



Source: Eurostat (STS)

Table 5.11
Miscellaneous chemical products (NACE Groups 24.3, 24.5 and 24.6)
Structural profile, EU-25, 2003

	Value added (EUR million)	Share of industrial value added (%)	Number of persons employed (thousands)	Share of industrial employment (%)
Miscellaneous chemical products (1)	42 000	2.5	640	1.8
Paints and printing inks (1)	10 800	0.6	172	0.5
Soaps, detergents and toiletries	17 331	1.0	267	0.8
Other chemical products (1)	14 100	0.8	209	0.6

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

Table 5.12
Miscellaneous chemical products (CPA Groups 24.3, 24.5 and 24.6)
External trade, EU-25, 2005

	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Miscellaneous chemical products	36 167	3.6	15 952	1.5	20 215	226.7
Paints and printing inks	4 958	0.5	1 282	0.1	3 675	386.6
Soaps, detergents and toiletries	12 206	1.2	3 291	0.3	8 915	370.9
Other chemical products	19 004	1.9	11 379	1.1	7 625	167.0

Source: Eurostat (Comext)

The miscellaneous chemical products manufacturing sector (NACE Groups 24.3, 24.5 and 24.6) employed 640 000 people throughout the EU-25 and generated EUR 42.0 billion of added value, 17.5 % of the added value generated by the whole of the chemicals, rubber and plastics manufacturing sector (NACE Subsections DG and DH). Within the miscellaneous chemical products manufacturing sector, almost one third of the value added created in 2003 came from other chemical products manufacturing (NACE

Group 24.6) and about one quarter from paints and printing inks manufacturing (NACE Group 24.3). The largest proportion (over 40.0 %), however, came from soaps, detergents and toiletries manufacturing (NACE Group 24.5).

Table 5.13

Production value of selected paint and printing ink products (CPA Group 24.3), EU-25, 2004 (EUR million)

	Prodcom code	
Paints and varnishes; based on acrylic or vinyl polymers dispersed or dissolved in an aqueous medium	24.30.11.50	5 306
Glaziers' putty, grafting putty, resin cements, caulking compounds and other mastics	24.30.22.53	1 216
Organic composite solvents & thinners used in conjunction with coatings & inks (excl. those based on butyl acetate)	24.30.22.79	884
Black printing inks	24.30.24.50	610
Printing inks (excluding black)	24.30.24.70	3 625

Source: Eurostat (PRODCOM)

MANUFACTURE OF PAINTS AND PRINTING INKS

The paint and printing inks manufacturing subsector (NACE Group 24.3) covers the manufacture of four main categories of product: architectural coatings (interior and exterior house paints, primers and fillers etc.), coatings for industrial and consumer products, special coatings for specific applications (for example, re-painting of machines and cars, and road marking), and printing inks for different printing processes. Despite the breadth of products manufactured (see Table 5.13), they all tend to use pigments and (sometimes) dyes to make colour, and use solvents which evaporate during or after processing. In this way they tend to face similar health, safety and environmental issues.

The paint and printing inks manufacturing subsector employed 172 000 people throughout the EU-25 in 2003 and generated EUR 10.8 billion of added value, which represented 4.5 % of the value added created by chemicals, rubber and plastics (NACE Subsections DG and DH) manufacturing as a whole. A little under one third (31.0 %) of the value added generated by the EU-25's paint and printing inks manufacturing subsector came from Germany, with other significant contributions coming from the United Kingdom (14.8 %), Italy (13.7 %) and France (10.8 %). Estonia was the Member State that was most specialised in the manufacture of paints and printing inks with the added value generated accounting for 2.6 % of national, industrial value added, about twice the proportion of the EU-25 average (1.3 %).

The index of production for paints and printing inks for the EU-25 followed two distinct patterns over the period between 1995 and 2005 (see Figure 5.8). In the period until 2000, there was strong growth in output (at an average rate of 3.7 % per annum), while a period of relative stability in production followed through until 2005 (with annual growth of 0.3 % per annum). Domestic output prices for paints and printing ink products in the EU-25 rose every year between 1995 and 2005, at a relatively modest pace (on average, 1.2 % per annum).

The apparent labour productivity of those working in the EU-25's paints and printing inks manufacturing subsector was EUR 63 000 per person in 2003, while average personnel costs were EUR 42 000 per employee. The wage adjusted labour productivity ratio (the ratio of apparent labour productivity to average personnel costs) was 151 % for the EU-25, below the 170 % average for the whole of chemicals, rubber and plastics manufacturing (NACE Subsections DG and DH). The highest wage adjusted labour productivity ratios among the Member States for paint and printing inks manufacturing were recorded in the Baltic Member States (between 244 % in Lithuania and 346 % in Estonia).

The EU-25 exported EUR 5.0 billion of paints and printing inks (CPA Group 24.3) in 2005, principally to Russia (14.9 %), the United States (7.9 %), Turkey (6.5 %) and Switzerland (5.8 %). The growth in exports in 2005 (6.9 %) was very similar to that registered a year before (7.1 %). Germany accounted for a little less than one third (30.5 %) of all exports (intra- and extra-EU trade) made by EU-25 Member States in 2005, and was, by far, the leading exporter (no other Member State accounting for more than a 10 % share). Although there was also strong growth (8.5 % higher in 2005) in the value of imports of paints and printing inks to the EU-25, the trade surplus grew to EUR 3.7 billion in 2005.

MANUFACTURE OF SOAPS, DETERGENTS AND TOILETRIES

The soaps, detergents and toiletries manufacturing subsector (NACE Group 24.5) covers the manufacture of two main product categories (see Table 5.14); firstly, the manufacture of soaps and synthetic detergents (toilet, household and industrial soaps and washing products) and secondly, the manufacture of personal care products (for example, skin care, toiletries and cosmetics).

Table 5.14

Production value of selected soaps, detergents and toiletries (CPA Group 24.5), EU-25, 2004 (EUR million)

	Prodcom code	
Soap and organic surface-active products in bars	24.51.31.20	1 161
Toilet waters	24.52.11.70	3 953
Hair preparations (excluding shampoos, permanent waving and hair straightening preparations, lacquers)	24.52.17.00	2 792
Dentifrices (including toothpaste, denture cleaners)	24.52.18.50	1 128
Personal deodorants and anti-perspirants	24.52.19.50	1 288
Perfumed bath salts and other bath preparations	24.52.19.70	1 293

Source: Eurostat (PRODCOM)

The Council's Cosmetics Directive ⁽¹³⁾ of July 1976 has been the bedrock for laws relating to cosmetic products, but has been subject to amendments over the years. Recent changes, consultations and decisions have revolved around public health issues (draft guidelines ⁽¹⁴⁾ on reporting requirements regarding adverse reactions to products, the labelling of claims and the efficacy regarding sunscreen products, and the safety of hair dyes) as well as animal testing (the recently established European Partnership for Alternative Approaches to Animal Testing (EPAA) agreeing an action programme to refine, reduce and replace animal use in testing the safety of consumer products).

The soaps, detergents and toiletries manufacturing subsector employed 266 600 people throughout the EU-25 in 2003 and generated EUR 17.3 billion of added value, which represented 7.2 % of the total created within chemicals, rubber and plastics manufacturing as a whole (NACE Subsections DG and DH). Perfumes and toiletries manufacturing (NACE Class 24.52) accounted for the majority of employment (55.3 %) and added value (55.0 %) within the subsector, although this was only the case in a few Member States ⁽¹⁵⁾, notably, France, Latvia (2002), Poland and the United Kingdom. France was not only the main manufacturer of soaps, detergents and toiletries, accounting for a little more than a quarter (26.2 %) of the added value generated by this subsector within the EU-25, but was also the most specialised Member State.

There was steady growth in the EU-25 production index for soaps, detergents and toiletries over the period between 1995 and 2005 (with average growth of 2.0 % per annum), except for a small decline in 1999. For most of this period, output growth for soaps, detergents and toiletries was less than that for chemicals, rubber and plastics as a whole (where an average of 3.1 % per annum was registered), although this was not the case in 2002, 2004 and 2005 (see Figure 5.8).

EU-25 apparent labour productivity among those working in the soaps, detergents and toiletries subsector was EUR 65 000 per person in 2003, while average personnel costs were EUR 39 500 per employee and the wage adjusted labour productivity ratio was 164.8 %. These ratios were similar to the averages for chemicals, rubber and plastics manufacturing (NACE Subsections DG and DH). The highest wage adjusted labour productivity ratios were in several of the Member States that joined the EU in 2004, in particular the Czech Republic, Hungary, Poland and Slovakia (with rates between 205 % and 281 %).

The EU-25 trade surplus for soaps, detergents and toiletries (CPA Group 24.5) grew strongly (up 6.3 %) to reach EUR 8.9 billion in 2005, as EU-25 exports rose to the value of EUR 12.2 billion. Almost three quarters (74.9 %) of the EU-25's exports of soaps, detergents and toiletries were accounted for by perfumes and toiletries (CPA Class 24.52), for which the United States (17.6 %) and Russia (11.5 %) were the main markets. France was the leading exporter of perfumes and toilet preparations (CPA Class 24.52) in 2005, accounting for 35.7 % of the intra- and extra-EU exports of the EU-25 Member States, while Germany had the highest share of exports (24.2 %) for soap and detergents, cleaning and polishing preparations (CPA Class 24.51).

MANUFACTURE OF OTHER CHEMICAL PRODUCTS

The other chemical products manufacturing subsector (NACE Group 24.6) covers the manufacture of a range of specialty chemicals, including compressed gases (principally for the engineering industry), glues and adhesives, essential oils and explosives (including liquid gas fuels and matches). The added value generated by other chemical products manufacturing subsector was EUR 14.1 billion in 2003, representing 5.9 % of the value added for chemicals, rubber and plastics manufacturing (NACE Subsections DG and DH). Germany was the largest producer, accounting for almost one quarter (24.9 %) of the EU-25's added value. However, Belgium was the most specialised in the production of other chemical products, as this activity contributed 2.2 % to national, industrial value added in 2003, compared with an EU-25 average of 0.8 %.

During the period from 1995 to 2005, the output of other chemical products in the EU-25 increased in stages; there were relatively sharp rises in 1997 (7.7 %), 2000 (5.3 %) and 2004 (4.3 %) which were preceded and followed by years of stability or some retraction in production (see Figure 5.8). Over the period as a whole, the output of other chemical products manufacturing increased on average by 1.0 % per annum, a much slower rate than that recorded for chemicals, rubber and plastics manufacturing (an average of 3.1 %). There were some contrasting developments, as the production of essential oils (NACE Class 24.63) saw large increases in output up to 2000 (on average rising by 4.5 % per annum) followed by less strong declines until 2005 (on average by 3.3 % per annum), while for explosives (NACE Class 24.61) the opposite was true, with a slight reduction in output up until 2000, followed by moderate increases until 2005.

The apparent labour productivity ratio of the other chemical products subsector was EUR 67 600 per person employed in the EU-25 in 2003, an almost identical figure to that for chemicals, rubber and plastics manufacturing as a whole. Nevertheless, higher average personnel costs of EUR 45 000 per employee, meant that the wage adjusted labour productivity ratio (150 %) for other chemicals was below the average for the whole of chemicals, rubber and plastics manufacturing (170 %).

The value of EU-25 exports of other chemical products (CPA Group 24.6) reached EUR 19.0 billion in 2005, continuing a strong upward trend apparent since 2001. With little change in the value of imports of other chemical products (EUR 11.4 billion), there was a rapid widening in the EU-25's trade surplus for these products, which rose, on average, by 18.0 % per annum between 2000 and 2005. Most of the widening in the trade surplus can be attributed to the miscellaneous category of other chemical products n.e.c. (CPA Class 24.66) and essential oils (CPA Class 24.63), which together accounted for a little over four fifths (81.8 %) of the value of exports of other chemical products in 2005.

⁽¹³⁾ Council Directive 76/768/EEC.

⁽¹⁴⁾ Practical implementation of Article 7a(1)(h) 2nd paragraph of Council Directive 76/768/EEC.

⁽¹⁵⁾ Latvia, Malta, Slovenia and Sweden, 2002; Czech Republic, Greece, Ireland, Luxembourg and Finland, not available.

5.4: MAN-MADE FIBRES

This subchapter relates to the manufacture of artificial and synthetic fibres (NACE Group 24.7) in the form of tow, fibres, yarn, or strips. It excludes the manufacture of sewing thread (NACE Class 17.16) and man-made fibres derived from minerals (carbon, ceramic, glass or metal).

The man-made fibres covered within this subchapter fall into two broad groups; these are synthetic fibres (polyester, nylons and acrylic fibres) and cellulosic fibres (such as acetates and viscose) which are made from natural sources. Man-made fibres are intermediate goods that are used mainly in clothes, interior furnishings and industrial applications. The man-made fibres activity is dominated by a small number of large enterprises that tend to concentrate on speciality fibres.

STRUCTURAL PROFILE

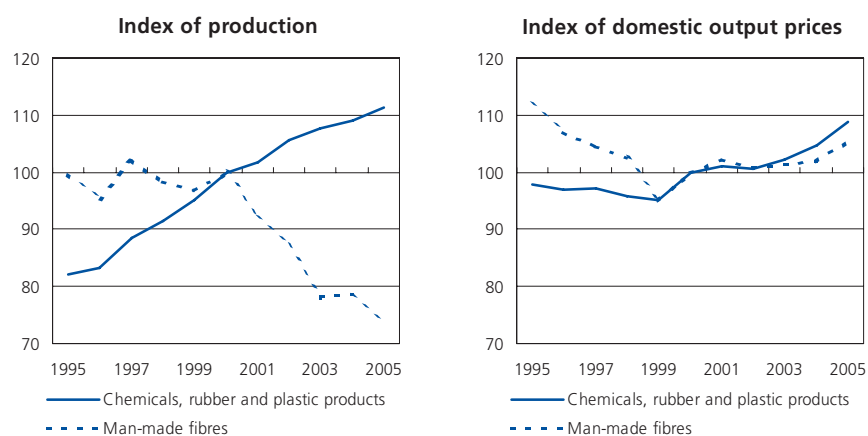
The man-made fibres manufacturing sector (NACE Group 24.7) in the EU-25 employed 52 600 people in 2003 and generated EUR 3.0 billion of added value, a 1.2 % share of the added value created within the whole of the chemicals, rubber and plastics (NACE Subsections DG and DH) sector. Germany was the principal producer ⁽¹⁶⁾ of man-made fibres, accounting for a little over one third (36.0 %) of EU-25's value added.

Since 2000, there has been a sharp fall in the EU-25 production index for man-made fibres (an average decline of 6.0 % per annum through until 2005). This development was in contrast with the growth in the production index for chemicals, rubber and plastics manufacturing (see Figure 5.9). The EU-25 domestic output price index for man-made fibres declined much more strongly than that for chemicals, rubber and plastics as a whole between 1995 and 1999, and the partial and uneven rebound through until 2005 was also less apparent. The output price index for man-made fibres in 2005 remained 6.2 % below its relative peak level of 1995.

⁽¹⁶⁾ Malta, the Netherlands and Austria, 2002; Belgium, the Czech Republic, Denmark, Greece, Ireland, Latvia, Lithuania, Luxembourg, Slovenia, Finland and Sweden, not available.

Figure 5.9

Manufacture of man-made fibres (NACE Group 24.7)
Evolution of main indicators, EU-25 (2000=100)



Source: Eurostat (STS)

COSTS, PRODUCTIVITY AND PROFITABILITY

Average personnel costs within the EU-25's man-made fibres manufacturing sector (NACE Group 24.7) were EUR 37 700 per employee in 2003, one of the lowest levels within the activities covered by chemicals, rubber and plastics manufacturing (NACE Subsections DG and DH), although still considerably more (15.6 %) than the industrial average. The apparent labour productivity of the man-made fibres manufacturing sector was EUR 52 500 per person employed in 2002. The highest rate ⁽¹⁷⁾ of apparent labour productivity in 2003 was in the United Kingdom at EUR 139 800 per person employed, more than twice the national, industrial average. The gross operating rate, a measure of profitability, of the man-made fibres manufacturing sector was also highest (28.9 %) in the United Kingdom in 2003, substantially above the EU-25 average (7.5 % in 2002).

⁽¹⁷⁾ Malta, the Netherlands and Austria, 2002; Belgium, the Czech Republic, Denmark, Greece, Ireland, Latvia, Lithuania, Luxembourg, Slovenia, Finland and Sweden, not available.

EXTERNAL TRADE

There was a much reduced EU-25 trade deficit for man-made fibres (CPA Group 24.7) in 2005, although the deficit remained the only one among the nine CPA groups that comprise chemicals, rubbers and plastics (CPA Subsections DG and DH). A second successive surge in exports of man-made fibres (41 % rises in both 2004 and then 2005) to a level of EUR 1.8 billion in 2005 led to the trade deficit being cut to EUR 129.8 million. In 2004, this surge in exports was led by a three-fold increase in exports from the Netherlands, while in 2005 it was led by a doubling of exports from Germany. This resulted in Germany becoming the principal EU-25 exporter (intra- and extra-EU exports) of man-made fibres in 2005, ahead of Italy and the Netherlands.

Table 5.15

Manufacture of man-made fibres (NACE Group 24.7)**Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003**

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (4)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	2.6	80.8	19.2	52.5	37.7	143.4	7.5
1	Austria (6.6)	Portugal (89.4)	Netherlands (30.3)	United Kingdom (139.8)	Netherlands (62.3)	United Kingdom (300.4)	United Kingdom (28.9)
2	Hungary (5.0)	Poland (89.0)	Austria (27.1)	Netherlands (106.8)	Austria (54.8)	Poland (221.5)	Netherlands (19.5)
3	United Kingdom (3.4)	Slovakia (88.8)	Germany (20.5)	Austria (92.1)	Germany (49.5)	Portugal (177.5)	Austria (16.1)
4	Portugal (3.0)	Italy (85.1)	United Kingdom (20.4)	Germany (68.7)	United Kingdom (46.5)	Netherlands (171.4)	Poland (10.2)
5	Poland (2.6)	France (84.5)	Hungary (20.1)	Italy (43.9)	Italy (37.7)	Austria (168.1)	Portugal (7.8)

(1) Malta and Austria, 2002; Belgium, the Czech Republic, Denmark, Greece, Ireland, Latvia, Lithuania, Luxembourg, the Netherlands, Slovenia, Finland and Sweden, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Malta, the Netherlands and Austria, 2002; Belgium, the Czech Republic, Denmark, Greece, Ireland, Latvia, Lithuania, Luxembourg, Slovenia, Finland and Sweden, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) EU-25, Malta, the Netherlands and Austria, 2002; Belgium, the Czech Republic, Denmark, Greece, Ireland, Latvia, Lithuania, Luxembourg, Slovenia, Finland and Sweden, not available.

(4) Malta, the Netherlands and Austria, 2002; Belgium, the Czech Republic, Denmark, Greece, Ireland, Latvia, Lithuania, Luxembourg, Slovenia, Finland and Sweden, not available.

Source: Eurostat (SBS)

5.5: RUBBER

The rubber sector (NACE Group 25.1) has three distinct parts: the manufacture of rubber tyres and tubes; the retreading and rebuilding of rubber tyres; and the manufacture of other rubber products.

Rubber is produced in both a natural form (from the hevea tree) and synthetic form (combining the gases butadiene and styrene). The EU has no natural rubber, but produced an estimated 2.7 million tonnes of synthetic rubber in 2005 (a 22 % share of global production, according to the International Rubber Study Group ⁽¹⁸⁾). The applications of rubber are diverse but the main downstream markets are in the transport equipment manufacturing sector (accounting for about 65 % of production according to the European Tyre and Rubber Manufacturers Association ⁽¹⁹⁾, through uses for tyres, windscreen wipers, and engine mountings among others), as well as for mining and pharmaceutical manufacturing.

⁽¹⁸⁾ IRSG, <http://www.rubberstudy.com/statistics-geninfo.aspx>.

⁽¹⁹⁾ ETRMA, <http://www.etrma.org/public/activitiesgrg.asp>.

As well as broader policy developments and evolving legislation regarding what to do with used tyres, a Directive ⁽²⁰⁾ of the European Parliament and of the Council was adopted in November 2005 regarding a reduction of Polycyclic Aromatic Hydrocarbons (PAH) in tyres by 1 January 2010. This further amendment of Council Directive 76/769/EEC followed findings by the Scientific Committee on Toxicity, Ecotoxicity and the Environment (CSTEE) that confirmed the adverse health effects of PAHs. By the beginning of 2010, therefore, all tyres should have tread containing new PAH-low extender oils that do not compromise on a high level of wet grip performance.

STRUCTURAL PROFILE

The rubber products manufacturing sector employed 359 400 people across the EU-25 in 2003 and generated EUR 17.1 billion of added value, which corresponded to 7.1 % of the added value generated by activities of chemicals, rubber and plastics manufacturing (NACE Subsections DG and DH). The added value of the rubber tyres and tubes manufacturing subsector (NACE Class 25.11) accounted for almost half (46.9 %) of the rubber products manufacturing sector's value added in 2003, with other rubber products (NACE Class 25.13) accounting for the majority of output (51.1 %), dwarfing the 2.0 % contribution made by the retreading and rebuilding of rubber tyres (NACE Class 25.12).

⁽²⁰⁾ Directive 2005/69/EC.

A little over four fifths (80.8 %) of the EU-25's value added generated by the rubber products manufacturing sector was concentrated in the five largest Member States, with Germany (25.4 % of the EU-25 total) and France (20.3 %) being the largest producers. However, Luxembourg was the Member State where the value added from rubber products manufacturing made the largest proportional contribution to industrial (NACE Sections C to E) value added (11.5 % of the total) in 2003, significantly more than the average recorded across the EU-25 (just 1.0 %). Malta, Slovakia and the Czech Republic were the next most specialised Member States within this sector (see Table 5.16).

There was a similar development in the output of the EU-25's rubber products manufacturing activity to that for chemicals, rubber and plastics manufacturing as a whole between 1995 and 2000 (see Figure 5.10). However, a subsequent decline in the production index for rubber products manufacturing occurred in 2001 and 2002, while the output of chemicals, rubber and plastics as a whole continued to rise. Growth in rubber products manufacturing output resumed in 2003 and continued in 2004 and 2005.

Table 5.16

Manufacture of rubber products (NACE Group 25.1)**Value added and employment: ranking of the top 5 Member States, 2003**

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (4 333.3)	25.4	Germany (78.5)	21.8	Luxembourg (11.5)	Luxembourg (10.0)
2	France (3 467.1)	20.3	France (70.6)	19.6	Malta (3.9)	Malta (2.7)
3	United Kingdom (2 251.2)	13.2	Italy (47.2)	13.1	Slovakia (2.0)	France (1.7)
4	Italy (2 132.5)	12.5	United Kingdom (33.6)	9.3	Czech Republic (2.0)	Slovakia (1.5)
5	Spain (1 597.9)	9.4	Spain (33.2)	9.2	Slovenia (1.8)	Czech Republic (1.3)

(1) Malta and Sweden, 2002; Greece, not available.

(2) Sweden, provisional; Malta, 2002; Greece, not available.

(3) Malta and Sweden, 2002; Greece and Ireland, not available.

(4) Sweden, provisional; Malta, 2002; Greece and Ireland, not available.

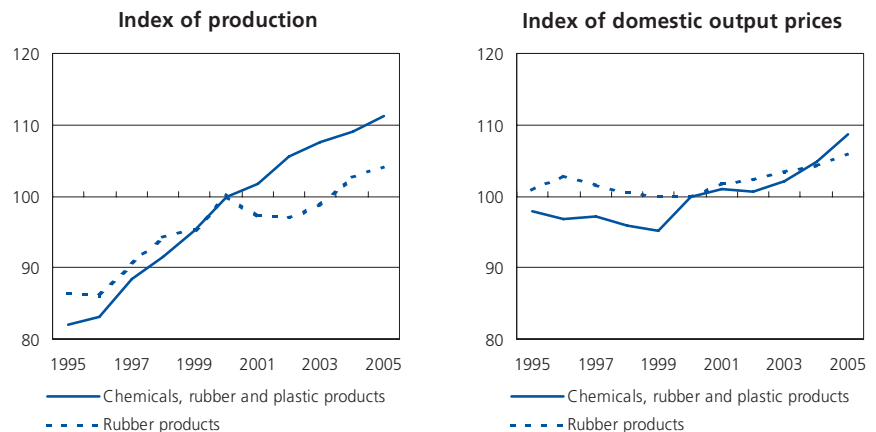
Source: Eurostat (SBS)

After a period of stability in the domestic output price index for EU-25 rubber products manufacturing for most years between 1995 and 2000, there was a subsequent, steady increase (with prices rising on average by 1.1 % per annum through until 2005). The development of the domestic output price index reflected developments in the price of natural rubber and petroleum costs for synthetic rubber (such as butadiene rubber).

COSTS, PRODUCTIVITY AND PROFITABILITY

Each person employed in the EU-25's rubber products manufacturing sector generated an average of EUR 47 500 of value added in 2003, which was some EUR 2 100 per person less than the average recorded for total industry. Personnel costs in the rubber products manufacturing sector averaged EUR 33 500 per employee in 2003, and were similar to the EU-25 industrial average, although substantially lower than the chemicals, rubber and plastics manufacturing average (EUR 39 900 per employee). The wage adjusted labour productivity ratio for the rubber products manufacturing sector was 141.6 % in 2003 for the EU-25, much lower than the average (170 %) for chemicals, rubber and plastics manufacturing. Nevertheless, in the Czech Republic, Latvia, Portugal and Slovenia the apparent labour productivity and wage adjusted labour productivity ratios for rubber products manufacturing were substantially higher (between 20 % and 70 %) than national, industrial averages.

Figure 5.10

Manufacture of rubber products (NACE Group 25.1)
Evolution of main indicators, EU-25 (2000=100)

Source: Eurostat (STS)

The profitability of the EU-25's rubber products manufacturing sector, as measured by the gross operating rate, was almost in line with the industrial average in 2003 (9.9 % compared with 10.3 %). The highest gross operating rates for the rubber products manufacturing sector were recorded in Malta (2002), Finland and Portugal in 2003, at levels between 75 % and 200 % higher than national, industrial averages ⁽²¹⁾.

EXTERNAL TRADE

Exports of rubber products (CPA Group 25.1) from the EU-25 were valued at EUR 7.1 billion in 2005, a 4.0 % share of the value of exports from the chemical, rubber and plastics sector as a whole (CPA Subsections DG and DH). Imports of rubber products to the EU-25 were valued at EUR 6.9 billion in 2005 (see Table 5.18). Since 2000, this sector has generally provided a small trade surplus (the exception being in 2003). The

make-up of this surplus, however, reflects two distinct trends; from their relatively balanced trade positions in 2000, there has been a steady rise in the trade surplus of other rubber products (CPA Class 25.13) through to 2005 (reaching EUR 810 million) and a widening trade deficit (reaching EUR 601 million in 2005) for rubber tyres and tubes (CPA Class 25.11); there is almost no external trade in retreaded and rebuilt tyres (CPA Class 25.12).

The main exporters of rubber products in 2005 were Germany (23.7 % of intra- and extra-EU exports by EU-25 Member States) and France (14.8 %), and these two Member States had the two largest trade surpluses in these goods (EUR 1.1 billion each). The respective trade surpluses for rubber products of the Czech Republic, Poland and Slovakia have been widening rapidly since 2000.

⁽²¹⁾ Malta and Sweden, 2002; Greece, not available.

Table 5.17

Production value of selected rubber products (CPA Group 25.1), EU-25, 2004 (EUR million)

	Prodcom code(s)	
New pneumatic rubber tyres for motor cars (incl. for racing cars)	25.11.11.00	8 728
New pneumatic rubber tyres for motorcycles and scooters with rims	25.11.12.35 and 25.11.12.37	349
New pneumatic rubber tyres for bicycles	25.11.12.60	38
New pneumatic rubber tyres for buses or lorries	25.11.13.55 and 25.11.13.57	4 409
New pneumatic rubber tyres for agricultural or forestry vehicles	25.11.14.04	756
Retreaded tyres of rubber (1)	25.12.10.30, 25.12.10.50 and 25.12.10.90	901
Compounded rubber unvulcanised (incl. with carbon black or silica and rubber solutions, dispersions)	25.13.20.13, 25.13.20.15 and 25.13.20.19	2 439
Forms and articles of unvulcanised rubber (incl. rods; tubes; profile shapes; discs and rings) (excl. camel-back; strips for retreading tyres)	25.13.20.30	545
Plates, sheets and strip of vulcanized rubber	25.13.20.70	731
Extruded solid rubber rods and profiles and rubber rods and profiles of cellular vulcanised rubber	25.13.20.83 and 25.13.20.87	1 305
Rubber tubing not reinforced	25.13.30.30	679
Rubber hose reinforced or combined with other materials	25.13.30.55, 25.13.30.57 and 25.13.30.59	1 527
Rubber hose assemblies	25.13.30.70	561
Rubber belts	25.13.40.30, 25.13.40.50, 25.13.40.75 and 25.13.40.79	1 585
Hygienic or pharmaceutical articles of rubber (incl. sheath contraceptives, teats; nipple shields and similar articles for babies)	25.13.71.50, 25.13.71.70 and 25.13.71.90	695
Floor coverings and mats of vulcanised rubber; non-cellular	25.13.72.00	399
Seals; of vulcanised rubber (2)	25.13.73.23	1 934
Rubber-to-metal bonded articles for tractors and motor vehicles	25.13.73.45	1 964
Moulded rubber articles for tractors and motor vehicles	25.13.73.47	1 756

(1) 25.12.10.50, estimated.

(2) Estimated.

Source: Eurostat (PRODCOM)

Table 5.18

Rubber products (CPA Group 25.1)
External trade, EU-25, 2005

	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Rubber products	7 138	0.7	6 881	0.6	257	103.7
New and used rubber tyres and tubes	3 402	0.3	4 003	0.4	-601	85.0
Retreaded pneumatic tyres, of rubber	56	0.0	8	0.0	48	684.4
Other rubber products	3 680	0.4	2 870	0.3	810	128.2

Source: Eurostat (Comext)

5.6: PLASTICS

This subchapter covers the manufacture of plastic products (NACE Group 25.2), including plastic sheets, pipes and tubes; plastic packaging goods (such as bags, containers and bottles); plastic products for the construction sector (such as doors, frames and baths); and other plastic products (such as insulating and lighting fittings). Note that the manufacture of plastic games, toys, footwear, furniture and linoleum are not considered as part of this sector.

Polyvinylchloride (PVC), high density polyethylene (HDPE), low density polyethylene (LDPE) and polypropylene (PP) are four of the main primary forms of plastics (included as part of Subchapter 5.1). These primary forms of plastic are converted into a myriad of products for other sectors of the economy, principally by a number of small and medium-sized enterprises. According to the Association of Plastics Manufacturers ⁽²²⁾, over one third (37 %) of plastics were used as packaging in 2003 in Western Europe ⁽²³⁾, by far the single largest end-use, ahead of building and construction (19 %), electrical and electronic applications (9%), and other household/domestic applications (20 %).

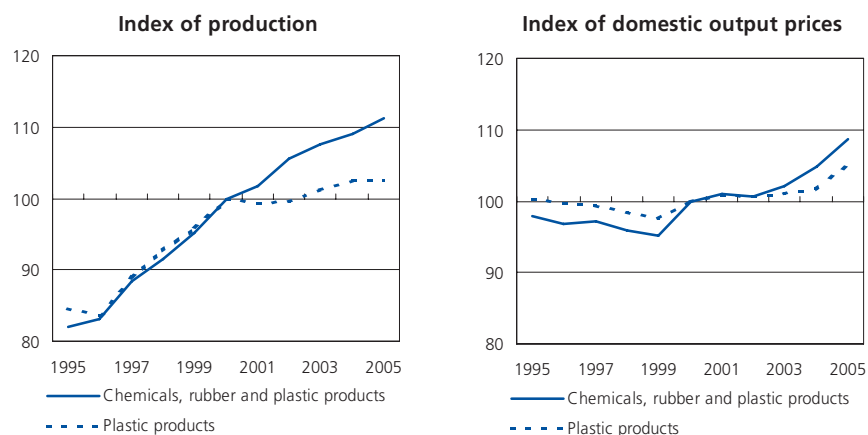
STRUCTURAL PROFILE

The plastics manufacturing sector (NACE Group 25.2) employed 1.3 million persons across the EU-25 in 2003, corresponding to about one in three people (36.8 %) within the chemicals, rubber and plastics manufacturing (NACE Subsections DG and DH) workforce. The added value generated by the plastics manufacturing sector was EUR 55.5 billion in 2003, corresponding to a little less than one quarter (23.0 %) of the value added of chemicals, rubber and plastics manufacturing activities in the EU-25.

⁽²²⁾ APME, <http://www.plasticseurope.org>.

⁽²³⁾ EU-15, Switzerland and Norway.

Figure 5.11
Manufacture of plastic products (NACE Group 25.2)
Evolution of main indicators, EU-25 (2000=100)



Source: Eurostat (STS)

The largest activity within the plastics manufacturing sector in 2003 was that of other plastics manufacturing (NACE Class 25.24), which generated a little over two fifths (41.6 %) of the value added of the sector. A further quarter (24.3 %) of the value added of the plastics manufacturing sector came from the activity of plastic plates, sheets, tubes and profiles manufacturing (NACE Class 25.21), with the activities of plastic packing goods manufacturing and builders' ware of plastic manufacturing providing the remainder.

The added value generated by the plastics manufacturing sector in Germany represented more than one quarter (27.7 %) of the added value of the EU-25's plastics manufacturing sector in 2003, the highest share among Member States ⁽²⁴⁾ and significantly more than the next highest contribution from the United Kingdom (15.5 %).

The EU-25's plastics manufacturing sector contributed 3.3 % to industrial (NACE Sections C to E) value added in 2003. Using this share as a benchmark for relative specialisation, Luxembourg, Denmark and Slovenia were the Member States most specialised in the manufacture of plastics (see Table 5.19).

There was a very similar development in the output of the EU-25's plastics manufacturing activity to that for chemicals, rubber and plastics manufacturing between 1996 and 2000 (see Figure 5.11). However, the output of chemical, rubber and plastics manufacturing continued to increase steadily after 2000, whereas plastics manufacturing output at first stabilised and then started to grow relatively slowly.

⁽²⁴⁾ Malta and Sweden, 2002; Greece, unavailable.

Table 5.19

Manufacture of plastic products (NACE Group 25.2)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (15 357.4)	27.7	Germany (302.2)	23.1	Luxembourg (6.2)	Luxembourg (5.2)
2	United Kingdom (8 591.1)	15.5	United Kingdom (187.3)	14.3	Denmark (3.9)	United Kingdom (5.0)
3	France (7 755.8)	14.0	France (173.7)	13.3	Slovenia (3.6)	Denmark (4.6)
4	Italy (7 506.7)	13.5	Italy (164.2)	12.5	United Kingdom (3.4)	France (4.2)
5	Spain (3 854.5)	6.9	Poland (99.0)	7.6	Germany (3.4)	Germany (3.9)

(1) Malta and Sweden, 2002; Greece, not available.

(2) Sweden, provisional; Malta, 2002; Greece, not available.

(3) Malta and Sweden, 2002; Greece and Ireland, not available.

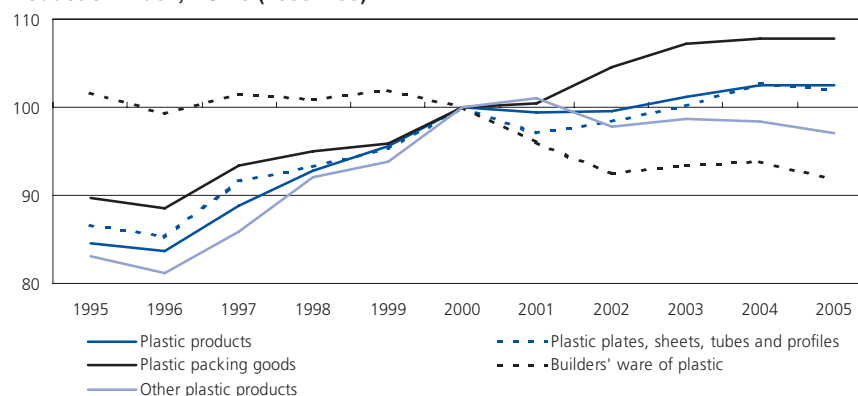
(4) Sweden, provisional; Malta, 2002; Greece and Ireland, not available.

Source: Eurostat (SBS)

Within the plastics manufacturing sector, there were some highly contrasting developments in the production indices of the various activities. Between 1995 and 2000, the main exception to the pattern of steady upward growth was the stability in the output of builders' ware of plastic (NACE Class 25.23). There were stronger differences in the development of output between the various plastic products after 2000 (see Figure 5.12). The output of builders' ware of plastic declined strongly in 2001 and 2002, and although there was a small upturn in the next couple of years, it declined again in 2005. In contrast, the steady growth in plastic packing goods (NACE Class 25.22) continued through until 2003, to be followed by a couple of years of unchanged output levels.

The development of the domestic output price index for plastic products was also very similar to that of chemicals, rubber and plastic products as a whole in the period 1995 to 1999, but the subsequent upturn in prices in 2000 was much weaker for plastic products, a trend which was re-enforced by relatively modest price increases between 2003 and 2005.

Figure 5.12
Manufacture of plastic products (NACE Group 25.2)
Production index, EU-25 (2000=100)



Source: Eurostat (STS)

Table 5.20

Production value of selected plastic products (CPA Group 25.2), EU-25, 2004 (EUR million)

	Prodcom code(s)	
Monofilament with any cross-sectional dimension > 1 mm	25.21.10.50, 25.21.10.70 and 25.21.10.90	4 361
Artificial guts (sausage skins) of hardened protein or cellulosic materials	25.21.21.30	658
Rigid tubes; pipes and hoses	25.21.21.55, 25.21.21.57 and 25.21.21.70	3 615
Plastic sacks and bags (incl. cones) (excl. of polymers of ethylene)	25.22.12.00	1 639
Plastic boxes; cases; crates and similar articles for the conveyance or packing of goods (1)	25.22.13.00	5 048
Plastic carboys; bottles; flasks and similar articles for the conveyance or packing of goods; of a capacity > 2 litres	25.22.14.70	1 394
Plastic spools; cops; bobbins and similar supports	25.22.15.23	1 340
Plastic caps and capsules for bottles	25.22.15.25	1 032
Plastic floor, wall or ceiling coverings (2)	25.23.11.55, 25.23.11.59 and 25.23.11.90	1 695
Plastic baths; shower-baths, wash-basins, lavatory seats and covers, bidets, lavatory pans, flushing cisterns etc.	25.23.12.50, 25.23.12.70 and 25.23.12.90	2 872
Plastic reservoirs; tanks; vats; intermediate bulk and similar containers; of a capacity > 300 litres	25.23.13.00	1 153
Builder's fittings and mountings intended for permanent installation of plastics	25.23.15.50	1 904
Plastic articles of apparel and clothing accessories (incl. gloves; raincoats; aprons; belts and babies' bibs) (excl. headgear)	25.24.10.00	487
Office or school supplies of plastic (incl. paperweights; paper-knives; blotting pads; pen-rests; and book marks)	25.24.27.00	1 286
Other articles made from sheet	25.24.28.50	1 408
Plastic parts for machinery and mechanical appliances excl. internal combustion piston engines, gas turbines (1)	25.24.90.10	2 099
Plastic parts for electrical machinery and equipment; sound recorders and reproducers; television image and sound recorders and reproducers (1)	25.24.90.93	1 417

(1) Estimated.

(2) 25.23.11.59, estimated.

Source: Eurostat (PRODCOM)

COSTS, PRODUCTIVITY AND PROFITABILITY

Each person employed in the EU-25's plastics manufacturing sector generated an average of EUR 42 400 of value added in 2003, some EUR 7 200 below the industrial (NACE Sections C to E) average. Average personnel costs were EUR 29 400 per employee in 2003, the lowest level among the nine NACE groups that comprise the activities of chemicals, rubber and plastics manufacturing. The added value per person employed in the plastics manufacturing sector covered average personnel costs by 144.4 % in 2003, which was below the industrial average (152 %).

The apparent labour productivity of those working in the plastics manufacturing sector was highest⁽²⁵⁾ in Luxembourg in 2003, with an average added value per person of EUR 84 300, which was almost double the EU-25 average. Luxembourg was also one of the few Member States, along with Estonia, Lithuania and Portugal, where the apparent labour productivity of the plastics sector was between 10 % and 25 % higher than the national, industrial average.

As an indicator of profitability, the gross operating rate of the plastics manufacturing sector in the EU-25 was 10.5 % in 2003, a similar figure to the industrial average (10.3 %). In Germany, Luxembourg, Hungary, Malta (2002) and Slovenia, the gross operating rate of this sector was at least 20 % higher than respective national, industrial averages, which contrasted with the situation in the Estonia, Poland and the United Kingdom where the gross operating rate was between 10 % and 20 % lower.

⁽²⁵⁾ Malta and Sweden, 2002; Greece, unavailable.

EXTERNAL TRADE

The EU-25's trade surplus in plastic products (CPA Group 25.2) widened to EUR 4.3 billion in 2005, continuing a trend of a widening trade surplus that was apparent since 2000. Most of the surplus came from plastic plates, sheets, tubes and profiles (CPA Class 25.21), where exports outweighed imports by EUR 3.6 billion in 2005 (see Table 5.21). The widening surplus for plastic products was driven by a higher growth in exports (to EUR 16.1 billion) than imports, a characteristic that was common to three of the four CPA classes that make-up this group of products, the exception being packaging products of plastics (CPA Class 25.22), for which the small trade deficit widened. The value of the exports of plastic plates, sheets, tubes and profiles represented 42.5 % of plastic products' exports in 2005, with exports of other plastic products (CPA Class 25.24) accounting for another 34.6 %.

Germany was the principal EU-25 exporter of plastic products, accounting for 27.4 % of the total intra- and extra-EU exports in 2005. Germany also had the largest trade surplus in plastic products among the Member States, which widened to EUR 8.8 billion in 2005. The only other Member States with significant trade surpluses in plastic products in 2005 were Italy (EUR 4.1 billion) and Belgium (EUR 1.3 billion).

Table 5.21
Plastic products (CPA Group 25.2)
External trade, EU-25, 2005

	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Plastic products	16 137	1.6	11 792	1.1	4 345	136.8
Plastic plates, sheets, tubes and profiles	6 851	0.7	3 297	0.3	3 554	207.8
Packaging products of plastics	2 201	0.2	2 472	0.2	-271	89.1
Builders' ware of plastics	1 400	0.1	689	0.1	711	203.2
Other plastic products	5 581	0.6	5 333	0.5	248	104.6

Source: Eurostat (Comext)

Table 5.22

Manufacture of chemicals and chemical products (NACE Division 24)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million) (2)	602 000	33 703	3 899	7 863	141 446	242	:	39 341	113 683	29 435	69 590	175	125	394	550	3 908	58
Production (EUR million)	:	31 869	3 719	7 904	124 032	202	:	35 594	101 835	28 927	64 405	151	110	398	369	3 693	58
Value added at factor cost (EUR million) (2)	169 000	9 585	1 024	3 231	41 096	52	:	9 835	25 355	15 957	15 639	58	51	67	98	1 364	20
Gross operating surplus (EUR million) (2)	78 400	4 864	605	1 527	12 312	32	:	4 284	9 580	14 794	6 386	25	29	27	44	851	8
Purchases of goods and services (EUR million)	:	25 503	2 946	5 005	99 843	190	:	30 551	88 234	13 750	53 602	120	77	339	463	2 634	39
Gross investment in tangible goods (EUR million) (3)	:	1 609	367	380	6 144	8	:	1 667	3 658	774	2 842	10	13	44	21	557	8
Number of persons employed (thousands) (2)	1 890	70	44	30	487	3	:	139	289	24	203	2	4	6	1	35	1
Personnel costs (EUR million) (2)	90 400	4 722	419	1 705	28 783	21	:	5 551	15 775	1 163	9 254	32	21	40	54	513	12
App. labour productivity (EUR thous./pers. emp.) (2)	89.3	136.3	23.4	108.7	84.4	19.1	:	70.6	87.7	674.8	77.0	32.2	11.4	11.4	67.4	39.5	23.4
Average personnel costs (EUR thous./employee) (2)	48.3	67.7	9.9	57.4	59.2	7.6	:	40.4	54.6	49.3	47.5	18.1	4.8	6.8	37.3	15.0	15.0
Wage adjusted labour productivity (%) (2)	185.0	201.2	237.2	189.3	142.4	252.1	:	174.5	160.6	1 369.2	162.1	178.4	236.5	167.1	180.7	264.1	155.7
Gross operating rate (%) (2)	13.0	14.4	15.5	19.4	8.7	13.1	:	10.9	8.4	50.3	9.2	14.6	23.4	6.8	7.9	21.8	13.7
Investment per person employed (EUR thousand) (3)	:	23.5	8.4	12.8	12.6	2.8	:	12.0	12.6	32.7	14.0	5.4	2.7	7.5	14.6	16.1	9.1
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million) (4)	40 509	7 626	9 447	4 091	2 085	1 050	5 780	13 539	71 105	813	:	1 889	:	:	:	4 779	:
Production (EUR million) (4)	36 824	6 923	8 621	3 760	2 004	998	5 240	13 946	62 509	771	:	1 774	:	:	:	4 676	:
Value added at factor cost (EUR million) (5)	8 294	2 511	2 608	1 039	840	185	1 651	5 711	21 604	196	:	391	:	:	:	1 599	:
Gross operating surplus (EUR million) (5)	4 406	1 167	1 587	473	467	69	824	3 445	10 104	111	:	166	:	:	:	762	:
Purchases of goods and services (EUR million) (4)	31 790	5 409	7 157	3 096	1 274	852	4 193	7 866	49 227	623	:	1 537	:	:	:	3 404	:
Gross investment in tangible goods (EUR million) (4)	2 073	523	558	188	230	46	268	816	3 018	69	:	252	:	:	:	267	:
Number of persons employed (thousands) (4)	68	26	101	22	14	16	19	42	235	26	:	62	:	:	:	13	:
Personnel costs (EUR million) (5)	3 888	1 345	1 020	566	372	116	857	2 266	11 500	86	:	226	:	:	:	837	:
App. labour productivity (EUR thous./pers. emp.) (5)	122.8	95.7	25.9	47.8	60.1	11.7	84.9	131.4	91.9	7.5	:	6.4	:	:	:	118.7	:
Average personnel costs (EUR thous./employee) (5)	57.3	51.6	10.5	26.3	26.8	7.4	44.1	52.5	49.2	3.3	:	3.7	:	:	:	62.2	:
Wage adjusted labour productivity (%) (5)	214.3	185.3	247.0	181.8	224.4	159.5	192.5	250.1	186.8	223.1	:	172.3	:	:	:	191.0	:
Gross operating rate (%) (5)	10.9	15.3	16.8	11.6	22.4	6.6	14.3	27.0	14.2	13.6	:	8.8	:	:	:	15.9	:
Investment per person employed (EUR thousand) (4)	30.7	19.9	5.5	8.7	16.4	2.9	13.8	19.3	12.8	2.6	:	4.1	:	:	:	19.8	:

(1) Malta, 2002. (2) EU-25, rounded estimate based on non-confidential data. (3) Belgium and Latvia, 2002. (4) Sweden, provisional. (5) Sweden, 2002.
Source: Eurostat (SBS)

Table 5.23

Manufacture of rubber and plastic products (NACE Division 25)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million)	228 358	7 439	4 486	3 187	57 575	200	:	17 770	38 314	1 292	35 356	78	110	356	1 464	2 572	90
Production (EUR million)	:	6 892	4 245	3 134	52 372	187	:	16 494	35 637	1 236	34 438	71	109	363	1 250	2 082	92
Value added at factor cost (EUR million)	72 592	1 964	1 180	1 325	19 691	48	:	5 452	11 223	458	9 639	33	31	74	483	637	57
Gross operating surplus (EUR million)	23 712	692	631	409	5 264	21	:	1 819	2 621	151	3 748	12	20	43	159	295	30
Purchases of goods and services (EUR million)	:	5 442	3 436	1 815	37 747	156	:	12 617	26 403	831	26 087	47	83	317	995	1 957	33
Gross investment in tangible goods (EUR million) (2)	:	305	365	229	2 364	13	:	890	1 563	48	1 840	9	16	21	35	242	9
Number of persons employed (thousands)	1 670	27	70	23	381	4	:	124	244	10	211	1	3	8	6	40	2
Personnel costs (EUR million)	48 880	1 272	549	916	14 426	27	:	3 634	8 602	307	5 891	21	11	32	306	342	26
App. labour productivity (EUR thous./pers. emp.)	43.5	71.4	16.8	58.8	51.7	13.0	:	43.9	45.9	47.1	45.6	25.9	9.2	9.6	82.5	15.9	31.0
Average personnel costs (EUR thous./employee)	30.3	47.2	8.2	40.9	38.3	7.3	:	29.9	35.3	31.8	30.6	16.8	3.3	4.1	52.3	8.7	14.5
Wage adjusted labour productivity (%)	143.7	151.3	205.4	143.7	135.2	177.9	:	146.5	130.2	148.3	149.1	153.7	274.2	231.3	157.7	181.9	213.5
Gross operating rate (%)	10.4	9.3	14.1	12.8	9.1	10.6	:	10.2	6.8	11.7	10.6	14.7	18.1	12.0	10.8	11.5	33.3
Investment per person employed (EUR thousand) (2)	:	11.2	5.2	10.1	6.2	3.6	:	7.2	6.4	5.0	8.7	7.0	4.6	2.8	6.0	6.0	4.9
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million) (3)	6 344	4 474	6 474	2 211	1 161	1 152	2 438	3 529	28 603	318	:	1 115	:	:	:	943	:
Production (EUR million) (3)	5 840	3 956	5 998	2 097	1 014	1 070	2 370	3 329	27 242	307	:	962	:	:	:	867	:
Value added at factor cost (EUR million) (4)	1 978	1 599	1 768	717	337	264	977	1 231	10 842	72	:	253	:	:	:	321	:
Gross operating surplus (EUR million) (4)	658	544	1 034	327	150	133	399	325	3 965	39	:	146	:	:	:	77	:
Purchases of goods and services (EUR million) (3)	4 372	2 958	4 927	1 527	827	905	1 528	2 139	17 687	269	:	906	:	:	:	629	:
Gross investment in tangible goods (EUR million) (3)	296	220	436	157	49	77	140	200	1 247	37	:	145	:	:	:	50	:
Number of persons employed (thousands) (3)	34	28	124	25	13	19	16	24	221	20	:	42	:	:	:	6	:
Personnel costs (EUR million) (4)	1 320	1 055	735	391	186	132	586	906	6 877	34	:	107	:	:	:	244	:
App. labour productivity (EUR thous./pers. emp.) (4)	58.6	57.9	14.3	29.3	25.8	14.0	61.0	49.0	49.1	3.7	:	6.0	:	:	:	56.5	:
Average personnel costs (EUR thous./employee) (4)	38.8	38.6	6.8	16.1	15.1	7.0	36.9	36.9	31.9	1.8	:	2.6	:	:	:	43.1	:
Wage adjusted labour productivity (%) (4)	151.2	149.9	208.9	181.8	171.0	200.0	165.4	133.0	154.0	200.3	:	233.5	:	:	:	131.1	:
Gross operating rate (%) (4)	10.4	12.2	16.0	14.8	13.0	11.5	16.4	9.0	13.9	12.1	:	13.1	:	:	:	8.1	:
Investment per person employed (EUR thousand) (3)	8.8	8.0	3.5	6.4	3.8	4.1	8.7	8.2	5.6	1.9	:	3.4	:	:	:	8.8	:

(1) Malta, 2002. (2) Belgium, 2002. (3) Sweden, provisional. (4) Sweden, 2002.
Source: Eurostat (SBS)

Other non-metallic mineral products



The construction industry (see Chapter 15) is the main user of other non-metallic mineral products like cement, concrete, clay products and plaster, while also being a prominent customer for lime, glass and ceramic goods (such as sanitary ware and tiles). Glass and ceramics are also used widely in other manufacturing activities, such as the manufacture of food and beverages, transport equipment, electrical machinery and equipment, as well as being sold directly as consumer goods.

The non-metallic mineral products activity is an important user of fossil fuels. As a result, legislation tends to be of an environmental nature or related to health and safety. Industry-wide environmental legislation is often aimed at energy saving on the one hand, such as through the energy services Directive ⁽¹⁾ of the European Parliament and of the Council (April 2006), and integrated pollution prevention and control on the other, through the IPPC Directive ⁽²⁾ of the European Parliament and of the Council (with existing installations being brought into compliance by 30 October 2007). Furthermore, the EU's emissions trading scheme (ETS), which started in January 2005, is an enterprise-level scheme for trading emissions of carbon dioxide that covers, among other things, the manufacture of cement, glass, lime, bricks and ceramics. At the time of writing, the national allocation plans for the second trading period (2008–2012) were still being submitted to the European Commission and a decision on whether to extend the scheme to other gases as well as other sectors was pending.

⁽¹⁾ Directive 2006/32/EC.

⁽²⁾ Directive 96/61/EC.

STRUCTURAL PROFILE

The other non-metallic mineral products (NACE Division 26) manufacturing sector in the EU-25 generated EUR 69.1 billion of value added in 2003 (see Table 6.1), corresponding to 4.1 % of industrial (NACE Sections C to E) output; it employed 1.5 million persons (4.3 % of the industrial workforce).

The value added generated by the activities of cement and concrete manufacturing (NACE Groups 26.5 and 26.6) in the EU-25 was EUR 28.9 billion in 2003, which represented the largest contribution (41.9 %) to the sectoral total (see Subchapter 6.3). The activities of glass manufacturing (NACE Group 26.1, see Subchapter 6.1) generated a further EUR 16.0 billion of value added (23.2 % of the sectoral total), with ceramic goods and clay products manufacturing (NACE Groups 26.2 to 26.4, see Subchapter 6.2) generating a further EUR 14.2 billion, and stone and miscellaneous non-metallic mineral products (NACE Groups 26.7 and 26.8, see Subchapter 6.4) the remaining EUR 9.9 billion.

Germany and Italy were the largest producers of other non-metallic mineral products in 2003, with EUR 13.0 billion and EUR 12.5 billion of value added respectively (see Table 6.2); together they contributed 36.9 % of the EU-25's value added in this sector in 2003. However, Cyprus, Luxembourg, Portugal and Spain were the Member States that were the most specialised in the manufacture of other non-metallic mineral products, in that this sector contributed upwards of 7.5 % of their industrial value added in 2003 (compared to an EU-25 average of 4.1 %).

This chapter focuses on the manufacture of other non-metallic mineral products (NACE Division 26), which consists of glass manufacturing (NACE Group 26.1); the manufacture of ceramic and clay products (NACE Groups 26.2 to 26.4); the manufacture of cement and concrete (NACE Groups 26.5 and 26.6); and the working of stone and miscellaneous non-metallic mineral products (NACE Groups 26.7 and 26.8). Note that the quarrying of non-metallic mineral products is covered in Chapter 12.

NACE

- 26: manufacture of other non-metallic mineral products;
- 26.1: manufacture of glass and glass products;
- 26.2: manufacture of non-refractory ceramic goods other than for construction purposes; manufacture of refractory ceramic products;
- 26.3: manufacture of ceramic tiles and flags;
- 26.4: manufacture of bricks, tiles and construction products, in baked clay;
- 26.5: manufacture of cement, lime and plaster;
- 26.6: manufacture of articles of concrete, plaster and cement;
- 26.7: cutting, shaping and finishing of ornamental and building stone;
- 26.8: manufacture of other non-metallic mineral products.

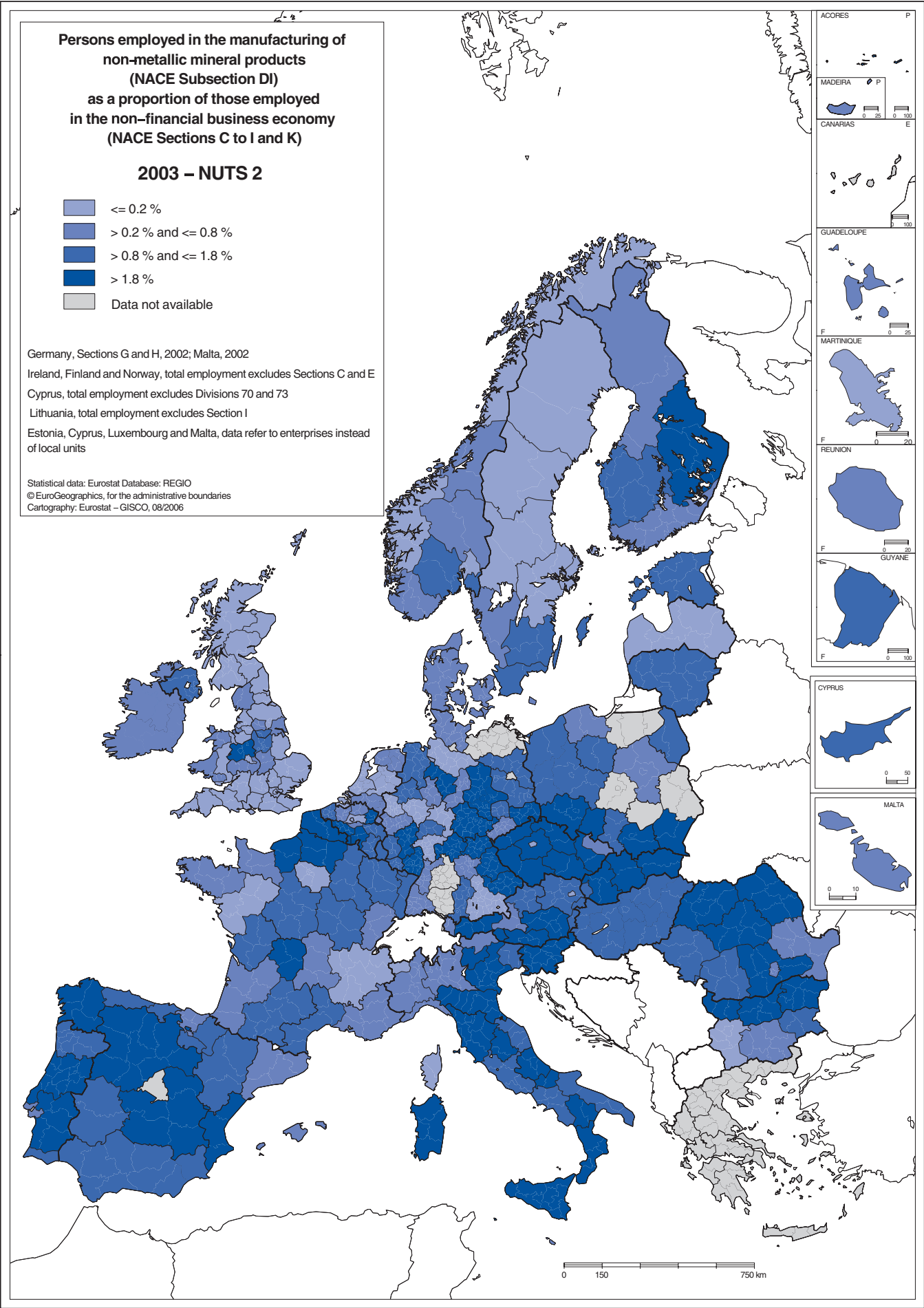


Table 6.1

Manufacture of other non-metallic mineral products (NACE Division 26)
Structural profile, EU-25, 2003

	Value added (EUR million)	Share of industrial value added (%)	Number of persons employed (thousands)	Share of industrial employment (%)
Other non-metallic mineral products (1)	69 100	4.1	1 520	4.3
Glass and glass products (2)	16 000	0.9	375	1.1
Ceramic goods and clay products (1)	14 200	0.8	360	1.0
Cement and concrete	28 876	1.7	501	1.4
Stone and miscellaneous non-metallic mineral products (1)	9 900	0.6	280	0.8

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

(2) Value added and related share, rounded estimates based on non-confidential data.

Source: Eurostat (SBS)

Table 6.2

Manufacture of other non-metallic mineral products (NACE Division 26)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (12 962.2)	18.8	Germany (255.6)	16.8	Cyprus (10.3)	Luxembourg (8.5)
2	Italy (12 540.7)	18.1	Italy (251.7)	16.6	Luxembourg (8.5)	Cyprus (7.7)
3	Spain (9 611.4)	13.9	Spain (193.8)	12.7	Portugal (7.7)	Spain (7.1)
4	France (7 896.2)	11.4	France (145.5)	9.6	Spain (7.6)	Portugal (7.0)
5	United Kingdom (7 524.5)	10.9	Poland (132.4)	8.7	Czech Republic (6.5)	Czech Republic (5.5)

(1) Malta and Sweden, 2002; Greece, not available.

(2) Sweden, provisional; Malta, 2002; Greece, not available.

(3) Malta and Sweden, 2002; Greece and Ireland, not available.

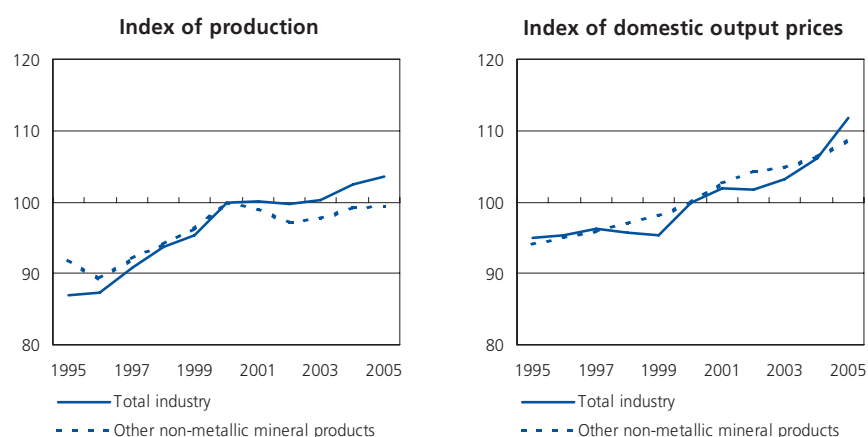
(4) Sweden, provisional; Malta, 2002; Greece and Ireland, not available.

Source: Eurostat (SBS)

The map on page 116 shows the contribution of the other non-metallic mineral products manufacturing sector to employment within the non-financial business economy (NACE Sections C to I and K) of each region in 2003. Many regions in Germany and Italy, as well as in Poland, the Czech Republic, Portugal and Slovenia (which is considered as one region at the level of detail shown in the map), as well as some regions in France, Spain and Romania were specialised in this sector in terms of employment.

There were two broad developments in the production index for the manufacture of other non-metallic mineral products during the period 1995 to 2005; firstly, there was a period of moderate growth between 1997 and 2000 after a temporary fall back in 1996, and then there was a period of falling production followed by sluggish growth through until 2005 to a level that remained a little lower than the peak in 2000. During much of the period, the development in the output of other non-metallic mineral products followed closely the pattern for industry as a whole (see Figure 6.1), the exceptions being in 1996, 2001 and 2002 when the output of other non-metallic mineral products declined, while industrial output as a whole remained unchanged.

Figure 6.1

Manufacture of other non-metallic mineral products (NACE Division 26)
Evolution of main indicators, EU-25 (2000=100)


Source: Eurostat (STS)

There was a continuous rise in the domestic output price index for other non-metallic mineral products manufacturing during the period between 1995 and 2005 (an average 1.5 % per annum). The steadiness of this increase contrasted with the domestic output price index for industry as a whole, which had some periods of unchanged prices (1995 to 1999 and 2001 to 2002), that were followed by sharper price rises.

A little less than half (47.4 %) of the value added generated by the EU-25's other non-metallic minerals manufacturing sector came from large enterprises (employing 250 or more persons); this was a much lower proportion than the industrial average (57.6 %). Indeed, almost as much (45.6 %) of the value added of other non-metallic minerals manufacturing was generated by small and

Table 6.3
Manufacture of other non-metallic mineral products (NACE Division 26)
Labour force characteristics, 2005

	Male		Full-time		Breakdown by age (% share of total)		
	Proportion of those employed (%)	Index (industry=100)	Proportion of those employed (%)	Index (industry=100)	< 30 years (1)	30-49 years	50+ years
EU-25	77.1	108.1	94.8	102.7	20.2	58.4	21.4
BE	88.3	116.7	92.0	103.4	23.7	59.1	17.2
CZ	60.6	94.1	96.9	99.4	17.7	55.9	26.4
DK	78.0	112.0	94.2	104.8	12.9	60.4	29.2
DE	72.1	99.4	89.1	100.7	16.4	57.5	26.1
EE	81.1	145.4	98.9	101.3	32.3	61.1	:
EL	86.8	117.1	98.8	100.7	12.7	63.0	24.3
ES	84.2	111.9	96.4	101.3	27.1	56.0	17.0
FR	78.3	109.6	98.1	104.4	15.9	61.4	22.6
IE	82.8	117.4	96.6	102.0	27.5	49.2	23.2
IT	78.1	109.2	95.2	102.0	19.2	62.4	18.4
CY	83.2	120.3	94.4	100.8	:	56.2	33.6
LV	76.1	129.7	97.7	101.3	:	41.7	36.2
LT	79.7	149.6	98.7	100.9	:	56.4	:
LU	92.3	113.2	98.3	104.8	:	59.0	:
HU	76.5	122.7	99.3	102.1	22.0	49.5	28.5
MT	:	:	:	:	:	:	:
NL	87.2	112.6	79.1	108.2	16.4	57.9	25.7
AT	75.8	101.5	88.7	98.6	23.9	61.4	14.8
PL	74.9	108.6	97.4	101.3	27.6	59.6	12.8
PT	70.9	119.6	97.8	100.7	18.0	62.3	19.7
SI	61.8	96.7	98.0	102.0	16.8	67.6	15.6
SK	63.1	99.0	97.8	98.9	24.8	49.9	25.3
FI	80.0	111.9	95.1	100.2	23.0	47.8	29.2
SE	79.2	105.5	90.6	100.5	17.5	43.4	39.1
UK	80.3	107.2	94.1	103.0	16.6	56.0	27.5

(1) Denmark and Estonia, 2004.
Source: Eurostat (LFS)

medium-sized enterprises (employing between 10 and 249 persons), which contrasted with a much lower overall proportion for total industry (35.2 %), while the contribution of micro enterprises (with less than 10 persons employed) to other non-metallic minerals manufacturing was close to the industrial average at 7.0 %. The importance of SMEs (enterprises employing less than 250 people) within the other non-metallic minerals manufacturing sector was particularly pronounced in Lithuania (accounting for 71.3 % of sectoral value added, compared with an industrial average of 40.4 % in 2003) and the Netherlands (60.7 % compared with an industrial average of 46.7 % in 2003).

LABOUR FORCE CHARACTERISTICS

The proportion of men working in the EU-25's other non-metallic mineral products manufacturing sector was 77.1 % in 2005, compared with the industrial average of 71.3 %. This characteristic was common across the majority of Member States, but particularly evident in Estonia and Lithuania (see Table 6.3).

The exceptions, where the proportion of men was below the industrial average, were limited to the Czech Republic, Slovenia, Slovakia and Germany.

A slightly higher proportion of the EU-25's other non-metallic mineral products manufacturing workforce were employed full-time (94.8 %) than the industrial average (92.4 %). This characteristic was common to the majority of the Member States, being particularly notable in the Netherlands (see Table 6.3), while in the Czech Republic, Austria and Slovakia the proportion of full-time employment was a little lower than the respective industrial averages.

The age profile of workers in other non-metallic mineral products manufacturing was broadly similar to the industrial average; about one in every five workers was under the age of 30 and another one in five were aged 50 or more years old.

COSTS, PRODUCTIVITY AND PROFITABILITY

Personnel costs within the EU-25's other non-metallic mineral products manufacturing sector (NACE Division 26) accounted, on average, for 24.2 % of operating costs in the EU ⁽³⁾ in 2003 (see Table 6.4), a much higher proportion than the industrial (NACE Sections C to E) average (18.9 %). However, average personnel costs in the sector were EUR 29 200 per employee in 2003, some EUR 3 400 per employee less than the industrial average. These figures support the notion of the other non-metallic mineral products manufacturing sector as being relatively low-salaried and labour intensive. Within the sector, this characteristic seems to resonate particularly strongly for glass manufacturing activities (personnel costs being a 27.5 % share of operating costs in 2003, with average personnel costs of EUR 29 000 per employee), ceramic and clay products manufacturing (29.1 % and EUR 27 000 per employee) and the working of stone (26.7 % and EUR 22 000 per employee).

⁽³⁾ EU average, 2003; Malta and Sweden, 2002; excluding Greece.

Table 6.4

Manufacture of other non-metallic mineral products (NACE Division 26)**Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003**

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	7.8	75.8	24.2	45.3	29.2	155.0	13.7
1	Luxembourg (26.2)	Latvia (83.9)	Denmark (31.7)	Ireland (73.2)	Belgium (45.2)	Latvia (277.6)	Latvia (23.2)
2	Latvia (16.0)	Poland (83.0)	Austria (31.6)	Netherlands (71.3)	Netherlands (45.1)	Estonia (222.2)	Poland (21.2)
3	Italy (13.2)	Slovakia (82.0)	Germany (29.3)	Luxembourg (70.4)	Austria (44.3)	Poland (221.5)	Ireland (20.3)
4	Slovakia (11.5)	Estonia (81.8)	United Kingdom (27.7)	Belgium (68.0)	Denmark (43.8)	Hungary (212.1)	Czech Republic (20.3)
5	Lithuania (11.0)	Hungary (81.8)	Finland (26.4)	Austria (65.7)	Luxembourg (43.2)	Czech Republic (204.5)	United Kingdom (19.1)

(1) Malta and Sweden, 2002; Belgium and Greece, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Malta and Sweden, 2002; Greece, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Malta and Sweden, 2002; Greece, not available; EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

Table 6.5

Other non metallic mineral products (CPA Division 26)**External trade, EU-25, 2005**

	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Other non metallic mineral products	16 078	1.6	9 154	0.8	6 924	175.6
Glass and glass products	5 461	0.5	3 131	0.3	2 330	174.4
Ceramic goods and clay products	5 932	0.6	2 822	0.3	3 110	210.2
Cement and concrete	1 188	0.1	921	0.1	267	129.0
Stone and miscellaneous non-metallic mineral products	3 455	0.4	2 267	0.2	1 187	152.4

Source: Eurostat (Comext)

The apparent labour productivity of the other non-metallic mineral products manufacturing sector was EUR 45 300 per person employed in 2003, which was 8.7 % less than the industrial average. Within the sector, the lowest level of apparent labour productivity (EUR 28 000 per person) in 2003 was for the working of stone (NACE Group 26.7), with the highest (EUR 112 200 per person) being recorded for the manufacture of cement, lime and plaster (NACE Group 26.5).

The wage adjusted labour productivity ratio for the EU-25's other non-metallic mineral products manufacturing sector (155 %) was very similar to the industrial average (152 %) in 2003. Among the Member States, however, the most notable differences between these two ratios were in Latvia (the ratio for the sector being 59.6 percentage points higher than the industrial average) and Estonia (48.5 percentage points higher); these two Member States, as well as the Czech Republic, Hungary and Poland reported wage adjusted labour productivity ratios above 200 %, meaning that apparent labour productivity was more than double average personnel costs.

As an indicator of profitability, the gross operating rate of the EU-25's other non-metallic mineral products manufacturing sector was 13.7 % in 2003, considerably higher than the industrial average (10.3 %). This characteristic was noted for all of the Member States ⁽⁴⁾ with the exception of Denmark.

EXTERNAL TRADE

The EU-25 had a surplus of EUR 6.9 billion in the trade of other non-metallic mineral products (CPA Division 26) in 2005 (see Table 6.5), although this represented a further narrowing of the surplus since a peak at EUR 8.4 billion in 2002. The surplus in 2005 was based on EU exports that were valued at EUR 16.1 billion (representing 1.6 % of industrial – CPA Sections C to E - exports) and imports valued at EUR 9.2 billion (representing 0.8 % of industrial imports). The United States was the principal export market, accounting for about one quarter (25.6 %) of the EU-25's exports, while China was the main source of imports (31.1 % of EU-25 imports).

⁽⁴⁾ Malta and Sweden, 2002; Greece, not available.

Seven of the eight CPA groups within other non-metallic mineral products recorded a trade surplus in 2005, the largest of these (EUR 2.4 billion) being for ceramic tiles and flags (CPA Group 26.3) and the next largest (EUR 2.3 billion) for glass (CPA Group 26.1). There was a small but growing trade deficit (EUR 308.5 million) as regards EU-25 trade of cement, lime and plaster (CPA Group 26.5).

Among the Member States, the largest exporters (intra- and extra-EU trade) of other non-metallic mineral products in 2005 were Germany (EUR 9.0 billion) and Italy (EUR 8.8 billion). Italy recorded the largest trade surplus in 2005 (EUR 5.7 billion), twice the level of Germany (EUR 2.8 billion). The largest trade deficit in other non-metallic mineral products was recorded for the United Kingdom (EUR 1.4 billion).

6.1: GLASS

NACE Group 26.1 covers the manufacture of glass and glass products, such as flat glass, container glass, glass fibres or specialised glass.

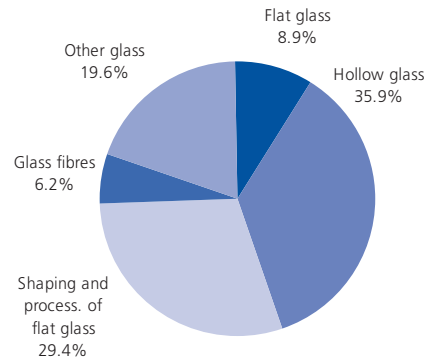
The main raw products in the manufacture of glass are limestone, silica sand, soda ash, feldspathic materials, dolomite and borates. Glass is principally manufactured as container glass (for example, bottles and jars), flat glass (for example, window glass), tableware (for example, drinking glasses and oven dishes), glass fibre (for example, for insulation and reinforcement) and special glass (for example, optical glass, electrical equipment screens and lighting glass).

For the special glass segment of the market in particular, the Waste Electrical and Electronic Equipment (WEEE) Directive ⁽⁵⁾ and the Restriction of the Use of Certain Hazardous Substances in Electric and Electronic Equipment (RoHS) ⁽⁶⁾ are two recently introduced legislative texts of the European Parliament and of the Council of importance for glass manufacturing (as well as other sectors). In August 2005, the WEEE Directive came into force, requiring a greater reuse and recycling of components and materials such as cathode ray tubes and liquid crystal displays, with producers financing collection, treatment, recovery and recycling. This has implications for the forms of composite materials in glass and the production process. From July 2006, the RoHS Directive should ensure that there are restrictions on the use of hazardous substances (particularly lead in the case of glass) in electrical and electronic equipment. The EU's Technical Adaptation Committee is defining maximum limits for these substances (such as maximum lead contents), which could have important manufacturing implications regarding the composite form of glass or its application.

⁽⁵⁾ Directive 2002/96/EC.

⁽⁶⁾ Directive 2002/95/EC.

Figure 6.2
Manufacture of glass and glass products
(NACE Group 26.1)
Breakdown of sectoral employment, EU-25,
2003 (%)



Source: Eurostat (SBS)

STRUCTURAL PROFILE

The EU-25's glass and glass products manufacturing sector (NACE Group 26.1, hereafter referred to as glass manufacturing) generated EUR 16.0 billion of value added in 2003, which represented 23.2 % of the value added generated by the activities of other non-metallic mineral products manufacturing (NACE Division 26). The sector employed 375 400 people in the EU-25 in 2003, representing one in four (24.7 %) of all those working in other non-metallic mineral products manufacturing activities.

In terms of employment, the manufacture of hollow glass (NACE Class 26.13) in the EU-25 was the largest subsector, accounting for 35.9 % of the glass and glass products manufacturing workforce, followed by the shaping and processing of flat glass (NACE Class 26.12) with 29.4 % (see Figure 6.2).

Germany, France and Italy had the largest glass manufacturing sectors in the EU ⁽⁷⁾ in 2003 (see Table 6.6), providing together a little over one half (51.5 %) of the value added generated in the EU-25. However, in terms of its contribution to industrial (NACE Sections C to E) value added, the Czech Republic was by far the most specialised Member State in the manufacture of glass.

As with the output of other non-metallic mineral products in general, there were also two distinct developments in the output of glass (see Figure 6.3). Between 1995 and 2000 there was a strong and continuous rise in the index of glass production (average growth of 3.7 % per annum), which was a little more than twice the average rate noted for other non-metallic mineral products. Between 2000 and 2005, in contrast, there was almost no change in the output of glass.

The development of the domestic output price index for glass during the period 1995 to 2005 contrasted with the steady upward trend noted for other non-metallic mineral products. The price index for glass rose relatively sharply in 1995 and 2000, reaching relative peaks in the following years before slipping back and stabilising.

⁽⁷⁾ Cyprus, Malta and Sweden, 2002; Greece and Luxembourg, not available

Table 6.6

Manufacture of glass and glass products (NACE Group 26.1)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (3 450.5)	21.6	Germany (65.5)	17.5	Czech Republic (2.6)	Czech Republic (2.4)
2	France (2 649.6)	16.6	France (50.3)	13.4	Austria (1.6)	Belgium (1.7)
3	Italy (2 131.4)	13.3	Italy (47.2)	12.6	Estonia (1.5)	Slovakia (1.7)
4	United Kingdom (1 903.0)	11.9	Poland (41.2)	11.0	Belgium (1.4)	Austria (1.6)
5	Spain (1 260.1)	7.9	Czech Republic (35.8)	9.5	Slovakia (1.3)	Poland (1.5)

(1) Cyprus, Malta and Sweden, 2002; Greece and Luxembourg, not available.

(2) Sweden, provisional; Cyprus and Malta, 2002; Greece and Luxembourg, not available.

(3) Cyprus, Malta and Sweden, 2002; Greece, Ireland and Luxembourg, not available.

(4) Sweden, provisional; Cyprus and Malta, 2002; Greece, Ireland and Luxembourg, not available.

Source: Eurostat (SBS)

Table 6.7

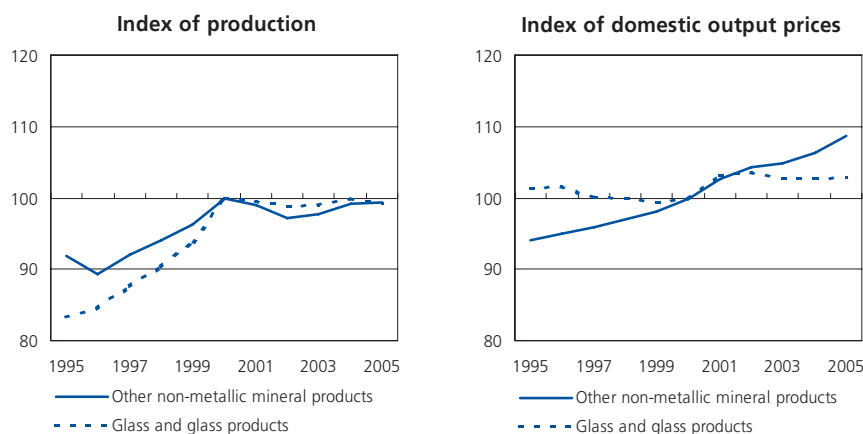
Production value of selected glass and glass products (CPA Group 26.1), EU-25, 2004 (EUR million)

	Prodcom code(s)	
Non-wired sheets of float glass & surface ground/polished glass, having an absorbent/reflecting layer, not otherwise worked, thickness >3.5mm excl. horticultural sheet glass	26.11.12.17	1 124
Toughened safety glass (for motor vehicles, aircraft, ships, boats etc.)	26.12.12.15, 12.12.12.19 and 26.12.12.30	2 772
Drinking glasses of toughened glass gathered (including cut or otherwise decorated; excluding of lead crystal)	26.13.12.55	902
Nonwoven glass fibre webs; felts; mattresses and boards	26.14.12.50	794
Glass smallware (incl. beads, imitation pearls/stones, ...)	26.15.26.70	726

Source: Eurostat (PRODCOM)

Figure 6.3

Manufacture of glass and glass products (NACE Group 26.1)
Evolution of main indicators, EU-25 (2000=100)



Source: Eurostat (STS)

COSTS, PRODUCTIVITY AND PROFITABILITY

The wage adjusted labour productivity ratio for those working in the glass manufacturing sector was 146 % in 2003, somewhat lower than the average ratios for other non-metallic mineral products manufacturing and the industrial average. The gross operating rate (an indicator of profitability) for the glass manufacturing sector was 12.9 % in 2003, a little below the average rate for other non-metallic mineral products manufacturing (13.7 %) but higher than the industrial average (10.3 %).

EXTERNAL TRADE

EU-25 exports of glass and glass products (CPA Group 26.1) were valued at EUR 5.5 billion in 2005, a similar level to that recorded in 2004. Among glass and glass products, a little over two thirds (69.4 %) of the value of EU exports were accounted for by hollow glass (CPA Class 26.13, EUR 2.0 billion) and by other processed glass, including technical glassware (CPA Class 26.15, EUR 1.7 billion). For the second successive year, imports of glass and glass products rose strongly (up 15.6 % overall between 2003 and 2005) and reached EUR 3.1 billion in 2005.

6.2: CERAMIC AND CLAY PRODUCTS

This subchapter includes information on three NACE groups: the manufacture of non-refractory ceramic goods other than for construction purposes and of refractory ceramic products (NACE Group 26.2); the manufacture of ceramic tiles and flags (NACE Group 26.3); the manufacture of clay bricks and tiles, as well as other construction products made of clay (NACE Group 26.4). Hereafter these activities are collectively referred to as ceramic and clay products manufacturing.

Table 6.8

**Production value of selected ceramic goods and clay products
(CPA Groups 26.2 to 26.4), EU-25, 2004 (EUR million)**

	Prodcom code	
Ceramic tableware, other household articles; common pottery	26.21.12.10	276
Ceramic sinks and other sanitary fixtures of porcelain of china	26.22.10.30	1 726
Glazed stoneware flags and paving; hearth or wall tiles; with a face of ≤ 90 cm²	26.30.10.73	3 623

Source: Eurostat (PRODCOM)

Demand-side developments in the ceramic and clay products manufacturing sector are principally influenced by the construction sector, as it is the main user of wall and floor tiles as well as bricks and roof tiles, these being the largest product segments related to this activity (see Table 6.8). In contrast, demand for ceramic tableware and kitchenware comes principally from households, as well as hotels, restaurants and institutional bodies like hospitals and schools. In this segment of the market, the abolition of import quotas on Chinese ceramic tableware since 1 January 2005 (as part of the WTO negotiated non-textile package) currently provides one of the main challenges for EU producers.

STRUCTURAL PROFILE

The EU-25's ceramic and clay products manufacturing sector (NACE Groups 26.2 to 26.4) generated EUR 14.2 billion of value added in 2003 (see Table 6.9), which represented 20.6 % of the value added generated by the activities of other non-metallic mineral products manufacturing (NACE Division 26); it employed 360 000 people.

In terms of value added, the largest subsector within the EU-25's ceramic and clay products manufacturing sector was the manufacture of non-refractory ceramic goods other than for construction purposes and of refractory ceramic products (NACE Group 26.2), which accounted for 43.2 % of sectoral value added in 2003. The share of sectoral value added generated by the manufacture of ceramic tiles and flags (NACE Group 26.3) was 29.7 % in 2003, a similar proportion (27.1 %) to that generated by the manufacturing of bricks, tiles and construction products (NACE Group 26.4).

Almost a quarter (25.1 %) of the EU-25's value added in ceramic and clay products manufacturing came from Italy, with Spain (17.8 %) and Germany (17.5 %) making the next largest contributions. Among those Member States with available data ⁽⁸⁾, Portugal, Spain and Italy were the countries that were most specialised in ceramic and clay products manufacturing in terms of this sector's contribution to industrial (NACE Sections C to E) value added.

⁽⁸⁾ The Czech Republic, Luxembourg, the Netherlands, Slovenia and Slovakia, 2002; Denmark, Estonia, Greece, Ireland, Cyprus, Latvia, Malta, Austria, Finland and Sweden, not available.

Within ceramic and clay products manufacturing, there were contrasting developments in the production indices of the three NACE groups covered (see Figure 6.4). There was a sharp downward trend in the output of non-refractory ceramic goods other than for construction purposes and of refractory ceramic products in the EU-25 between 1995 and 2005 (an average decline of 1.8 % per annum), despite some short-lived upturns in 1997, 2000 and 2004. Apart from some increases in 1997 and 1998, there was also a steady decline in the output of ceramic tiles and flags through until 2005 (with an average loss of 0.8 % per annum). The development of the production index for bricks, tiles and construction products, however, was similar to the development for other non-metallic mineral products as a whole, albeit with a sharper rate of increase in output between 1996 and 2000, a greater fall in 2001 and 2002, and a more pronounced rebound through until 2005.

Table 6.9

**Manufacture of ceramic goods and clay products (NACE Groups 26.2 to 26.4)
Structural profile, EU-25, 2003**

	Value added (EUR million)	Share of industrial value added (%)	Number of persons employed (thousands)	Share of industrial employment (%)
Ceramic goods and clay products (1)	14 200	0.8	360	1.0
Ceramics other than non-refractory for construction (2)	6 200	0.4	199	0.6
Ceramic tiles and flags (3)	4 254	0.3	90	0.3
Bricks, tiles and construction products	3 891	0.2	78	0.2

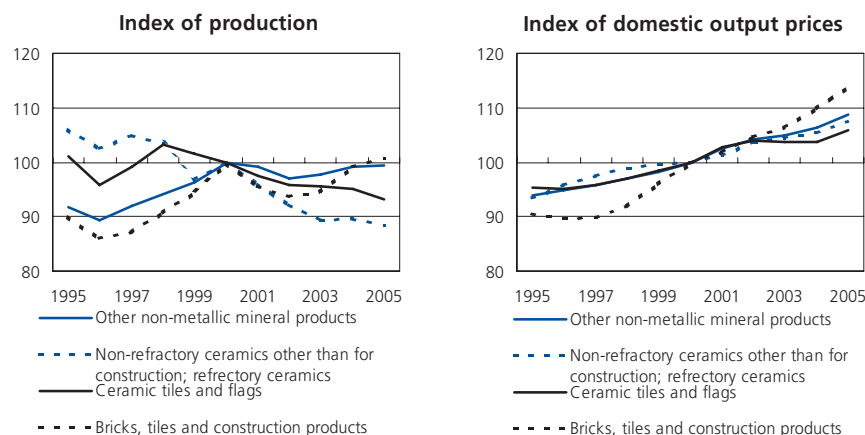
(1) Rounded estimates based on non-confidential data.

(2) Value added and related share, rounded estimates based on non-confidential data.

(3) Number of persons employed and related share, rounded estimates based on non-confidential data.

Source: Eurostat (SBS)

Figure 6.4
Manufacture of ceramic goods and clay products (NACE Groups 26.2 to 26.4)
Evolution of main indicators, EU-25 (2000=100)



Source: Eurostat (STS)

COSTS, PRODUCTIVITY AND PROFITABILITY

The apparent labour productivity of those working in the manufacture of ceramic goods and clay products in the EU-25 was EUR 39 000 per person employed in 2003, while average personnel costs were EUR 27 000 per employee. The corresponding wage adjusted labour productivity ratio of those working in the EU-25's ceramic and clay products manufacturing sector was 146 %, a little below both the other non-metallic mineral products and industrial averages. Within the sector, however, wage adjusted labour productivity ranged from 130 % for the manufacture of non-refractory ceramic goods other than for construction purposes and of refractory ceramic products to 185 % for the manufacture of clay bricks and tiles as well as other construction products made of clay.

The gross operating rate in ceramic goods and clay products manufacturing was 10.0 % in 2003, although this ratio rose as high as 20.4 % for the manufacture of clay bricks and tiles as well as other construction products made of clay subsector.

EXTERNAL TRADE

The trade surplus of ceramic and clay products (CPA Groups 26.2 to 26.4) narrowed from its 2002 peak to a value of EUR 3.1 billion by 2005. Although trade surpluses were recorded for each of the three CPA groups that comprise ceramic and clay products in 2005, with that for ceramic tiles and flags (CPA Group 26.3) being by far the largest at EUR 2.4 billion, the steady reduction in the overall trade surplus since 2002 resulted principally from the narrowing of the surplus for non-refractory ceramic goods other than for construction and refractory ceramics (CPA Group 26.2).

6.3: CEMENT AND CONCRETE

This subchapter covers the manufacture of cement, lime and plaster (NACE Group 26.5), as well as the manufacture of articles made from concrete, plaster and cement (NACE Group 26.6).

Cement clinker is a semi-finished product that derives from raw materials (principally lime and clay) that are crushed and heated in a high temperature kiln (up to a 2 000 °C flame). As a finished product, cement is obtained from mixing clinker and calcium sulphate with some additional components such as gypsum, blast furnace slag or limestone into a fine cement powder. Concrete is made from cement, sand, water, aggregates and sometimes admixtures.

Concrete is used in road construction, and other civil engineering (bridge girders, tunnel elements, flood protection etc.) as well as for building (for example, for floor elements, beams and columns), among other uses (see Table 6.10).

In the process of manufacturing clinker, carbon dioxide is produced through the de-carbonation of limestone in the kiln, the combustion of fuel in the kiln and the use of electricity. Cement, lime and concrete

manufacturing enterprises are energy-intensive, therefore, and important producers of carbon dioxide (as well as nitrogen oxides, sulphur dioxide and dust), underlining the relevance of European Community environmental legislation such as the Emissions Trading Directive and the new Energy Services Directive.

STRUCTURAL PROFILE

The EU-25's cement and concrete manufacturing sector (NACE Groups 26.5 and 26.6) generated EUR 28.9 billion of value added in 2003 (see Table 6.11), which represented 41.9 % of the value added generated by the activities of other non-metallic mineral products manufacturing (NACE Division 26); this sector employed half a million people. A little more than two thirds (69.8 %) of sectoral value added came from the manufacture of articles of concrete, plaster and cement (NACE Group 26.6).

Among the Member States for which data were available ⁽⁹⁾, the largest contribution to the EU-25's value added from the cement and concrete manufacturing sector came from Italy

⁽⁹⁾ Sweden, 2002; Denmark, Estonia, Greece, Ireland, Cyprus, Latvia, Luxembourg, Malta, the Netherlands, Austria and Finland, not available.

(16.7 %) in 2003. Other large contributions came from Germany (16.1 %), Spain (14.5 %), France (11.7 %) and the United Kingdom (11.2 %). Across the EU-25, value added from the manufacture of cement and concrete contributed, on average, 1.7 % to industrial (NACE Sections C to E) value added. Spain was relatively specialised in the manufacture of cement and concrete, with this ratio being almost double (3.3 %) the EU-25 average. Cyprus is probably even more specialised in the manufacture of cement and concrete, although it is not possible to report data for this ratio after 2001, when it stood at 6.1 %. Furthermore, in the absence of structural business statistics for recent years, Greece also appears to be relatively specialised on the basis of its exports (see the section on external trade below).

Between 1995 and 2000 there were similar developments in the production indices of cement, lime and plaster and of articles of concrete, plaster and cement; there was a sharp fall in output in 1996, after which there was strong growth. Since 2000, however, the production indices for these two activities have diverged. Despite a contraction in output in 2002, there has been a further upward development in the output of cement, lime and

Table 6.10

Production value of selected cement and concrete products (CPA Groups 26.5 and 26.6), EU-25, 2004 (EUR million)

	Prodcom code	
White Portland cement	26.51.12.10	451
Other hydraulic cements	26.51.12.90	1 468
Quicklime	26.52.10.33	1 229
Slaked lime	26.52.10.35	373
Plasters consisting of calcined gypsum or calcium sulphate (incl. for use in building, for use in dressing woven fabrics or surfacing paper, for use in dentistry)	26.53.10.00	977
Building blocks and bricks of cement, concrete or artificial stone	26.61.11.30	3 909
Tiles; flagstones and similar articles of cement; concrete or artificial stone (excl. building blocks and bricks)	26.61.11.50	5 671
Prefabricated structural components for building	26.61.12.00	11 389
Prefabricated buildings of cement	26.61.20.00	2 441
Boards, sheets, panels, tiles, similar articles of plaster/compositions based on plaster, faced/reinforced with paper/paperboard only excl. articles agglom. with plaster, ornamented	26.62.10.50	2 535
Ready-mixed concrete	26.63.10.00	18 971

Source: Eurostat (PRODCOM)

Table 6.11

Manufacture of cement, lime and plaster; articles of concrete, plaster, cement (NACE Groups 26.5 and 26.6)

Structural profile, EU-25, 2003

	Value added (EUR million)	Share of industrial value added (%)	Number of persons employed (thousands)	Share of industrial employment (%)
Cement and concrete	28 876	1.7	501	1.4
Cement, lime and plaster	8 717	0.5	78	0.2
Articles of concrete, plaster, cement	20 159	1.2	423	1.2

Source: Eurostat (SBS)

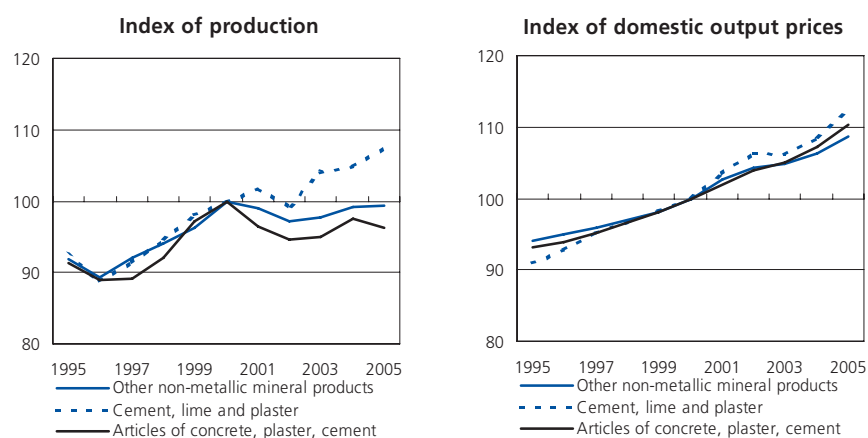
plaster through until 2005 (see Figure 6.5), at a similar average annual rate of increase to that recorded between 1995 and 2000. In contrast, the production index of articles of concrete, plaster and cement in 2005 remained below its level of 2000, after a contraction in output in 2005 stifled the partial recovery witnessed in 2003 and 2004.

There were steady increases in the domestic output price indices of both cement, lime and plaster manufacturing (an average 2.1 % per annum, despite a slight decline in 2003) and articles of concrete, plaster and cement (an average 1.7 % per annum), at slightly faster rates than the average (1.5 % per annum) for other non-metallic mineral products manufacturing.

COSTS, PRODUCTIVITY AND PROFITABILITY

The apparent labour productivity of those working in the EU-25's cement and concrete manufacturing sector was EUR 57 700 per person employed in 2003 (see Table 6.12), which was 27.3 % higher than the average for those within other non-metallic mineral products manufacturing. Within the sector, the apparent labour productivity of those working in the manufacture of cement, lime and plaster subsector (EUR 112 200 per person) was the third highest among all industrial NACE groups for which 2003 data are available and more than double the level of apparent labour productivity of those working in the manufacture of articles of concrete, plaster and cement subsector (EUR 47 600 per person). The wage adjusted labour productivity ratio for the cement, lime and plaster manufacturing subsector (267.8 %) was also significantly higher than that for the manufacture of articles of concrete, plaster and cement subsector (157.3 %).

Figure 6.5
Manufacture of cement, lime and plaster; manufacture of articles of concrete, plaster, cement (NACE Groups 26.5 and 26.6)
Evolution of main indicators, EU-25 (2000=100)



Source: Eurostat (STS)

As a measure of profitability, the gross operating surplus of the cement and concrete manufacturing sector equated 15.3 % of turnover in 2003, higher than the average for other non-metallic mineral products manufacturing and also higher, therefore, than the industrial average (10.3 %). Within the sector, the gross operating rate of the cement, lime and plaster manufacturing subsector was 26.7 %, the second highest level of profitability (using this measure) among the NACE groups for which 2003 data are available.

EXTERNAL TRADE

Much of the supply and demand for cement and concrete products is, by definition, local, offering little potential for trade. EU-25 exports of cement and concrete (CPA Groups 26.5 and 26.6) were valued at EUR 1.2 billion in 2005 (a similar value to that in 2000), representing 7.4 % of total exports of other non-metallic mineral products (CPA Division 26)

and 0.1 % of industrial (CPA Sections C to E) exports. The overall EU-25 trade surplus for cement and concrete products was EUR 267 million, although there was a trade deficit of EUR 308 million for cement, lime and plaster (CPA Group 26.5).

In 2005, the highest share of exports of cement and concrete by EU-25 Member States (intra- and extra-EU trade combined) was accounted for by Germany (22.1 %) and Belgium (13.4 %). Greece and Cyprus were the most specialised Member States in exporting cement and concrete, as these products accounted for 1.4 % and 1.0 % respectively of their industrial exports. The largest importers of these products in 2005 were Spain (12.9 % of EU-25 Member State imports), France (12.7 %) and the Netherlands (11.0 %).

Table 6.12

Manufacture of cement, lime and plaster; manufacture of articles of concrete, plaster, cement (NACE Groups 26.5 and 26.6)
Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	6.4	79.9	20.1	57.7	32.2	179.3	15.3
1	Slovakia (21.1)	Hungary (86.4)	Germany (27.2)	United Kingdom (80.8)	Belgium (46.5)	Hungary (270.5)	Czech Republic (21.8)
2	Hungary (12.9)	Slovakia (85.0)	Sweden (24.9)	Belgium (78.0)	Germany (42.6)	Portugal (247.2)	Poland (21.8)
3	Sweden (8.4)	Poland (84.8)	Slovenia (23.4)	France (75.4)	France (40.4)	Slovakia (246.5)	United Kingdom (21.3)
4	United Kingdom (8.0)	Italy (84.5)	Belgium (22.4)	Italy (65.6)	Sweden (39.8)	Poland (243.4)	Portugal (19.7)
5	Poland (7.6)	Czech Republic (84.3)	United Kingdom (21.7)	Spain (64.2)	United Kingdom (37.0)	United Kingdom (218.3)	Hungary (19.7)

(1) Sweden, 2002; Belgium, Denmark, Estonia, Greece, Ireland, Cyprus, Latvia, Luxembourg, Malta, the Netherlands, Austria, Slovenia and Finland, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Sweden, 2002; Denmark, Estonia, Greece, Ireland, Cyprus, Latvia, Luxembourg, Malta, the Netherlands, Austria, Slovenia and Finland, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Sweden, 2002; Denmark, Estonia, Greece, Ireland, Cyprus, Latvia, Luxembourg, Malta, the Netherlands, Austria, Slovenia and Finland, not available.

Source: Eurostat (SBS)

6.4: STONE AND MISCELLANEOUS NON-METALLIC MINERAL PRODUCTS

This subchapter covers separately the activities of cutting, shaping and finishing stone (NACE Group 26.7), hereafter referred to as the working of stone, and the manufacture of other non-metallic mineral products (NACE Group 26.8), hereafter referred to as the manufacture of miscellaneous non-metallic mineral products; this latter group includes the production of abrasive products, non-metallic mineral yarns, and mineral insulating materials (be they for heat or sound insulation).

WORKING OF STONE

The activities of cutting, shaping and finishing stone (NACE Group 26.7) in the EU-25 generated EUR 5.0 billion of value added in 2003, accounting for 7.2 % of the value added generated by the manufacturing activities of other non-metallic mineral products (NACE Division 26). However, the 190 000 people working in cutting, shaping and finishing stone in the EU-25 represented a much higher proportion (12.5 %) of the other non-metallic mineral products workforce.

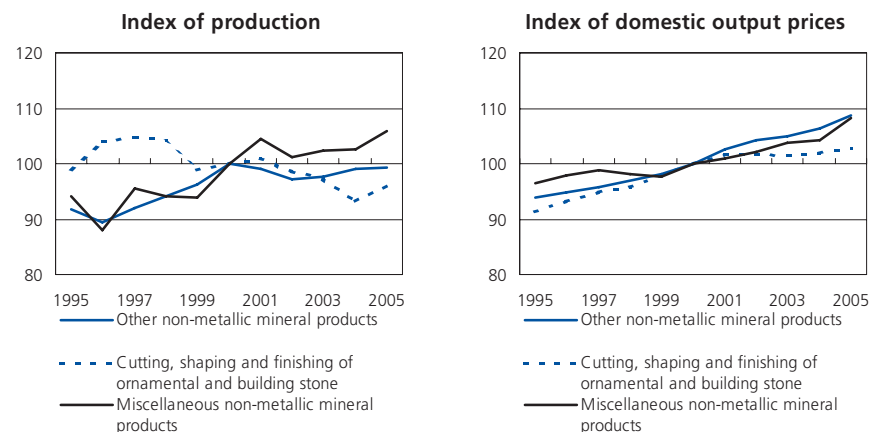
Cutting, shaping and finishing stone activities in Italy (31.0 %), Spain (23.5 %), and Germany (15.5 %) generated the largest contributions of value added among the Member States⁽¹⁰⁾ in 2003. However, Cyprus, Portugal and Spain were the Member States that were most specialised in these activities (see Table 6.13), the contribution of the value added from such activities to national industrial (NACE Sections C to E) value added being between three to four times greater than the EU-25 average (0.3 %).

⁽¹⁰⁾ The Czech Republic, Malta, Slovakia and Sweden, 2002; Greece, not available.

The production index for the working of stone reached a peak plateau in the period 1996 to 1998, after which there was a steep decline in 1999. Despite a slight recovery in output in 2000 and 2001, there were then three years of moderate falls in the production index to a relative low in 2004, from which output rebounded somewhat in 2005 (see Figure 6.6). Between 1995 and 2000, the upward development of the domestic output price index for the working of stone was similar to that for other non-metallic mineral products manufacturing. However, there was a marked divergence from the upward trend in the period 2001 to 2004, when the price index for the working of stone remained relatively unchanged, while the index for other non-metallic mineral products manufacturing continued to increase.

EU-25 exports of monumental and building stone products (CPA Group 26.7) were valued at EUR 1.4 billion in 2005, a similar level to the previous two years, but down on the level recorded in 2000. Trade surpluses (intra- and extra-EU trade combined) in monumental and building stone products were limited to five Member States, among which those of Italy (EUR 1.4 billion) and Spain (EUR 0.5 billion) were by far the largest. With a steady rise in the value of imports from non-member countries, the EU-25 trade surplus in monumental and building stone products narrowed further to EUR 387 million in 2005. Imports of monumental and building stone products in 2005 came principally from China (47.5 %) and India (20.1 %).

Figure 6.6
Cutting, shaping and finishing of ornamental and building stone (NACE Group 26.7) and miscellaneous non-metallic mineral products (NACE Group 26.8)
Evolution of main indicators, EU-25 (2000=100)



Source: Eurostat (STS)

Table 6.13

Cutting, shaping and finishing of ornamental and building stone (NACE Group 26.7) Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Italy (1 552.4)	31.0	Italy (50.5)	26.6	Cyprus (1.2)	Portugal (1.5)
2	Spain (1 176.7)	23.5	Spain (38.8)	20.4	Portugal (1.0)	Spain (1.4)
3	Germany (775.9)	15.5	Germany (25.5)	13.4	Spain (0.9)	Cyprus (1.4)
4	France (517.7)	10.4	France (14.9)	7.9	Italy (0.7)	Italy (1.0)
5	United Kingdom (342.1)	6.8	Portugal (14.3)	7.5	Malta (0.5)	Malta (1.0)

(1) The Czech Republic, Malta, Slovakia and Sweden, 2002; Greece, not available.

(2) Sweden, provisional; Malta and Slovakia, 2002; Greece, not available.

(3) The Czech Republic, Malta, Slovakia and Sweden, 2002; Greece and Ireland, not available.

(4) Sweden, provisional; Malta and Slovakia, 2002; Greece and Ireland, not available.

Source: Eurostat (SBS)

Table 6.14

Manufacture of miscellaneous non-metallic mineral products (NACE Group 26.8)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (1 589.9)	34.7	Germany (22.7)	25.8	Slovenia (1.0)	Denmark (0.8)
2	Spain (469.0)	10.2	Italy (10.3)	11.7	Denmark (0.7)	Slovenia (0.8)
3	Italy (468.5)	10.2	France (9.3)	10.6	Luxembourg (0.6)	Luxembourg (0.6)
4	United Kingdom (464.7)	10.1	United Kingdom (8.1)	9.1	Austria (0.6)	Austria (0.5)
5	Austria (252.6)	5.5	Spain (7.2)	8.2	Lithuania (0.5)	Finland (0.3)

(1) Malta and Sweden, 2002; Greece and Latvia, not available.

(2) Sweden, provisional; Malta, 2002; Greece, not available.

(3) Malta and Sweden, 2002; Greece, Ireland and Latvia, not available.

(4) Sweden, provisional; Malta, 2002; Greece and Ireland, not available.

Source: Eurostat (SBS)

MANUFACTURE OF MISCELLANEOUS NON-METALLIC MINERAL PRODUCTS

The activities of miscellaneous non-metallic mineral products manufacturing (NACE Group 26.8) in the EU-25 generated EUR 4.6 billion of value added in 2003, which represented 6.6 % of the value added for other non-metallic mineral products manufacturing (NACE Division 26). A little more than one third (34.7 %) of the EU-25's value added generated by the miscellaneous non-metallic mineral products manufacturing sector came from Germany (see Table 6.14), with Spain, Italy and the United Kingdom each contributing just over 10 % each to the EU-25 total. However, the relative contribution of this sector to industrial (NACE Sections C to E) value added was greatest in Slovakia (1.0 %), Denmark (0.7 %), Luxembourg (0.6 %) and Austria (0.6 %); between two and three times the average across the EU-25 (0.3 %).

In comparison to the production index for other non-metallic mineral products manufacturing as a whole, the output of miscellaneous non-metallic minerals products manufacturing was somewhat more irregular during the period 1995 to 2005, with some declines (particularly in 1996 and 2002, but also 1998 and 1999) mixed with some years of strong increases in output (particularly in 1997, 2000, 2001 and 2005).

The EU-25's trade surplus in miscellaneous non-metallic mineral products (CPA Group 26.8) widened further to EUR 800 million in 2005, with the increase in the value of exports outweighing the increase in the value of imports from non-member countries. Germany recorded the largest trade surplus (EUR 663 million, intra- and extra-EU trade combined), despite being the largest importer, accounting for a little under one fifth (18.9 %) of the imports of these products by EU-25 Member States.

Table 6.15

Production value of selected stone and miscellaneous non-metallic mineral products (CPA Groups 26.7 and 26.8), EU-25, 2004 (EUR million)

	Prodcom code	
Natural or artificial abrasive powder or grain; on a base of woven textile fabric only	26.81.12.30	418
Natural or artificial abrasive powder or grain; on a base of paper or paperboard only	26.81.12.50	509
Roofing or water-proofing felts based on bitumen (in rolls)	26.82.12.53	1 460
Bituminous mixtures based on natural and artificial aggregate and bitumen or natural asphalt as a binder	26.82.13.00	2 637
Slag wool; rock wool and similar mineral wools and mixtures thereof; in bulk; sheets or rolls	26.82.16.10	1 733

Source: Eurostat (PRODCOM)

Table 6.16

Manufacture of other non-metallic mineral products (NACE Division 26)

Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million) (2)	199 000	7 357	4 050	2 633	37 387	259	:	27 907	25 353	1 940	38 780	361	127	239	681	1 796	69
Production (EUR million)	:	7 259	3 879	2 510	34 057	238	:	27 060	23 587	1 812	38 268	353	116	239	651	1 602	68
Value added at factor cost (EUR million) (2)	69 100	2 273	1 465	1 070	12 962	86	:	9 611	7 896	780	12 541	129	45	79	230	597	24
Gross operating surplus (EUR million) (2)	27 400	834	820	326	2 988	48	:	4 428	2 392	394	5 972	63	29	32	90	328	12
Purchases of goods and services (EUR million)	:	4 990	2 665	1 605	24 064	172	:	18 881	17 029	1 151	26 798	237	83	166	448	1 207	44
Gross investment in tangible goods (EUR million) (3)	:	455	334	185	1 599	22	:	1 974	1 103	111	4 413	26	16	23	154	160	3
Number of persons employed (thousands) (2)	1 520	33	82	17	256	5	:	194	146	11	252	3	4	10	3	32	1
Personnel costs (EUR million) (2)	41 700	1 439	645	744	9 974	38	:	5 183	5 504	387	6 569	65	16	46	140	269	13
App. labour productivity (EUR thous./pers. emp.) (2)	45.3	68.0	17.8	61.7	50.7	18.4	:	49.6	54.3	73.2	49.8	39.4	10.6	7.8	70.4	18.6	17.5
Average personnel costs (EUR thous./employee) (2)	29.2	45.2	8.7	43.8	40.3	8.3	:	27.7	38.5	36.8	30.9	20.7	3.8	4.7	43.2	8.8	10.1
Wage adjusted labour productivity (%) (2)	155.0	150.4	204.5	140.9	125.9	222.2	:	179.1	140.8	199.0	161.1	190.3	277.6	164.4	163.0	212.1	172.6
Gross operating rate (%) (2)	13.7	11.3	20.3	12.4	8.0	18.4	:	15.9	9.4	20.3	15.4	17.5	23.2	13.5	13.2	18.3	16.8
Investment per person employed (EUR thousand) (3)	:	13.7	4.1	10.6	6.3	4.7	:	10.2	7.6	10.4	17.5	8.0	3.7	2.3	47.2	5.0	1.8
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million) (4)	5 991	5 571	5 863	4 718	681	1 000	2 553	3 454	18 234	525	:	1 288	:	:	:	1 956	:
Production (EUR million) (4)	5 490	5 209	5 502	4 401	633	961	2 500	3 255	17 239	490	:	1 280	:	:	:	1 822	:
Value added at factor cost (EUR million) (5)	2 109	2 379	2 088	1 703	249	296	969	1 084	7 525	140	:	441	:	:	:	661	:
Gross operating surplus (EUR million) (5)	817	816	1 240	776	106	145	386	333	3 486	79	:	237	:	:	:	184	:
Purchases of goods and services (EUR million) (4)	3 856	3 378	4 141	3 099	432	685	1 631	2 083	10 530	390	:	907	:	:	:	1 311	:
Gross investment in tangible goods (EUR million) (4)	230	329	408	365	37	96	117	138	955	69	:	186	:	:	:	80	:
Number of persons employed (thousands) (4)	30	36	132	65	10	23	16	20	127	23	:	75	:	:	:	10	:
Personnel costs (EUR million) (5)	1 292	1 562	848	928	143	150	585	750	4 039	61	:	204	:	:	:	477	:
App. labour productivity (EUR thous./pers. emp.) (5)	71.3	65.7	15.8	26.3	24.4	13.0	60.6	53.2	59.2	6.2	:	5.9	:	:	:	64.1	:
Average personnel costs (EUR thous./employee) (5)	45.1	44.3	7.1	14.8	14.4	6.6	37.1	38.8	32.8	2.8	:	2.8	:	:	:	46.5	:
Wage adjusted labour productivity (%) (5)	158.2	148.1	221.5	177.2	169.6	196.5	163.3	137.1	180.7	222.8	:	213.5	:	:	:	137.9	:
Gross operating rate (%) (5)	13.6	14.7	21.2	16.4	15.5	14.5	15.1	10.4	19.1	15.1	:	18.4	:	:	:	9.4	:
Investment per person employed (EUR thousand) (4)	7.8	9.1	3.1	5.6	3.6	4.2	7.3	6.7	7.5	3.0	:	2.5	:	:	:	7.7	:

(1) Malta, 2002.

(2) EU-25, rounded estimate based on non-confidential data.

(3) Belgium, 2002.

(4) Sweden, provisional.

(5) Sweden, 2002.

Source: Eurostat (SBS)

Metals and metal products



As metal consumption has increased, world ore reserves have increased, not only because of discoveries, but because of developments in mining technology that have lowered production costs (large mechanised mining equipment, less expensive bulk explosives, and large milling and concentrating equipment) and made it possible to recover metals from deposits whose low grade previously prevented them from being profitably mined. Costs and availability of inputs (raw materials, energy, labour and transport) are of major importance for the manufacture of metals and metal products, as well as the competition of non-member countries (mainly China). It would appear that supply relative to demand was more than adequate in recent years through to 2003, given that the price of many metals declined over a period of several decades. However, metals activities faced supply shortages and rising prices in 2004 and 2005, which particularly affected the price of steel, as well as raw materials such as iron ore or copper; this trend was often attributed to rapid growth in demand from China (see Subchapter 7.1 for more details on global producers).

Outside of the metal products sector itself, the construction sector is a major customer for metal and metal products, notably for central heating equipment, hot water boilers, fittings and structural products. Mechanical engineering sectors (such as machinery and equipment, and transport equipment manufacturing) are also large consumers of steel. Other manufacturers consume items such as metal packaging, for example, in the form of aluminium tins for food and beverages manufacturing. Only a small part of output from the metals and metal products sector finds its way directly to household consumers, for example, in the form of products such as cutlery or household tools for the do-it-yourself market.

NACE Divisions 27 and 28 cover the manufacture of basic metals and fabricated metal products (except machinery and equipment, see Chapter 8).

The manufacture of basic metals (NACE Division 27) includes activities such as the manufacture of iron, steel and ferro-alloys, as well as basic precious and non-ferrous metals; it also includes first processing stages of metal manufacturing (such as the manufacture of tubes, bars, strips, wires, and sheets of metal, as well as casting). The downstream activity of the manufacture of fabricated metal products (NACE Division 28) covers the production of structural metal products; boilers, metal containers and steam generators; forging, pressing, stamping and roll forming of metal; the treatment and coating of metal and general mechanical engineering (such as turning, milling, or welding); the manufacture of cutlery, tools and general hardware; and the manufacture of other fabricated metal products (such as metal drums, metal packaging, wire products, and household articles of metal).

Note that there are no external trade statistics for a number of industrial services covered in this chapter, namely foundry work services (CPA Group 27.5), forging, pressing, stamping and roll forming metal services (CPA Group 28.4) and treatment and coating of metal services and general mechanical engineering services (CPA Group 28.5).

NACE

- 27: manufacture of basic metals;
- 27.1: manufacture of basic iron and steel and of ferro-alloys;
- 27.2: manufacture of tubes;
- 27.3: other first processing of iron and steel;
- 27.4: manufacture of basic precious and non-ferrous metals;
- 27.5: casting of metals;
- 28: manufacture of fabricated metal products, except machinery and equipment;
- 28.1: manufacture of structural metal products;
- 28.2: manufacture of tanks, reservoirs and containers of metal; manufacture of central heating radiators and boilers;
- 28.3: manufacture of steam generators, except central heating hot water boilers;
- 28.4: forging, pressing, stamping and roll forming of metal; powder metallurgy;
- 28.5: treatment and coating of metals; general mechanical engineering;
- 28.6: manufacture of cutlery, tools and general hardware;
- 28.7: manufacture of other fabricated metal products.

The EU-25 Member States are largely deficient in deposits of most raw minerals from which metals are derived, and as a result they are often dependent on imports for first processing activities, as well as recycling waste and scrap materials (see Subchapter 14.1). Given the energy-intensive nature of many activities in the metal and metal products manufacturing sector, in particular those at the start of the production chain, energy policy and pricing

have a direct impact on the competitiveness of the sector. As such, the Kyoto protocol obligations and other environmental issues play an important role in the cost profile of those operating in this sector.

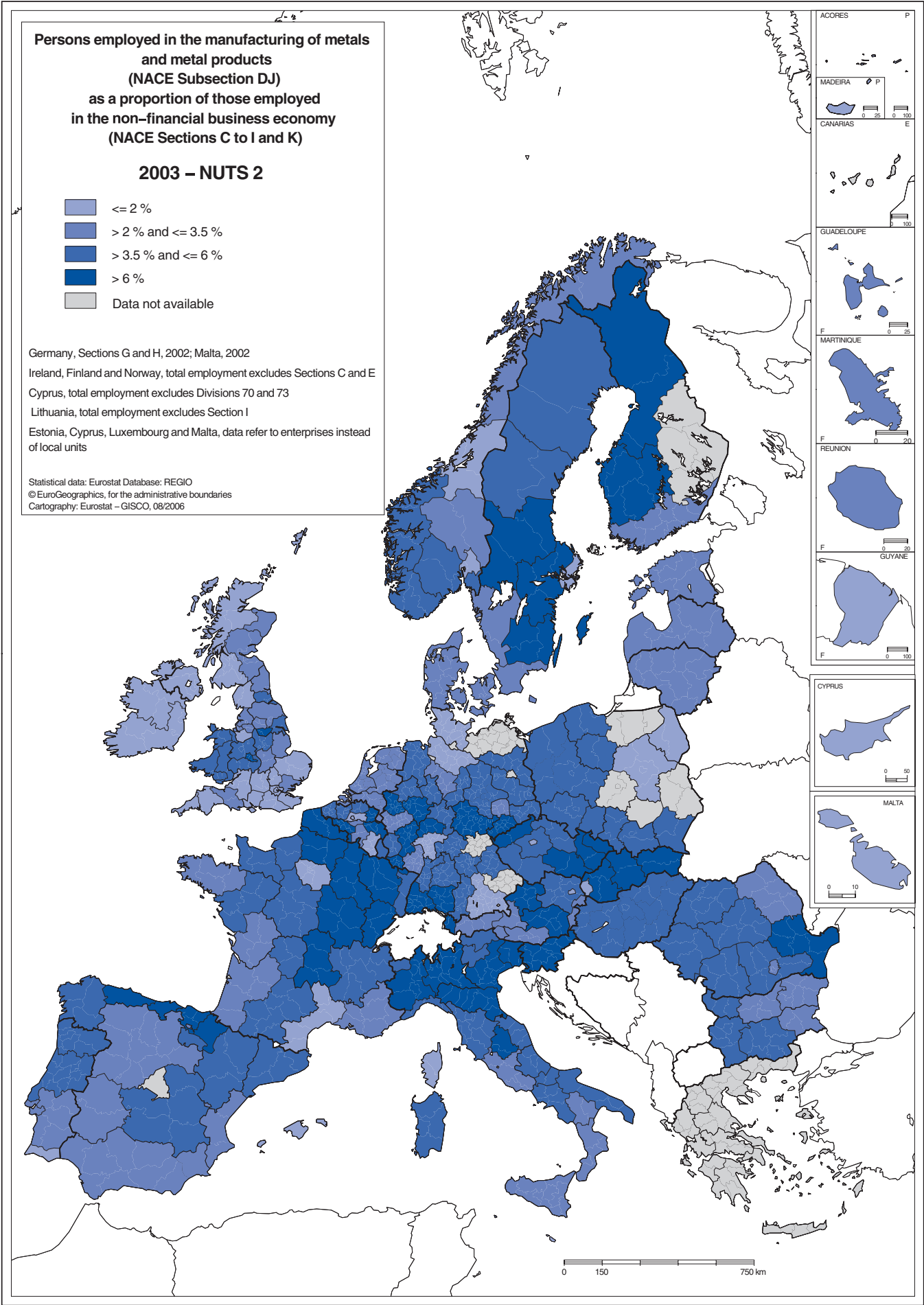


Table 7.1

Manufacture of basic metals and fabricated metal products (NACE Subsection DJ)
Structural profile, EU-25, 2003

	Value added (EUR million)	Share of industrial value added (%)	Number of persons employed (thousands)	Share of industrial employment (%)
Manufacture of basic metals and fabricated metal products (1)	190 000	11.2	4 800	13.6
Manufacture of first processing of ferrous metals (2)	31 085	1.8	550	1.6
Manufacture of basic precious and non-ferrous metals (3)	13 000	0.8	215	0.6
Casting of metals (3)	10 000	0.6	265	0.8
Manufacture of structural metal products	32 945	1.9	972	2.8
Manufacture of boilers, metal containers and steam generators (1)	12 000	0.7	290	0.8
Manufacture of other metal processing	50 229	3.0	1 344	3.8
Manufacture of miscellaneous fabricated metal products (3)	45 000	2.7	1 124	3.2

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

(2) Number of persons employed and related share, rounded estimates based on non-confidential data.

(3) Value added and related share, rounded estimates based on non-confidential data.

Source: Eurostat (SBS)

Table 7.2

Manufacture of basic metals and fabricated metal products (NACE Subsection DJ)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (53 742.3)	28.3	Germany (1 052.0)	21.9	Luxembourg (24.3)	Luxembourg (29.1)
2	Italy (34 120.8)	18.0	Italy (846.0)	17.6	Italy (15.3)	Italy (17.1)
3	France (25 004.1)	13.2	France (566.6)	11.8	Slovenia (14.3)	Spain (15.9)
4	United Kingdom (20 843.3)	11.0	United Kingdom (446.6)	9.3	Austria (14.2)	Slovenia (15.7)
5	Spain (16 623.6)	8.7	Spain (434.1)	9.0	Slovakia (13.4)	Belgium (15.5)

(1) Hungary, Malta and Sweden, 2002; Greece, not available.

(2) Sweden, provisional; Hungary and Malta, 2002; Greece, not available.

(3) Hungary, Malta and Sweden, 2002; Greece and Ireland, not available.

(4) Sweden, provisional; Hungary and Malta, 2002; Greece and Ireland, not available.

Source: Eurostat (SBS)

STRUCTURAL PROFILE

The EU-25's metal and metal products manufacturing sector (NACE Subsection DJ), generated EUR 190.0 billion of value added in 2003, and as such was the second largest industrial activity (NACE Sections C to E) after the manufacturing of food, beverages and tobacco (at the level of NACE subsections) – see Table 7.1. Indeed, this sector contributed 11.2 % of industrial value added. However, the 4.8 million persons that were employed in this sector in 2003 meant that the metal and metal products manufacturing sector ranked as the largest industrial sector in employment terms within the EU-25 (with 13.6 % of the industrial workforce).

In 2003, first processing of ferrous metal (NACE Groups 27.1 to 27.3) generated 16.0 % of the EU-25's metals and metal products manufacturing sector value added – see Subchapter 7.1. Structural metal products (NACE Group 28.1, Subchapter 7.4) accounted for a slightly larger share (17.0 %), while other metal processing (NACE Groups 28.4 and 28.5, Subchapter 7.6) and miscellaneous fabricated metal products (NACE Groups 28.6 and 28.7, Subchapter 7.7) were larger still, each contributing around one quarter of sectoral value

added. Together these four subsectors represented more than 80 % of the wealth generated. It can be noted that first processing of ferrous metals generated a significantly lower share of total sectoral employment (11.5 %). The other subsectors presented in Subchapters 7.2, 7.3 and 7.5 accounted for less than 7 % of sectoral employment and value added.

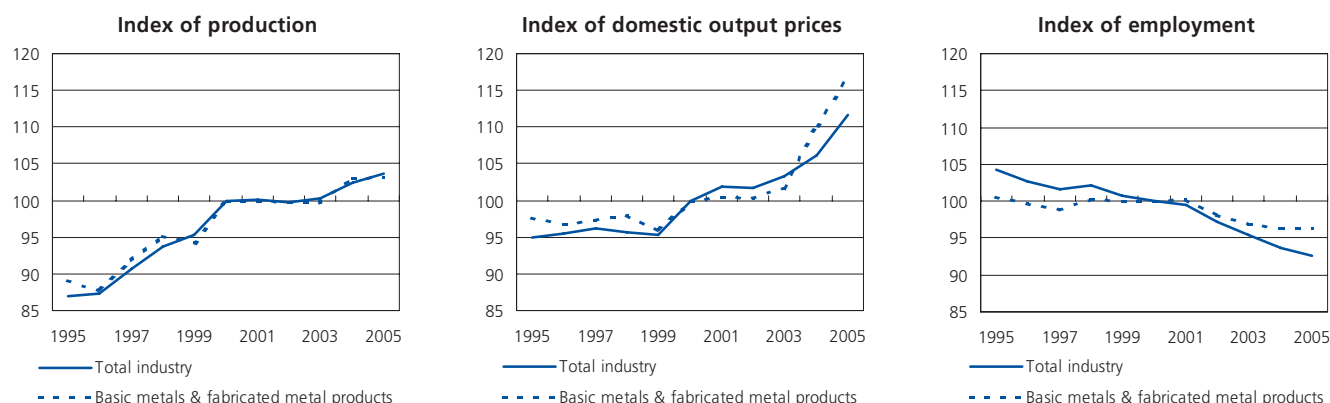
Germany was by far the leading producer of metals and metal products in 2003, generating EUR 53.7 billion of value added, which represented more than a quarter of the EU-25's total (28.3 %) and employed 1.1 million persons, which corresponded to slightly more than a fifth of the EU-25's sectoral employment (21.9 %) – see Table 7.2. As such, the metals and metal products manufacturing sector was the fourth largest industrial NACE subsection in value added terms in Germany, while it was the second largest in terms of industrial employment. Italy, France and the United Kingdom were the next largest producers, generating respectively 18.0 %, 13.2 % and 11.0 % of the EU-25's value added, while no other Member State accounted for more than 10 %. In terms of employment, the same Member States were the largest contributors.

Looking in more detail, at a national level metals and metal products represented the most important source of value added within the industrial sector in Luxembourg, representing almost a quarter of industrial value added in this Member State (compared with an EU-25 average of 11.2 %). To a lesser extent than in Luxembourg, the metals and metal products sector also weighed significantly in total national, industrial value added in Italy (15.3 % of the total), Slovenia (14.3 %), Austria (14.2 %), Slovakia (13.4 %) and the Czech Republic (13.1 %), where this activity was also the largest among industrial NACE subsections.

The regional specialisation of the manufacturing of metal and metal products is shown in the map on page 130 which is based on the non-financial business economy employment share of this sector. The most specialised regions (at the level of detail shown in the map) were Arnsberg (Germany), Východné Slovensko (Slovakia), Moravskoslezsko (the Czech Republic) and Pais Vasco (Spain). Many other regions in Germany and several regions in France were also specialised in this sector, as well as Norra Mellansverige (Sweden) and Pohjois-Suomi (Finland).

Figure 7.1

Manufacture of basic metals and fabricated metal products (NACE Subsection DJ)
Evolution of main indicators, EU-25 (2000=100)

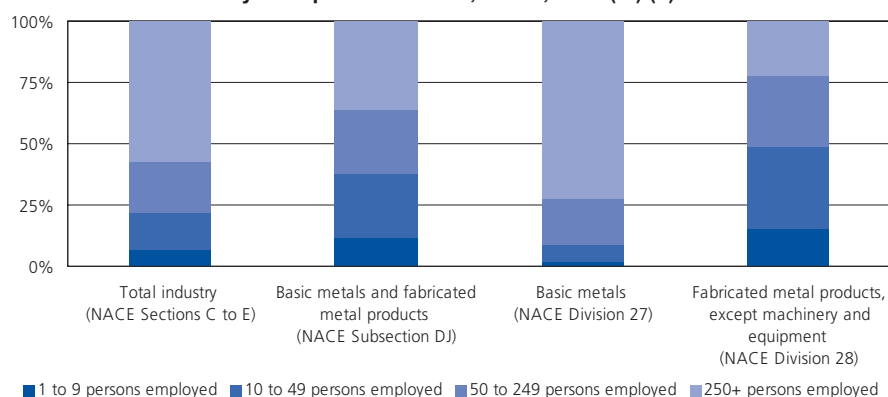


Source: Eurostat (STS)

The production index for EU-25 metals and metal products manufacturing evolved in a very similar way to the industrial average between 1995 and 2005, growing on average by 1.5 % per annum, compared with 1.8 % per annum for industry as a whole – see the evolution of the main short-term indicators in Figure 7.1. However, the index of metals and metal products manufacturing tended to report somewhat larger fluctuations both when expanding and contracting. In the three most recent years (2003 to 2005), output grew year on year, with a marked growth in 2004 (3.2 %) compared with the industrial average (2.2 %). Note that short-term statistics are available at the level of the NACE divisions and groups within metals and metal products manufacturing. Analysing the same period of time, the average growth rate for the production index was 1.9 % per annum for the manufacture of fabricated metal products (NACE Division 28), more than twice the rate for the manufacture of basic metals (NACE Division 27), where the index of production rose by 0.8 % per annum. Within the manufacture of fabricated metal products, the two groups concerned with other metal processing manufacturing recorded particularly high growth between 1995 and 2005, namely forging, pressing, stamping and roll forming of metal (NACE Group 28.4) and the treatment and coating of metal and general mechanical engineering (NACE Group 28.5), for which the production index rose on average by at least 3.4 % per annum.

Figure 7.2

Manufacture of basic metals and fabricated metal products (NACE Subsection DJ)
Share of value added by enterprise size class, EU-25, 2003 (%) (1)



(1) Rounded estimates based on non-confidential data, except for fabricated metal products, except machinery and equipment.

Source: Eurostat (SBS)

The EU-25's domestic output price index recorded an average growth rate of 1.8 % per annum for metals and metal products manufacturing between 1995 and 2005 (1.6 % per annum for the industrial average). However, prices went up by 8.3 % (2.8 % for industry as a whole) between 2003 and 2004, partly reflecting price increases for raw materials and energy in 2004. The increase for the manufacture of basic metals (NACE Division 27) was particularly strong, at 16.4 %. The rhythm at which prices increased for the manufacture of metals and metal products slowed in 2005, growing by 5.9 % compared with the previous year, only slightly more than the industrial average of 5.2 %.

During the second half of the 1990's, the index of employment was rather stable for metals and metal products manufacturing, falling by an average of 0.1 % per annum between 1995 and 2000, while the industrial employment index fell by 0.8 % per annum during the same period. However, between 2000 and 2005, the rate of employment decline increased to an average of 0.7 % per annum for metals and metal products manufacturing, although this was still at a slower pace than the decline recorded for total industry (-1.5 % per annum). Looking over the whole period from 1995 to 2005, the index of the number of persons employed fell by 0.4 % per annum for metals and metal products manufacturing, however, net employment gains were recorded for the manufacture of fabricated metal products (NACE Division 28). Indeed, this NACE division was one of only a few industrial sectors for which the index of employment rose during the most recent decade for which data are available, with an average increase of 0.4 % per annum.

Small and medium-sized enterprises (SMEs) with less than 250 persons employed accounted for 64.0 % of value added in the EU-25's metals and metal products manufacturing sector in 2003, a proportion that was 21.7 percentage points above the industrial average, and one of the highest shares among industrial NACE subsections – see Figure 7.2. The EU-25 pattern was also valid among all of the Member States for which data are available ⁽¹⁾ except Latvia, as SMEs accounted for a higher share of total wealth generated in metals and metal products manufacturing compared with national industrial averages. Some 72.6 % of employment within the EU-25's metals and metal products manufacturing sector was concentrated among SMEs in 2003, compared with 57.1 % for the industrial average.

⁽¹⁾ Italy, Hungary and Portugal, 2002; Belgium, Denmark, Estonia, Greece, Ireland, Cyprus, Luxembourg, Malta, the Netherlands, Austria, Slovenia and Sweden, not available.

LABOUR FORCE CHARACTERISTICS

In 2005, the proportion of men in the metals and metal products manufacturing workforce was 84.7 % in the EU-25, 13.4 percentage points above the industrial (NACE Sections C to E) average (see Table 7.3). In every one of the Member States, the proportion of men working in the metals and metal products manufacturing sector was higher than the average proportion recorded for the whole of the industrial economy. Concerning the breakdown of work between full-time and part-time jobs, the metals and metal products manufacturing sector displayed the characteristics of a typical industrial activity, with a relatively high proportion of full-time employment. No major deviation was observed in the Member States compared with the EU-25 pattern: as full-time employment represented a high proportion of total employment, usually above the national, industrial average.

The breakdown of the workforce by age within the metals and metal products manufacturing sector was also similar to that for industry as a whole, as just over one fifth of the EU-25's workforce was aged 15 to 29, more than half were aged 30 to 49, and the remaining share were aged 50 or more. Among the Member States, the only notable differences between the metals and metal products sector and the average industrial age profiles were found in Latvia and Lithuania, where persons aged 30 to 49 were much less represented in the metals and metal products manufacturing sector, while persons aged 50 and more were more represented.

Table 7.3
Manufacture of basic metals and fabricated metal products (NACE Subsection DJ)
Labour force characteristics, 2005

	Male		Full-time		Breakdown by age (% share of total)		
	Proportion of those employed (%)	Index (industry=100)	Proportion of those employed (%)	Index (industry=100)	< 30 years (1)	30-49 years	50+ years
EU-25	84.7	118.7	94.6	102.4	21.8	54.3	23.8
BE	87.4	115.5	92.0	103.4	20.8	58.8	20.4
CZ	79.0	122.7	98.5	101.0	20.9	49.4	29.7
DK	82.5	118.6	93.0	103.5	17.4	55.5	27.1
DE	82.7	114.0	92.4	104.4	19.3	55.0	25.7
EE	85.3	153.1	97.1	99.5	14.2	51.9	33.9
EL	92.2	124.3	98.6	100.4	21.8	56.8	21.4
ES	89.0	118.3	96.7	101.5	27.7	50.3	22.0
FR	85.4	119.6	97.0	103.3	21.0	56.4	22.6
IE	87.9	124.6	96.4	101.8	34.4	47.0	18.6
IT	84.6	118.3	95.0	101.7	23.5	59.3	17.1
CY	89.7	129.7	95.6	102.0	27.2	49.8	23.1
LV	80.9	138.1	97.2	100.8	19.9	39.3	40.7
LT	81.7	153.3	98.9	101.2	:	47.1	33.7
LU	93.1	114.1	93.8	100.1	8.8	62.7	30.5
HU	83.4	133.6	97.8	100.6	18.2	51.3	30.5
MT	85.9	111.3	96.9	101.4	:	:	:
NL	89.1	115.1	84.5	115.6	19.4	57.3	23.2
AT	82.5	110.4	92.7	103.1	31.0	52.4	16.6
PL	86.1	124.9	97.6	101.4	21.4	56.2	22.4
PT	83.6	141.1	96.3	99.2	25.2	49.7	25.0
SI	82.4	128.9	95.9	99.9	21.9	57.4	20.7
SK	85.4	133.9	99.4	100.5	23.0	55.8	21.3
FI	81.5	114.0	95.0	100.0	23.1	46.3	30.6
SE	84.1	112.0	91.4	101.4	16.7	52.1	31.2
UK	85.7	114.4	92.5	101.3	20.7	49.1	30.2

(1) Luxembourg, 2004.
Source: Eurostat (LFS)

Table 7.4

Manufacture of basic metals and fabricated metal products (NACE Subsection DJ)
Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	4.6	75.3	24.7	40.0	31.0	130	9.5
1	Latvia (9.6)	Luxembourg (93.7)	Denmark (34.1)	Austria (60.9)	Luxembourg (49.6)	Latvia (257.2)	Malta (22.1)
2	Lithuania (9.2)	Slovakia (85.2)	Germany (28.8)	Belgium (59.1)	Belgium (47.6)	Slovakia (194.0)	Latvia (20.0)
3	Slovenia (8.7)	Latvia (84.8)	United Kingdom (28.8)	Luxembourg (59.0)	Netherlands (41.5)	Estonia (160.8)	Cyprus (14.1)
4	Hungary (7.5)	Poland (84.4)	Ireland (28.1)	Finland (55.8)	Austria (40.9)	Poland (159.7)	Czech Republic (13.0)
5	Slovakia (6.9)	Hungary (83.8)	France (27.0)	Netherlands (55.8)	Denmark (40.4)	Czech Republic (152.7)	Austria (12.8)

(1) France, Hungary, Malta and Sweden, 2002; Belgium and Greece, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Hungary, Malta and Sweden, 2002; Greece, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Hungary, Malta and Sweden, 2002; Greece, not available; EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

COSTS, PRODUCTIVITY AND PROFITABILITY

In 2003, EU ⁽²⁾ investment in tangible goods was equivalent to 4.6 % of total operating costs in the metals and metal products manufacturing sector, which was slightly lower than the industrial average – see Table 7.4. Purchases of goods and services represented 75.3 % of total operating costs in the metals and metal products manufacturing sector based on an average of the data for available countries ⁽³⁾, the industrial average was 81.1 % ⁽⁴⁾. Luxembourg stood out from the rest of the Member States, as 93.7 % of its operating costs within the metals and metal products manufacturing sector came from purchases of goods and services.

⁽²⁾ EU average, 2003; France, Hungary and Malta, 2002; excluding Belgium and Greece.

⁽³⁾ EU average, 2003; Hungary, Malta and Sweden, 2002; excluding Greece.

⁽⁴⁾ EU average, 2003; Malta and Sweden, 2002; excluding Greece and Ireland.

Among the metals and metal products manufacturing subsectors, casting (NACE Group 27.5) and other metal processing (NACE Groups 28.4 and 28.5) had a relatively high ratio of investment in tangible goods relative to total operating costs. Basic precious and non-ferrous metals (NACE Group 27.4) and first processing of ferrous metals (NACE Groups 27.1 to 27.3) sectors both recorded relatively high proportions of purchases of goods and services relative to total operating costs.

The apparent labour productivity of the EU-25's metals and metal products manufacturing sector was EUR 40 000 per person employed in 2003, EUR 9 600 below the industrial average. Personnel costs for the EU-25's metals and metal products manufacturing sector averaged EUR 31 000 per employee, slightly lower than the industrial average. As a result, the EU-25's wage adjusted labour productivity ratio in the metals and metal products sector was 130 %, among the lowest recorded by industrial NACE subsections. The gross operating rate of the EU-25's metals and metal products manufacturing sector was 9.5 %, close, but nevertheless lower, than the industrial average (10.3 %), indicating a lower rate of operating profitability.

Among the subsectors that make-up the metals and metal products manufacturing sector, the highest apparent labour productivity was recorded for basic precious and non-ferrous metals (EUR 59 000 per person employed, NACE Group 27.4), which also recorded the highest average personnel costs (EUR 41 400 per employee) and the lowest gross operating rate (5.7 %).

EXTERNAL TRADE

The EU-25 exported EUR 66.8 billion of metals and fabricated metal products (CPA Subsection DJ) in 2005, almost equally balanced by imports of EUR 66.7 billion – see Table 7.5. Exports of metals and fabricated metal products accounted for 6.7 % of the EU-25's industrial exports to non-member countries, with 4.1 % derived from basic metals (CPA Division 27) and 2.6 % from fabricated metal products (CPA Division 28). Metals and fabricated metal products represented 6.2 % of total industrial imports from non-member countries, mainly due to imports of basic metals (4.6 % of industrial imports).

Table 7.5

Basic metals and fabricated metal products (CPA Subsection DJ)
External trade, EU-25, 2005

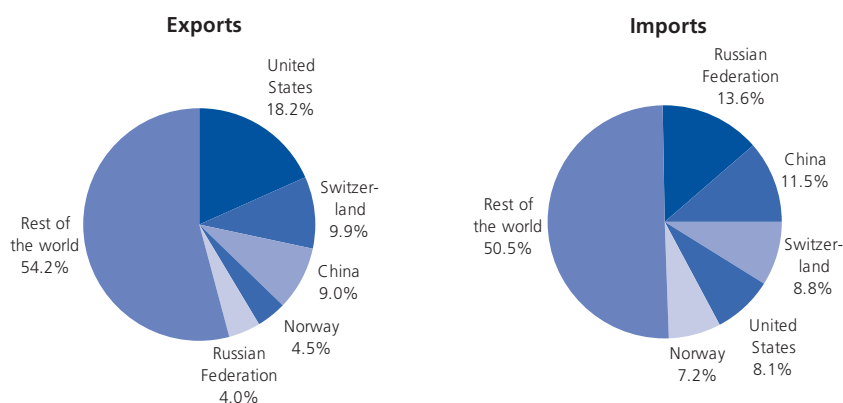
	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Basic metals and fabricated metal products	66 800	6.7	66 726	6.2	74	100.1
Basic iron and steel and ferro-alloys; tubes; other iron and steel	22 254	2.2	17 034	1.6	5 220	130.6
Basic precious metals and metals clad with precious metals	18 276	1.8	32 439	3.0	-14 162	56.3
Structural metal products	4 018	0.4	1 190	0.1	2 828	337.6
Tanks, reservoirs and containers of metal; central heating radiators and boilers; steam generators, except central heating hot water boilers	4 270	0.4	764	0.1	3 505	558.6
Cutlery, tools and general hardware, and other fabricated metal products	17 537	1.8	15 218	1.4	2 320	115.2

Source: Eurostat (Comext)

Exports of metals and fabricated metal products from Germany to the rest of the world (intra- and extra-EU trade combined) were EUR 57.6 billion, exceeding imports by EUR 12.0 billion, well ahead of the Swedish trade surplus of EUR 2.7 billion, while Belgium (EUR 1.9 million), Austria (EUR 1.5 million) and Poland (EUR 1.2 million) were the only other Member States to record trade surpluses in excess of EUR 1 billion. In 2005, the share of metals and fabricated metal products exports in national industrial exports to the rest of the world was 18.1 % in Luxembourg, its second highest source of industrial exports (at the level of CPA subsections), after electrical and optical equipment (CPA Subsection DL). In Greece, metals and fabricated metal products exports accounted for 15.4 % of industrial exports, its highest share at the level of CPA subsections, equal to the share of chemicals, chemical products and man-made fibres (CPA Subsection DG).

Figure 7.3

Basic metals and fabricated metal products (CPA Subsection DJ)
Share in extra-EU trade, 2005 (%)



Source: Eurostat (Comext)

7.1: FIRST PROCESSING OF FERROUS METALS

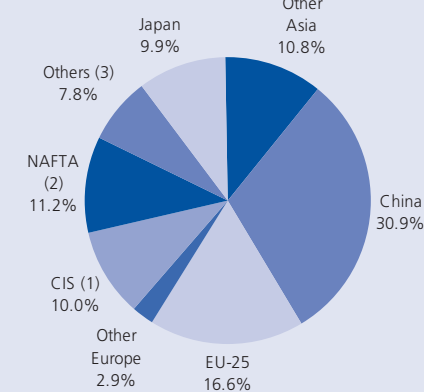
This subchapter includes information on NACE Groups 27.1 to 27.3. The first of these covers the manufacture of basic iron and steel and ferro-alloys (NACE Group 27.1). The manufacture of tubes (be they of iron or steel) is included in NACE Group 27.2, while other first processing activities associated with iron and steel (drawing, rolling, forming, wire drawing) are covered by NACE Group 27.3. The aggregate covering all three of these activities is hereafter referred to as the first processing of ferrous metals.

Steel is an alloy, made of iron, carbon and small amounts of other elements, and ferrous scrap is an important secondary source for steel processing, whether domestic or imported. The challenges faced by the EU's steel activities are linked to the costs and availability of inputs (raw materials, energy and labour) and to the competition of producers in non-member countries. Steel producing activities are also one of the biggest CO₂ emitters, and meeting the Kyoto protocol requirements presents another challenge for this industrial sector.

The extraordinary levels of industrial growth in China and its rapid growth in demand for steel have pushed input prices within this activity to record levels. According to the International Iron and Steel Institute ⁽⁵⁾, China was not only

Figure 7.4

Global steel production, 2005
(%, based on crude steel output in tonnes)



(1) Commonwealth of Independent States.
(2) North American Free Trade Association.
(3) Comprising Africa 1.6 %, Central and South America 4.1 %, the Middle East 1.4 %, and Australia and New Zealand 0.8 %.
Source: IISI (International Iron and Steel Institute), <http://www.worldsteel.org>

Table 7.6

Largest global steel producing enterprise groups
(million tonnes of crude steel output)

	2004	2005
Mittal Steel	42.8	63.0
Arcelor	46.9	46.7
Nippon Steel	32.4	32.0
POSCO	30.2	30.5
JFE	31.6	29.9
Baosteel	21.4	22.7
US Steel	20.8	19.3
Nucor	17.9	18.4
Corus Group	19.0	18.2
Riva	16.7	17.5

Source: IISI (International Iron and Steel Institute), <http://www.worldsteel.org>

the largest producer of steel in the world in 2005 - with about 31 % of world production - which was almost twice the share for the EU-25 (17 %) - but was also the largest user of steel, with a share of consumption that was very close to its production share (see Figure 7.4).

Among the recent changes that have marked the production side of the world steel market is the decision on 25 June 2006 for Arcelor - the world's second largest steel producer in terms of volume - to merge with Mittal Steel.

⁽⁵⁾ IISI (International Iron and Steel Institute), more information at: <http://www.worldsteel.org>.

Table 7.7

Manufacture of basic iron and steel and of ferro-alloys; manufacture of tubes; other first processing of iron and steel (NACE Groups 27.1, 27.2 and 27.3)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (8 639.9)	27.8	Germany (127.7)	23.2	Slovakia (6.8)	Slovakia (5.5)
2	Italy (4 427.8)	14.2	Italy (79.2)	14.4	Sweden (4.1)	Belgium (3.6)
3	France (3 647.6)	11.7	France (60.6)	11.0	Belgium (3.8)	Sweden (3.4)
4	Spain (2 563.0)	8.2	United Kingdom (45.0)	8.2	Austria (3.6)	Austria (2.9)
5	Sweden (2 024.1)	6.9	Spain (39.1)	7.1	Czech Republic (3.3)	Czech Republic (2.5)

(1) Slovakia and Sweden, 2002; Estonia, Greece, Cyprus, Latvia, Luxembourg, Malta and the Netherlands, not available.

(2) Sweden, provisional; Slovakia, 2002; Estonia, Greece, Cyprus, Luxembourg, Malta and the Netherlands, not available.

(3) Slovakia and Sweden, 2002; Estonia, Greece, Ireland, Cyprus, Latvia, Luxembourg, Malta and the Netherlands, not available.

(4) Sweden, provisional; Slovakia, 2002; Estonia, Greece, Ireland, Cyprus, Luxembourg, Malta and the Netherlands, not available.

Source: Eurostat (SBS)

STRUCTURAL PROFILE

The EU-25's first processing of ferrous metals sector (NACE Groups 27.1 to 27.3) generated EUR 31.1 billion value added and employed 550 000 persons in 2003, equivalent to 16.0 % of the value added generated by the metals and metal products (NACE Subsection DJ) manufacturing sector and 11.6 % of its workforce. Within the EU-25's first processing of ferrous metals sector, the manufacture of basic iron and steel (NACE Group 27.1) was the largest activity among the three NACE groups covered, accounting for more than two thirds of value added and employment (70.3 % and 70.5 % respectively). It was followed, in size, by the manufacture of tubes (NACE Group 27.2), which generated 17.6 % of sectoral value added and accounted for 20.0 % of the sectoral workforce. The remaining shares were accounted for by other first processing of iron and steel (NACE Group 27.3).

Germany dominated the first processing of ferrous metals sector, generating EUR 8.6 billion value added in 2003, more than a quarter of the EU-25's total, which was almost twice the share of Italy (14.2 %), the next largest Member State. France, Spain, Sweden (2002) and Belgium were the only other Member States to account for more than 6 % of the EU-25's value added within this activity – see Table 7.7. Germany, Italy and France were also the largest employers, contributing respectively 23.2 %, 14.4 % and 11.0 % of the EU-25's workforce. Note that the United Kingdom accounted for 8.2 % of the EU-25's workforce, while generating just 5.1 % of EU-25 value added. In a similar vein, Poland was ranked as the sixth largest employer in the EU-25 (6.7 % of the workforce), while accounting for a significantly lower share of EU-25 value added (1.9 %). Among the

Table 7.8

Production value of selected structural metal products (CPA Group 28.1), EU-25, 2004 (EUR million)

	Prodcom code	
Prefabricated buildings, of iron or steel (1)	28.11.10.30	10 705
Structures, solely or principally of iron or steel sheet comprising two walls of profiled (ribbed) sheet with an insulating core (excl. prefabricated buildings)	28.11.23.40	2 422
Installation in situ of self produced metal structures	28.11.91.00	4 291

(1) Estimated.

Source: Eurostat (PRODCOM)

Member States for which data are available ⁽⁶⁾, Slovakia (2002), Sweden (2002) and Belgium were the most specialised in the first processing of ferrous metals sector, as this activity generated 6.8 %, 4.1 % and 3.8 % respectively of industrial value added, compared with an EU-25 average of 1.8 %.

Developments for the EU-25's index of production for the manufacture of basic iron and steel (NACE Group 27.1) were very similar to that for the metals and metal products manufacturing in total, with production growing on average by 0.7 % per annum between 1995 and 2005. However, during the same period, growth was somewhat slower for the manufacture of tubes (NACE Group 27.2), on average up by 0.3 % per annum, while output fell on average by 0.6 % per annum for other first processing of iron and steel (NACE Group 27.3).

⁽⁶⁾ Slovakia and Sweden, 2002; Estonia, Greece, Ireland, Cyprus, Latvia, Luxembourg, Malta and the Netherlands, not available.

COSTS, PRODUCTIVITY AND PROFITABILITY

Apparent labour productivity was EUR 53 000 per person employed in 2003 in the EU-25's first processing of ferrous metals sector, EUR 13 000 above the metals and metal products average – see Table 7.9. Average personnel costs were EUR 38 000 per employee, making the first processing of ferrous metals sector the activity with the second highest apparent labour productivity and average personnel costs among those presented within Subchapters 7.1 to 7.7. When comparing these two ratios, personnel costs per employee were covered 140 % by value added per person employed, compared with an average of 130 % for metals and metal products. Among the three subsectors, the manufacture of basic iron and steel (NACE Group 27.1) had the highest apparent labour productivity and average personnel costs per employee, while the manufacture of tubes (NACE Group 27.2) had the highest rate of profitability (7.0 %), as measured by the gross operating rate.

Table 7.9

Manufacture of basic iron and steel and of ferro-alloys; manufacture of tubes; other first processing of iron and steel (NACE Groups 27.1, 27.2 and 27.3)
Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (4)
EU-25	4.5	83.3	16.7	53.0	38.0	140.0	5.6
1	Austria (8.5)	Portugal (93.1)	Ireland (28.3)	Finland (86.4)	Belgium (65.1)	Portugal (251.9)	Austria (12.7)
2	Finland (8.2)	Lithuania (89.9)	Austria (22.6)	Belgium (80.1)	Austria (49.0)	Czech Republic (195.4)	Sweden (11.7)
3	Slovakia (7.5)	Poland (89.4)	Germany (20.9)	Austria (79.3)	Germany (48.9)	Slovakia (185.8)	Finland (11.3)
4	Hungary (5.8)	Czech Republic (89.0)	Denmark (18.9)	Sweden (71.0)	Finland (46.6)	Finland (185.4)	Slovakia (10.5)
5	Denmark (5.3)	Hungary (88.9)	Belgium (18.9)	Germany (67.7)	Denmark (46.0)	Poland (168.8)	Czech Republic (9.9)

(1) The Czech Republic, Slovakia and Sweden, 2002; Belgium, Estonia, Greece, Cyprus, Latvia, Luxembourg, Malta, the Netherlands and Slovenia, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Slovakia and Sweden, 2002; Estonia, Greece, Cyprus, Latvia, Luxembourg, Malta and the Netherlands, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Slovakia and Sweden, 2002; Estonia, Greece, Cyprus, Latvia, Luxembourg, Malta and the Netherlands, not available; EU-25, rounded estimate based on non-confidential data.

(4) Slovakia and Sweden, 2002; Estonia, Greece, Cyprus, Latvia, Luxembourg, Malta and the Netherlands, not available.

Source: Eurostat (SBS)

Table 7.10

Basic iron and steel and ferro-alloys; tubes; other first processed iron and steel (CPA Groups 27.1, 27.2 and 27.3)
External trade, EU-25, 2005

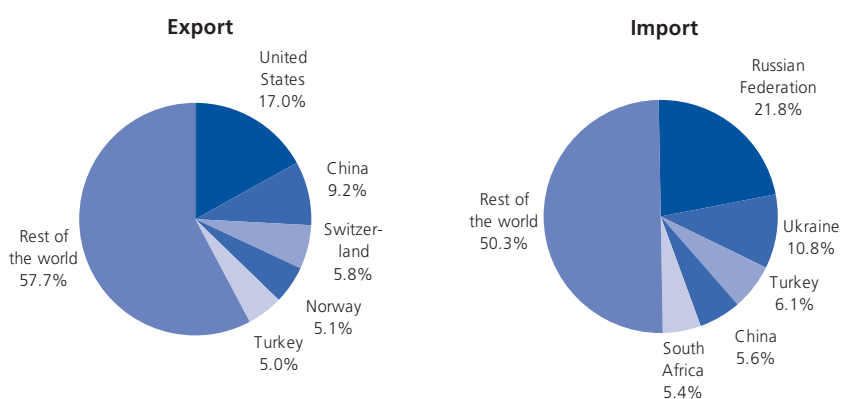
	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Basic iron and steel and ferro-alloys; tubes; other iron and steel	22 254	2.2	17 034	1.6	5 220	130.6
Basic iron and steel and ferro-alloys	12 154	1.2	13 394	1.2	-1 240	90.7
Tubes	8 504	0.9	2 506	0.2	5 998	339.3
Other first processed iron and steel	1 596	0.2	1 133	0.1	463	140.8

Source: Eurostat (Comext)

EXTERNAL TRADE

In 2005, the EU-25's trade surplus with non-member countries was EUR 5.2 billion for ferrous metals (CPA Groups 27.1 to 27.3) – see Table 7.10. Basic iron and steel and ferro-alloys (CPA Group 27.1) generated a EUR 1.2 billion trade deficit, while tubes (CPA Group 27.2) and other first processed iron and steel (CPA Group 27.3) both generated trade surpluses, of EUR 6.0 billion and EUR 462.8 million respectively. In 2005, exports of tubes from the EU-25 to non-member countries were almost twice their level of 2000 in value terms, which marked the fastest expansion of exports among other ferrous metals CPA groups. Germany exported EUR 15.0 billion of ferrous metals (to both intra- and extra-EU partners) in 2003, and was by far the largest exporter among the EU-25 Member States. Germany also recorded the largest trade surplus for ferrous metals (EUR 2.6 billion), followed by Belgium (EUR 2.5 billion), Sweden and the United Kingdom (both EUR 1.7 billion). However, ferrous metals represented 11.6 % of all industrial exports (intra- and extra-EU trade combined) in Luxembourg, a relatively high proportion when compared with the other Member States and the EU-25 average of 2.2 %.

Figure 7.5

Basic iron and steel and ferro-alloys; tubes; other first processed iron and steel (CPA Groups 27.1, 27.2 and 27.3)
Share in extra-EU trade, 2005 (%)


Source: Eurostat (Comext)

7.2: BASIC PRECIOUS AND NON-FERROUS METALS

NACE Group 27.4 covers the manufacture of a wide range of metals other than iron and steel, including precious metals (such as gold, silver and platinum) and common metals (aluminium, lead, zinc, tin, copper, chrome, nickel and manganese), hereafter referred to as basic precious and non-ferrous metals manufacturing.

As the EU is deficient in raw materials, its metals refining activity depends, to a large extent, on the import of minerals from abroad, including waste and scrap for recycling. From a commercial point of view, these metals are subject to the general trade rules of the WTO. Import duties for non-ferrous metals ranged between 0 % (copper and nickel) and 6 % (aluminium).

STRUCTURAL PROFILE

In 2003, basic precious and non-ferrous metals manufacturing (NACE Group 27.4) generated EUR 13.0 billion of value added and employed 214 000 persons in the EU-25, meaning that the activities covered within this subchapter were among the smallest within the metals and metal products (NACE Subsection DJ) manufacturing sector – see Table 7.11 – accounting for 6.7 % of sectoral value added and 4.5 % of the sectoral employment.

Among the Member States, Germany had the highest level of value added in the EU-25 in 2003 recording EUR 4.2 billion value added for basic precious and non-ferrous metals, which was more than the combined value added of the three next largest Member States, namely Italy, France (both EUR 1.3 billion) and the United Kingdom (EUR 1.2 billion). No other Member State posted more than EUR 1.0 billion of value added in 2003. There was a similar picture in terms of employment, as almost 30 % of the

EU-25's workforce was concentrated in Germany (62 440 persons employed), which was almost the same as the combined share of Italy (10.9 % of the EU-25's total), France (10.3 %) and the United Kingdom (9.4 %). However, value added generated by the precious and non-ferrous metals manufacturing sector in Luxembourg (2002) and in Belgium accounted for 2.8 % and 1.4 % respectively of the national industrial (NACE Sections C to E) total, compared with an EU-25 average of just 0.8 %. Slovakia, Austria and Hungary were also relatively specialised in the manufacture of precious and non-ferrous metals, with at least 1.0 % of their industrial value added coming from this activity.

Table 7.11
Manufacture of basic precious and non-ferrous metals (NACE Group 27.4)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (4 248.2)	32.7	Germany (62.4)	29.1	Luxembourg (2.8)	Luxembourg (2.1)
2	Italy (1 323.9)	10.2	Italy (23.4)	10.9	Belgium (1.4)	Belgium (1.4)
3	France (1 267.1)	9.7	France (22.1)	10.3	Slovakia (1.1)	Austria (1.0)
4	United Kingdom (1 235.1)	9.5	United Kingdom (20.2)	9.4	Austria (1.1)	Germany (0.8)
5	Spain (915.5)	7.0	Spain (15.1)	7.0	Hungary (1.0)	Slovakia (0.8)

(1) Luxembourg, Malta and Sweden, 2002; Estonia, Greece and Cyprus, not available.

(2) Sweden, provisional; Luxembourg and Malta, 2002; Estonia, Greece and Cyprus, not available.

(3) Luxembourg, Malta and Sweden, 2002; Estonia, Greece, Ireland and Cyprus, not available.

(4) Sweden, provisional; Luxembourg and Malta, 2002; Estonia, Greece, Ireland and Cyprus, not available.

Source: Eurostat (SBS)

Table 7.12
Manufacture of basic precious and non-ferrous metals (NACE Group 27.4)
Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	3.7	86.2	13.8	59.0	41.4	143.0	5.7
1	Lithuania (100.0)	Lithuania (100.0)	Malta (63.6)	Luxembourg (95.1)	Belgium (57.6)	Latvia (290.5)	Slovenia (13.3)
2	Slovakia (12.3)	Latvia (98.2)	Denmark (19.5)	Finland (81.8)	Germany (52.3)	Slovakia (254.2)	Slovakia (11.2)
3	Netherlands (9.2)	Slovakia (91.6)	Ireland (19.1)	Belgium (75.1)	Austria (48.5)	Slovenia (232.8)	Czech Republic (10.6)
4	Portugal (7.7)	Finland (91.3)	Netherlands (17.8)	Austria (73.6)	Netherlands (47.2)	Czech Republic (212.2)	Poland (9.6)
5	Denmark (7.1)	Czech Republic (90.1)	Portugal (15.7)	Netherlands (71.3)	Luxembourg (46.5)	Luxembourg (204.3)	Hungary (9.3)

(1) The Czech Republic, Malta, Latvia and Sweden, 2002; Belgium, Estonia, Greece, Cyprus, Luxembourg and Slovenia, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Malta, Luxembourg and Sweden, 2002; Estonia, Greece and Cyprus, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Luxembourg, Malta and Sweden, 2002; Estonia, Greece and Cyprus, not available; EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

Table 7.13

Basic precious metals and metals clad with precious metals (CPA Group 27.4)
External trade, EU-25, 2005

	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Basic precious metals and metals clad with precious metals	18 276	1.8	32 439	3.0	-14 162	56.3
Precious metals	5 053	0.5	7 805	0.7	-2 751	64.7
Aluminium and aluminium products	5 746	0.6	10 460	1.0	-4 715	54.9
Lead, zinc and tin and products thereof	604	0.1	1 382	0.1	-778	43.7
Copper products	4 567	0.5	7 064	0.7	-2 497	64.7
Other non-ferrous metal products	2 306	0.2	5 728	0.5	-3 422	40.3

Source: Eurostat (Comext)

COSTS, PRODUCTIVITY AND PROFITABILITY

Apparent labour productivity was EUR 59 000 per person employed in the EU-25's basic precious and non-ferrous metals sector in 2003 and average personnel costs were EUR 41 400 per employee – see Table 7.12. Both of these values were considerably higher than the averages recorded for metals and metal products manufacturing, as was the wage adjusted labour productivity ratio of 143 % (compared with 130 % for metals and metal products manufacturing). In contrast, the gross operating rate (5.7 %) of the basic precious and non-ferrous metals sector was 3.8 percentage points lower than the metals and metal products manufacturing average.

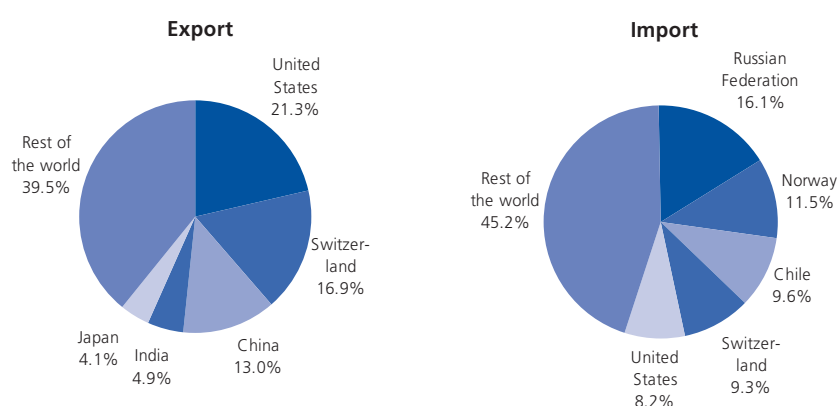
Personnel costs accounted for 13.8 % ⁽⁷⁾ of total operating costs within the basic precious and non-ferrous metals sector, the lowest share among the activities presented in Subchapters 7.1 to 7.7. The ratio of investments in tangible goods relative to total operating costs for basic precious and non-ferrous metals was 3.7 % ⁽⁸⁾, somewhat below the metals and metal products average (4.6 %).

⁽⁷⁾ EU average, 2003; Malta, Luxembourg and Sweden, 2002; excluding Estonia, Greece and Cyprus.

⁽⁸⁾ EU average, 2003; the Czech Republic, Malta, Latvia and Sweden, 2002; excluding Belgium, Estonia, Greece, Cyprus, Luxembourg and Slovenia.

Figure 7.6

Basic precious metals and metals clad with precious metals (CPA Group 27.4)
Share in extra-EU trade, 2005 (%)



Source: Eurostat (Comext)

EXTERNAL TRADE

The EU-25 ran a trade deficit of EUR 14.2 billion in 2005 for basic precious metals and other non-ferrous metals (CPA Group 27.4), with imports from non-member countries valued at EUR 32.4 billion – see Table 7.13. There was a trade deficit for each of the five CPA classes that compose basic precious metals and other non-ferrous metals, the largest being recorded for aluminium and aluminium products (CPA Class 27.42), at EUR 4.7 billion. Within the EU-25, Germany was the largest exporter of basic precious metals and other non-ferrous metals (EUR 17.0 billion in 2005, both intra- and extra-EU trade), but was still running a deficit of EUR 1.4 billion. Although the vast majority of the Member States recorded trade deficits for basic precious metals and other non-ferrous metals, there were small trade surpluses recorded in Finland (EUR 442.7 million), Sweden (EUR 165.6 million), Luxembourg (EUR 164.7 million), Greece (EUR 58.3 million) and Latvia (EUR 35.8 million).

7.3: CASTING

NACE Group 27.5 covers the casting of metals (including iron, steel, light metals and other non-ferrous metals). As such, this activity specialises in the manufacture of semi-finished castings for downstream customers. The information presented does not include the manufacture of standardised, finished products (such as tubes, see Subchapter 7.1) or boilers or radiators (see Subchapter 7.5). Note that external trade statistics are not available for foundry work services (CPA Group 27.5).

Foundries use cast metallic products (steel, aluminium, copper, cast iron, magnesium, lead, titanium, zinc, etc.) and produce iron and steel castings. Foundry work consists of pouring a molten metal alloy into a mould to obtain a part with the same shape as the mould after it solidifies, and uses casting procedures appropriate for the alloy used, the number of parts to be made, and their shape and weight. Main downstream activities for casting enterprises include machinery and equipment and transport equipment manufacturers, as well as the construction and telecommunications sectors.

STRUCTURAL PROFILE

With EUR 10.0 billion of value added in 2003, the EU-25's casting of metals activity (NACE Group 27.5) made the smallest contribution (5.1 %) to the metals and metal products total (NACE Subsection DJ) of all of the activities presented in Subchapters 7.1 to 7.7. In the EU-25 there were 265 300 persons employed casting metals, which corresponded to 5.6 % of the metals and metal products workforce in 2003, slightly more than the share recorded for basic precious and non-ferrous metals (NACE Group 27.4).

Among the Member States, Germany had by far the highest share of the EU-25 value added, with over a third of the total (37.7 %), followed by Italy (15.9 %), France (12.8 %) and Spain (9.7 %) – see Table 7.14. However, Slovenia was particularly specialised in casting metals, as the added value generated by this sector in Slovenia contributed 1.3 % to the industrial total, compared with an EU-25 average of 0.6 %. The Czech Republic (0.9 %), Austria and Germany (both 0.8 %) were the next most specialised Member States in value added terms.

The index of production for the EU-25's casting of metals followed quite closely that for the manufacture of metals and metal products as a whole between 1995 and 2005, growing on average by 1.4 % per annum. Nevertheless, there have been differences in the development of these two indices, especially in recent years, as the output index for metals and metal products manufacturing registered consecutive year on year growth from 2003 to 2005, while the index of production for the casting of metals contracted slightly twice during the same period, by 0.4 % in 2003 and by 0.1 % in 2005.

Table 7.14

Casting of metals (NACE Group 27.5)

Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (3 770.6)	37.7	Germany (69.0)	26.0	Slovenia (1.3)	Slovenia (1.5)
2	Italy (1 594.4)	15.9	Italy (35.9)	13.5	Czech Republic (0.9)	Czech Republic (1.3)
3	France (1 284.9)	12.8	France (35.2)	13.3	Austria (0.8)	Austria (1.0)
4	Spain (968.9)	9.7	United Kingdom (24.1)	9.1	Germany (0.8)	Germany (0.9)
5	United Kingdom (932.3)	9.3	Spain (22.3)	8.4	Spain (0.8)	France (0.8)

(1) Malta, the Netherlands, Slovakia and Sweden, 2002; Greece, Latvia and Luxembourg, not available.

(2) Sweden, provisional; Slovakia, 2002; Greece, Luxembourg, Malta and the Netherlands, not available.

(3) Malta, the Netherlands, Slovakia and Sweden, 2002; Greece, Ireland, Latvia and Luxembourg, not available.

(4) Sweden, provisional; Malta, Netherlands and Slovakia, 2002; Greece, Ireland and Luxembourg, not available.

Source: Eurostat (SBS)

Table 7.15

Casting of metals (NACE Group 27.5)

Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	6.4	69.8	30.2	39.0	30.7	127	8.2
1	Estonia (18.2)	Slovakia (82.4)	Ireland (40.0)	Austria (56.2)	Belgium (43.3)	Hungary (150.9)	Ireland (14.7)
2	Portugal (11.1)	Italy (79.7)	Denmark (38.0)	Belgium (55.0)	Germany (43.2)	Poland (143.5)	Finland (10.5)
3	Hungary (9.9)	Hungary (78.5)	Lithuania (37.5)	Germany (54.6)	Austria (42.8)	Estonia (140.9)	Estonia (10.4)
4	Spain (9.5)	Poland (77.2)	Finland (36.2)	Denmark (51.6)	Denmark (40.2)	Spain (139.7)	Hungary (10.3)
5	Slovenia (9.5)	Czech Republic (76.2)	Germany (36.0)	Sweden (44.6)	Sweden (35.3)	Slovenia (133.6)	Poland (10.2)

(1) Malta, the Netherlands, Slovakia and Sweden, 2002; Belgium, Greece, Cyprus, Latvia and Luxembourg, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Malta, the Netherlands, Slovakia and Sweden, 2002; Greece, Cyprus, Latvia and Luxembourg, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Malta, the Netherlands, Slovakia and Sweden, 2002; Greece, Cyprus, Latvia and Luxembourg, not available; EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

COSTS, PRODUCTIVITY AND PROFITABILITY

Apparent labour productivity and average personnel costs were, in general, similar for the casting of metals and the manufacture of metals and metal products as a whole. Apparent labour productivity for the casting of metals was EUR 39 000 and average personnel costs were EUR 30 700 per employee – see Table 7.15. The wage adjusted labour productivity was 127 %, just below the metals and metal products manufacturing average (130 %). Equally, the gross operating rate, one measure of profitability, for the casting of metals (8.2 %) was somewhat lower than the corresponding level for metals and metal products (9.5 %).

Compared with the other metals and metal products manufacturing activities, personnel costs for the casting of metals accounted for a relatively high proportion of total operating costs, averaging 30.2 % among those countries for which data are available in the EU ⁽⁹⁾. Investment in tangible goods relative to operating costs was also relatively high for the EU's ⁽¹⁰⁾ casting of metals sector at 6.4 %, compared with an EU ⁽¹¹⁾ average of 4.6 % for metals and metal products as a whole.

⁽⁹⁾ EU average, 2003; Malta, the Netherlands, Slovakia and Sweden, 2002; excluding Greece, Latvia and Luxembourg.

⁽¹⁰⁾ EU average, 2003; the Netherlands, Slovakia and Sweden, 2002; excluding Belgium, Greece, Latvia and Luxembourg.

⁽¹¹⁾ EU average, 2003; France, Hungary and Malta, 2002; excluding Belgium and Greece.

7.4: STRUCTURAL METAL PRODUCTS

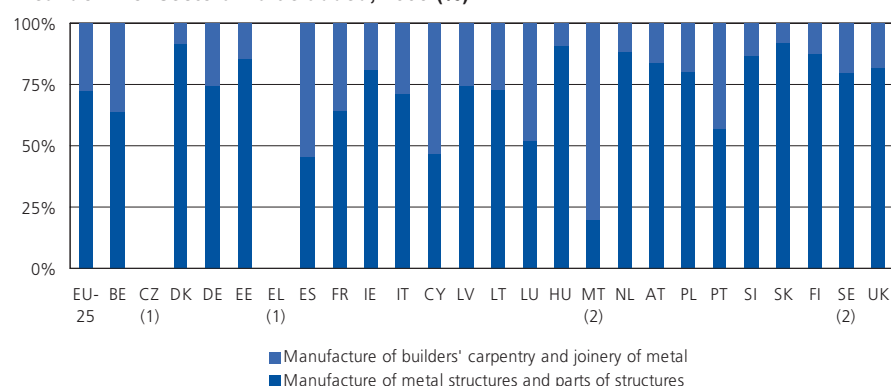
This subchapter includes information on NACE Group 28.1 that covers the manufacture of structural metal products. The vast majority of the products that are produced within this activity are destined for the construction sector (see Chapter 15), for example, as metal supports and structures, prefabricated buildings, metal doors, window frames, or shutters. Demand is therefore closely linked to developments in the construction sector for new housing, renovation and civil engineering projects.

STRUCTURAL PROFILE

There were 971 800 persons employed in the structural metal products sector (NACE Group 28.1) in the EU-25 in 2003, generating EUR 32.9 billion of value added. Structural metal products contributed 17.0 % of the value added generated in EU-25's metals and metal products (NACE Subsection DJ) manufacturing sector in 2003 and employed just over one fifth (20.4 %) of its workforce.

Germany generated 21.8 % of the EU-25's value added in the structural metal products sector, followed by Italy (19.0 %), the United Kingdom (13.3 %) and Spain (13.0 %), while no other Member State contributed more than 10 % to the total in 2003 – see Table 7.16. Italy was the largest Member States in terms of employment, with 19.9 % of the EU-25 total, while Germany posted the second largest share (18.8 %). Cyprus, Spain, the Netherlands, Austria, Italy, Estonia and Luxembourg were the most specialised Member States in this activity, as this

Figure 7.7
Manufacture of structural metal products (NACE Group 28.1)
Breakdown of sectoral value added, 2003 (%)



(1) Not available.

(2) 2002.

Source: Eurostat (SBS)

sector's share of national, industrial value added was 2.4 % or more in each of these countries, compared with an EU-25 average of 1.9 %.

The pace at which output grew for structural metal products manufacturing between 1995 and 2005 was very similar to that for metals and metal products manufacturing as a whole. However, in 2004 and 2005 the output of structural metal products in the EU-25 was relatively unchanged, in contrast to the positive evolution recorded for metals and metal products manufacturing as a whole.

Table 7.16

Manufacture of structural metal products (NACE Group 28.1)**Value added and employment: ranking of the top 5 Member States, 2003**

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (7 173.2)	21.8	Italy (193.2)	19.9	Cyprus (3.6)	Spain (5.4)
2	Italy (6 265.5)	19.0	Germany (183.0)	18.8	Spain (3.4)	Cyprus (5.0)
3	United Kingdom (4 384.6)	13.3	Spain (148.3)	15.3	Netherlands (2.9)	Netherlands (4.6)
4	Spain (4 280.3)	13.0	United Kingdom (79.9)	8.2	Austria (2.9)	Luxembourg (4.5)
5	France (2 482.1)	7.5	Poland (62.7)	6.5	Italy (2.8)	Italy (3.9)

(1) Malta and Sweden, 2002; Greece, not available.

(2) Sweden, provisional; Malta, 2002; Greece, not available.

(3) Malta and Sweden, 2002; Greece and Ireland, not available.

(4) Sweden, provisional; Malta, 2002; Greece and Ireland, not available.

Source: Eurostat (SBS)

Table 7.17

Manufacture of structural metal products (NACE Group 28.1)**Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003**

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	4.1	73.2	26.8	33.9	26.3	128.9	10.4
1	Latvia (12.8)	Lithuania (84.0)	Luxembourg (38.0)	United Kingdom (54.9)	Denmark (42.9)	Latvia (214.4)	Latvia (18.9)
2	Lithuania (8.0)	Estonia (82.4)	Denmark (37.2)	Austria (53.4)	Luxembourg (38.9)	Lithuania (170.0)	United Kingdom (16.7)
3	Portugal (8.0)	Czech Republic (82.0)	Germany (31.3)	Denmark (51.0)	Belgium (38.6)	United Kingdom (165.1)	Austria (14.1)
4	Slovenia (7.0)	Poland (81.7)	Austria (29.1)	Netherlands (48.2)	Netherlands (37.2)	Poland (155.0)	Poland (13.1)
5	Hungary (6.5)	Latvia (81.0)	United Kingdom (28.6)	Finland (47.0)	Austria (35.9)	Austria (149.0)	Italy (12.6)

(1) Malta, Sweden and the United Kingdom, 2002; Belgium and Greece, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Malta and Sweden, 2002; Greece, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Malta and Sweden, 2002; Greece, not available.

Source: Eurostat (SBS)

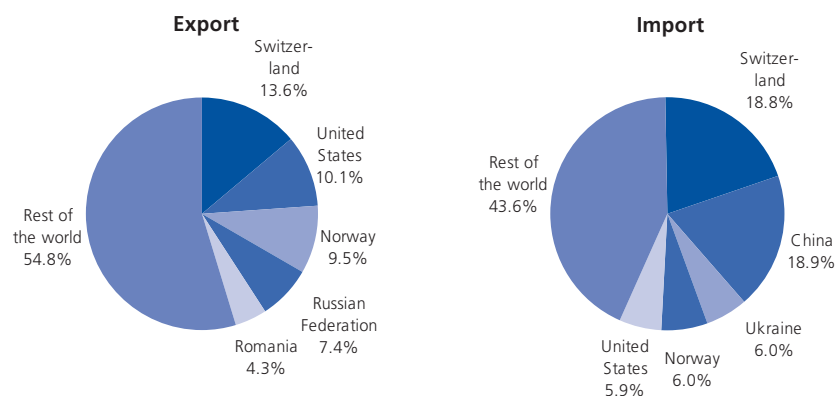
COSTS, PRODUCTIVITY AND PROFITABILITY

In 2003, both apparent labour productivity and average personnel cost were relatively low for the EU-25's structural metal products manufacturing sector, respectively EUR 33 900 per person employed (EUR 6 100 below the metals and metal products average) and EUR 26 300 per employee (EUR 3 700 lower) – see Table 7.17. These two relatively low ratios more or less balanced each other, and as a result, the wage adjusted labour productivity ratio was 128.9 %, very close to the average for metals and metal products manufacturing (130 %). The gross operating rate for the structural metal products manufacturing sector was 10.4 %, which was just over one percentage point above the equivalent rate for the whole of metals and metal products manufacturing.

EXTERNAL TRADE

The EU-25's exports of structural metal products (CPA Group 28.1) to non-member countries were valued at EUR 4.0 billion in 2005, generating a trade surplus of EUR 2.8 billion. Metal structures and parts of structures (CPA Class 28.11) accounted for the overwhelming share of trade activity in these products, some 90.8 % of

Figure 7.8

Structural metal products (CPA Group 28.1)**Share in extra-EU trade, 2005 (%)**

Source: Eurostat (Comext)

exports and 89.5 % of imports. Germany exported EUR 3.2 billion of structural metal products (intra- and extra-EU trade combined) and its trade surplus for these products was valued at EUR 1.8 billion in 2005, more than double the next largest trade surpluses that were recorded by Italy and Poland.

7.5: BOILERS, METAL CONTAINERS AND STEAM GENERATORS

This subchapter covers NACE Groups 28.2 and 28.3 together, which are referred to as the boilers, metal containers and steam generators manufacturing sector. The first of the groups covered includes the manufacture of metal tanks, reservoirs and containers, as well as central heating radiators and boilers, while the latter covers the manufacture of steam generators (except for central heating), for example, vapour generators, condensers or nuclear reactors.

The manufacture of boilers, containers and steam generators supplies various downstream sectors, most notably the construction (see Chapter 15) and energy (see Chapter 13) sectors.

STRUCTURAL PROFILE

In 2003, the boilers, metal containers and steam generators manufacturing sector (NACE Groups 28.2 and 28.3) generated some EUR 12.0 billion of value added in the EU-25, of which 30.7 % was created in France (the largest EU-25 producer), while Germany had the second highest level of output, accounting for almost one quarter (24.6 %) of the EU-25's value added. This contrasted with most of the other metals and metal products activities presented in Subchapters 7.1 to 7.7 where Germany was the largest producer in the EU – see Table 7.18. This sector accounted for a relatively small share (6.2 %) of the EU-25's metals and metal products (NACE Subsection DJ) value added, and a similar share (6.1 %) of its workforce, with approximately 290 000 persons employed manufacturing boilers, metal containers and steam generators in the EU-25.

A breakdown by activity shows that the two NACE groups that compose this subchapter were of similar size both in terms of value added and employment. Indeed, the manufacture of tanks, reservoirs, containers and central heating (NACE Group 28.2) posted EU-25 value added of EUR 6.2 billion and employed 150 000 persons in 2003, which was slightly higher than the contributions from the manufacture of steam generators (NACE Group 28.3) where EUR 6.0 billion of value added was generated by 145 500 persons employed.

The fastest expansion of output between 1995 and 2005 was recorded for the manufacture of steam generators where the EU-25's index of production grew on average by 2.4 % per annum, a faster pace than the average for metals and metal products manufacturing (1.5 %). In contrast, during the same period, output growth for tanks, reservoirs, containers and central heating was slower, averaging 0.5 % per annum.

Table 7.18

Manufacture of boilers, metal containers and steam generators (NACE Groups 28.2 and 28.3)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (1)	Highest share of national industrial employment (%) (2)
1	France (3 684.7)	30.7	France (90.9)	31.4	France (1.6)	France (2.2)
2	Germany (2 947.8)	24.6	Germany (52.1)	18.0	Czech Republic (1.1)	Belgium (1.5)
3	Italy (1 107.8)	9.2	Italy (23.5)	8.1	Belgium (1.0)	Finland (1.5)
4	United Kingdom (1 004.4)	8.4	Poland (23.3)	8.0	Finland (0.9)	Czech Republic (1.1)
5	Spain (700.6)	5.8	Spain (20.0)	6.9	Netherlands (0.8)	Austria (0.8)

(1) The Netherlands and Sweden, 2002; Denmark, Estonia, Greece, Ireland, Cyprus, Lithuania, Luxembourg and Malta, not available.

(2) Sweden, provisional; Denmark, Estonia, Greece, Ireland, Cyprus, Lithuania, Luxembourg and Malta, not available.

Source: Eurostat (SBS)

Table 7.19

Manufacture of boilers, metal containers and steam generators (NACE Groups 28.2 and 28.3)
Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (4)	Wage adjusted labour productivity (%) (4)	Gross operating rate (%) (4)
EU-25	2.8	69.9	30.1	41.0	34.0	121.0	7.0
1	Sweden (8.6)	Slovakia (90.4)	Spain (34.8)	Netherlands (86.7)	Netherlands (71.0)	Slovakia (300.6)	Latvia (19.7)
2	Hungary (7.7)	Hungary (82.8)	France (34.5)	Germany (56.6)	Germany (46.4)	Poland (180.9)	Poland (18.0)
3	Poland (5.7)	Czech Republic (81.2)	United Kingdom (34.5)	United Kingdom (56.4)	Austria (45.3)	Czech Republic (175.4)	Slovakia (16.3)
4	Czech Republic (5.4)	Italy (79.3)	Austria (33.0)	Belgium (54.2)	United Kingdom (44.0)	Latvia (170.6)	Czech Republic (14.2)
5	Italy (5.4)	Portugal (78.6)	Germany (31.3)	Austria (52.1)	Belgium (42.6)	Hungary (168.4)	Sweden (12.9)

(1) Latvia, the Netherlands, Sweden and the United Kingdom, 2002; Belgium, Denmark, Estonia, Greece, Ireland, Cyprus, Lithuania, Luxembourg and Malta, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Latvia, the Netherlands and Sweden, 2002; Denmark, Estonia, Greece, Ireland, Cyprus, Lithuania, Luxembourg and Malta, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) The Netherlands and Sweden, 2002; Denmark, Estonia, Greece, Ireland, Cyprus, Lithuania, Luxembourg and Malta, not available.

(4) Latvia, the Netherlands and Sweden, 2002; Denmark, Estonia, Greece, Ireland, Cyprus, Lithuania, Luxembourg and Malta, not available.

Source: Eurostat (SBS)

COSTS, PRODUCTIVITY AND PROFITABILITY

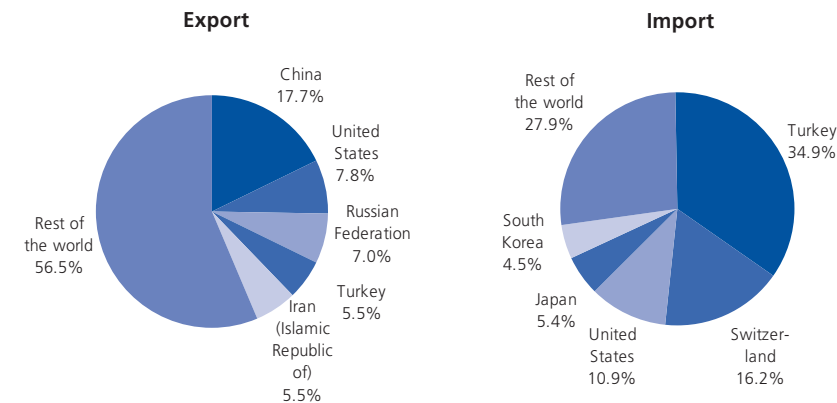
In 2003, the EU-25's boilers, metal containers and steam generators manufacturing sector had apparent labour productivity (EUR 41 000 per person employed) and average personnel costs (EUR 34 000 per employee) at a similar level to the metals and metal products manufacturing sector as a whole – see Table 7.19. These values resulted in a wage adjusted labour productivity ratio of 121 % for boilers, metal containers and steam generators manufacturing, showing that value added per person employed covered average personnel costs to a somewhat lesser extent than for metals and metal products manufacturing as a whole (130 %). The ratio of gross operating surplus to turnover (the gross operating rate) was 7.0 % for the boilers, metal containers and steam generators manufacturing sector, also lower than the metals and metal products average (9.5 %). The EU ⁽¹²⁾ average ratio of investment in tangible goods relative to total operating costs was 2.8 % for the boilers, metal containers and steam generators manufacturing sector, which was the lowest among the metals and metal products manufacturing sectors presented in Subchapters 7.1 to 7.7.

EXTERNAL TRADE

The EU-25 ran a trade surplus with non-member countries for boilers, metal containers and steam generators (CPA Groups 28.2 and 28.3), valued at EUR 3.5 billion, mainly coming from a particularly large surplus for steam generators (CPA Group 28.3) where exports of EUR 5.0 billion were more than ten times the value of imports (EUR 334.9 million). In 2005, exports of tanks, reservoirs, containers and central heating radiators and boilers (CPA Group 28.2) were valued 1.8 times as high as in 2000, which marked faster export growth than for boilers, metal containers and steam generators (where the expansion was 1.5 times as high). Among the Member States, Germany generated the largest trade surplus (intra- and extra-EU trade combined), valued at EUR 2.6 billion, more that twice the next largest trade surplus recorded in Italy (EUR 1.1 billion).

(12) EU average, 2003; Latvia, the Netherlands, Sweden and the United Kingdom, 2002; excluding Belgium, Denmark, Estonia, Greece, Ireland, Cyprus, Lithuania, Luxembourg and Malta.

Figure 7.9 Boilers, metal containers and steam generators (CPA Groups 28.2 and 28.3) Share in extra-EU trade, 2005 (%)



Source: Eurostat (Comext)

7.6: OTHER METAL PROCESSING

Together, NACE Groups 28.4 and 28.5 are referred to as other metal processing. Both activities concern the transformation of metals, with NACE Group 28.4 covering forging, pressing, stamping and roll forming of metal, while NACE Group 28.5 covers the treatment and coating of metal and general mechanical engineering (such as turning, milling, welding or planing).

According to Euroforge⁽¹³⁾, the main downstream activity for the EU-25's forging sector is the manufacture of cars, trucks and lorries, which consumes some 60 % of forged metal products.

STRUCTURAL PROFILE

The EU-25's other metal processing sector (NACE Groups 28.4 and 28.5) generated EUR 50.2 billion of value added in 2003, which makes it the largest of the activities covered in Subchapters 7.1 to 7.7, with a 25.9 % share of metals and metal products (NACE Subsection DJ) value added, and a 3.0 % share of industrial (NACE Sections C to E) value added. In employment terms, other metal processing was relatively larger, as its 1.3 million strong workforce accounted for 28.2 % of the metals and metal products manufacturing workforce, or 3.8 % of industrial employment. About three quarters of the EU-25's value added in the other metal processing sector came from the treatment and coating of metal and general mechanical engineering (NACE Group 28.5) in 2003, while the remaining share was generated by forging, pressing, stamping and roll forming of metal (NACE Group 28.4).

⁽¹³⁾ Euroforge (European committee for forging and pressing metal industries), more information at: <http://www.euroforge.org>.

Germany (23.7 %) and Italy (23.4 %) were the largest producers, in value added terms, as each generated almost a quarter of the EU-25's value added for other metal processing in 2003, followed by France (16.2 %) and the United Kingdom (12.4 %) - the only other Member States to report more than a 10 % share - see Table 7.20. In Italy as much as 5.3 % of industrial value added was generated in the other metal processing sector in 2003, which approached almost double the EU-25 average (3.0 %). To a lesser extent, France, Slovenia and Spain, with shares ranging from 3.5 % to 3.2 % of industrial value added were also relatively specialised in this activity.

There was little difference between the developments of the index of production between 1995 and 2005 for the two NACE groups that make-up the other metal processing sector. Indeed, output growth for forging, pressing, stamping and roll forming of metal averaged 3.5 % per annum for the EU-25, while the corresponding figure for the treatment and coating of metal and general mechanical engineering was 3.4 %. As such, between 1995 and 2005 both parts of this activity developed significantly faster than the average for metals and metal products manufacturing (1.5 % per annum).

COSTS, PRODUCTIVITY AND PROFITABILITY

In the EU-25's other metal processing sector, apparent labour productivity was EUR 37 400 per person employed in 2003, a relatively low value compared with the other activities that make-up metals and metal products manufacturing - see Table 7.21. However, EU-25 personnel costs for other metal processing manufacturing averaged EUR 29 400 per employee, which was also relatively low, and as a consequence the wage adjusted labour productivity ratio was 127.3 %, only slightly below the metals and metal products manufacturing average (130 %). The gross operating rate, one measure of profitability, stood at 12.3 % for other metal processing in the EU-25 in 2003, some 2.0 percentage points above the industrial average and the second highest rate among the activities within metals and metal products manufacturing. Compared with operating costs, investment in tangible goods were relatively important for the other metal processing sector, as this ratio stood at 6.1 % for the EU⁽¹⁴⁾ average based on available data, which was more than one percentage point above the industrial average. Personnel costs accounted almost for one third of total operating costs in the EU's⁽¹⁵⁾ other metal processing sector, the highest share among the activities covered by Subchapters 7.1 to 7.7.

⁽¹⁴⁾ EU average, 2003; Denmark, Latvia, Sweden and the United Kingdom, 2002; excluding Belgium, Estonia, Greece, Luxembourg and Malta.

⁽¹⁵⁾ EU average, 2003; Denmark and Sweden, 2002; excluding Estonia, Greece, Luxembourg and Malta.

Table 7.20

Forging, pressing, stamping and roll forming of metal; powder metallurgy; treatment and coating of metals; general mechanical engineering (NACE Groups 28.4 and 28.5)

Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (11 888.3)	23.7	Italy (300.3)	22.3	Italy (5.3)	Italy (6.1)
2	Italy (11 737.8)	23.4	Germany (272.4)	20.3	France (3.5)	France (4.8)
3	France (8 138.1)	16.2	France (200.9)	14.9	Slovenia (3.3)	Sweden (4.5)
4	United Kingdom (6 225.1)	12.4	United Kingdom (156.0)	11.6	Spain (3.2)	Slovenia (4.2)
5	Spain (4 021.4)	8.0	Spain (108.6)	8.1	Sweden (2.9)	United Kingdom (4.2)

(1) Denmark and Sweden, 2002; Estonia, Greece, Luxembourg and Malta, not available.

(2) Sweden, provisional; Denmark, 2002; Estonia, Greece, Luxembourg and Malta, not available.

(3) Denmark and Sweden, 2002; Estonia, Greece, Ireland, Luxembourg and Malta, not available.

(4) Sweden, provisional; Denmark, 2002; Estonia, Greece, Ireland, Luxembourg and Malta, not available.

Source: Eurostat (SBS)

Table 7.21

Forging, pressing, stamping and roll forming of metal; powder metallurgy; treatment and coating of metals; general mechanical engineering (NACE Groups 28.4 and 28.5)

Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	6.1	66.8	33.2	37.4	29.4	127.3	12.3
1	Hungary (12.1)	Poland (81.8)	United Kingdom (43.6)	Austria (57.5)	Netherlands (36.6)	Latvia (191.9)	Latvia (24.3)
2	Lithuania (11.4)	Hungary (80.4)	Denmark (41.4)	Belgium (47.1)	Austria (36.3)	Slovakia (166.3)	Austria (17.7)
3	Slovenia (11.1)	Slovenia (78.4)	Ireland (38.8)	Netherlands (46.5)	Belgium (36.2)	Austria (158.2)	Cyprus (17.4)
4	Denmark (10.1)	Lithuania (75.2)	Cyprus (38.5)	Finland (44.9)	Denmark (35.6)	Hungary (147.1)	Czech Republic (17.0)
5	Finland (9.1)	Czech Republic (75.2)	Finland (37.3)	Ireland (44.2)	France (34.8)	Czech Republic (142.0)	Italy (16.1)

(1) Denmark, Latvia, Sweden and the United Kingdom, 2002; Belgium, Estonia, Greece, Luxembourg and Malta, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Denmark and Sweden, 2002; Estonia, Greece, Luxembourg and Malta, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Denmark and Sweden, 2002; Estonia, Greece, Luxembourg and Malta, not available.

Source: Eurostat (SBS)

7.7: MISCELLANEOUS FABRICATED METAL PRODUCTS

Together, NACE Groups 28.6 and 28.7 are referred to as miscellaneous fabricated metal products manufacturing. These two activities concern the manufacture of finished products for use in other industrial and construction activities, as well as final consumer markets. NACE Group 28.6 covers the manufacture of cutlery, tools and general hardware, such as locks and hinges, while NACE Group 28.7 covers the manufacture of other fabricated metal products, such as metal drums, light metal packaging, wire products, fasteners, baths and sinks, and household articles.

Most of the steel for packaging is used in food and beverage manufacturing activities. In contrast to most of the metal products that are then used by downstream industrial sectors, the output of manufacturers within these activities often finds its way to end users (restaurants and catering enterprises) and households without further processing, in the form of products such as cutlery or tools.

STRUCTURAL PROFILE

In 2003, EU-25 miscellaneous fabricated metal products manufacturing (NACE Groups 28.6 and 28.7) accounted for 23.2 % of the metals and metal products manufacturing sector (NACE Subsection DJ) value added, generating EUR 45.0 billion of added value, while employing 23.6 % of the metals and metal products manufacturing workforce, some 1.1 million persons. Miscellaneous fabricated metal products manufacturing was therefore the second largest of the activities covered by Subchapters 7.1 to 7.7, both in terms of value added and employment, with shares that were just below those of other metal processing (see Subchapter 7.6). The manufacture of other fabricated metal products (NACE Group 28.7) accounted for about 60 % of the EU-25's value added within miscellaneous fabricated metal products manufacturing in 2003, with the remaining share being generated by the manufacture of cutlery, tools and general hardware (NACE Group 28.6).

About one third (33.5 %) of the EU-25's value added for miscellaneous fabricated metal products manufacturing was generated by Germany (EUR 15.1 billion), far ahead of the next largest producer, namely Italy, that accounted for 17.0 % of the total (EUR 7.6 billion) – see Table 7.22. The United Kingdom (12.2 %) and France (10.0 %) were respectively the third and fourth largest producers in the EU-25.

The average share of miscellaneous fabricated metal products manufacturing in industrial (NACE Sections C to E) value added in the EU-25 was 2.7 %. Slovenia was particularly specialised in this activity as some 5.6 % of national, industrial value added was generated in this sector. To a lesser extent, the Czech Republic, Italy, Germany, Austria and Denmark were also relatively specialised in value added terms.

Between 1995 and 2005 there was a more rapid expansion to the EU-25's index of production for the manufacture of cutlery, tools and general hardware (NACE Group 28.6) than for the manufacture of other fabricated metal products (NACE Group 28.7), with average growth of 1.9 % compared with 0.1 % per annum. Moreover, in recent years, while the index of production for other fabricated metal products contracted year on year between 2001 and 2003 and also in 2005, the output of cutlery, tools and general hardware expanded during the period 2000 to 2005, with the exception of 2003 (-2.0 %).

Table 7.22

Manufacture of cutlery, tools and general hardware; manufacture of other fabricated metal products (NACE Groups 28.6 and 28.7)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (15 074.3)	33.5	Germany (285.4)	25.4	Slovenia (5.6)	Slovenia (6.1)
2	Italy (7 663.4)	17.0	Italy (190.6)	17.0	Czech Republic (3.6)	Czech Republic (5.1)
3	United Kingdom (5 477.4)	12.2	United Kingdom (103.6)	9.2	Italy (3.4)	Italy (3.9)
4	France (4 499.7)	10.0	France (99.4)	8.8	Germany (3.3)	Denmark (3.8)
5	Spain (3 174.0)	7.1	Poland (81.0)	7.2	Austria (3.1)	Germany (3.7)

(1) Lithuania, the Netherlands and Sweden, 2002; Greece, Cyprus, Luxembourg and Malta, not available.

(2) Sweden, provisional; Lithuania, 2002; Greece, Cyprus, Luxembourg and Malta, not available.

(3) Lithuania, the Netherlands and Sweden, 2002; Greece, Ireland, Cyprus, Luxembourg and Malta, not available.

(4) Sweden, provisional; Lithuania, 2002; Greece, Ireland, Cyprus, Luxembourg and Malta, not available.

Source: Eurostat (SBS)

Table 7.23

Production value of selected miscellaneous metal products (CPA Groups 28.6 and 28.7), EU-25, 2004 (EUR million)

	Prodcom code	
Base metal motor vehicle locks	28.63.11.50	1 781
Base metal mountings, fittings and similar articles suitable for buildings (excl. hinges, castors, locks, keys, spy holes fitted with optical elements and key operated door bolts)	28.63.14.40	3 608
Cans used for preserving food and drink of iron or steel, < 50 l, food cans	28.72.11.33	3 025
Welded grill, netting and fencing manufactured from wire of a diameter of ≥3mm, with mesh size of ≥100cm² incl. with a backing of paper as used in cementing and plastering	28.73.13.20	2 173

Source: Eurostat (PRODCOM)

COSTS, PRODUCTIVITY AND PROFITABILITY

Apparent labour productivity was EUR 40 000 per person employed in EU-25's miscellaneous fabricated metal products manufacturing sector in 2003, and personnel costs per employee were EUR 29 600 – see Table 7.24. Both of these indicators had values that were similar to those recorded for the whole of metals and metal products manufacturing. The wage adjusted labour productivity ratio was 136 %, which was 6 percentage points above the metals and metal products manufacturing average, but 16 percentage points below the industrial (NACE Sections C to E) average. EU-25 miscellaneous metal products manufacturing reported a relatively high level of profitability, as measured by the gross operating rate, which stood at 13.0 % in 2003 (while the average for the whole of metals and metal products manufacturing was 9.5 % for comparison).

Table 7.24

Manufacture of cutlery, tools and general hardware; manufacture of other fabricated metal products (NACE Groups 28.6 and 28.7)
Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (4)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	4.7	71.2	28.8	40.0	29.6	136.0	13.0
1	Latvia (12.8)	Poland (83.7)	Denmark (34.7)	Belgium (55.8)	Belgium (43.4)	United Kingdom (180.2)	United Kingdom (21.4)
2	Lithuania (11.6)	Latvia (80.6)	Germany (34.4)	Austria (55.6)	Germany (40.4)	Poland (172.7)	Czech Republic (19.3)
3	Hungary (9.5)	Czech Republic (80.5)	Austria (32.6)	Netherlands (53.4)	Denmark (38.9)	Latvia (170.0)	Finland (16.7)
4	Czech Republic (7.3)	Slovakia (80.0)	Finland (32.6)	United Kingdom (52.9)	Netherlands (38.8)	Hungary (154.5)	Poland (15.5)
5	Portugal (7.2)	Hungary (79.3)	Ireland (31.1)	Germany (52.8)	Austria (38.4)	Finland (151.9)	Austria (14.8)

(1) France, Lithuania, the Netherlands and Sweden, 2002; Belgium, Greece, Cyprus, Luxembourg and Malta, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Lithuania, the Netherlands and Sweden, 2002; Greece, Cyprus, Luxembourg and Malta, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Lithuania, the Netherlands and Sweden, 2002; Greece, Cyprus, Luxembourg and Malta, not available; EU-25, rounded estimate based on non-confidential data.

(4) Lithuania, the Netherlands and Sweden, 2002; Greece, Cyprus, Luxembourg and Malta, not available.

Source: Eurostat (SBS)

Table 7.25

Cutlery, tools and general hardware, and other fabricated metal products (CPA Groups 28.6 and 28.7)
External trade, EU-25, 2005

	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Cutlery, tools and general hardware, and other fabricated metal products	17 537	1.8	15 218	1.4	2 320	115.2
Cutlery, tools and general hardware	7 640	0.8	6 313	0.6	1 327	121.0
Other fabricated metal products	9 897	1.0	8 905	0.8	993	111.2

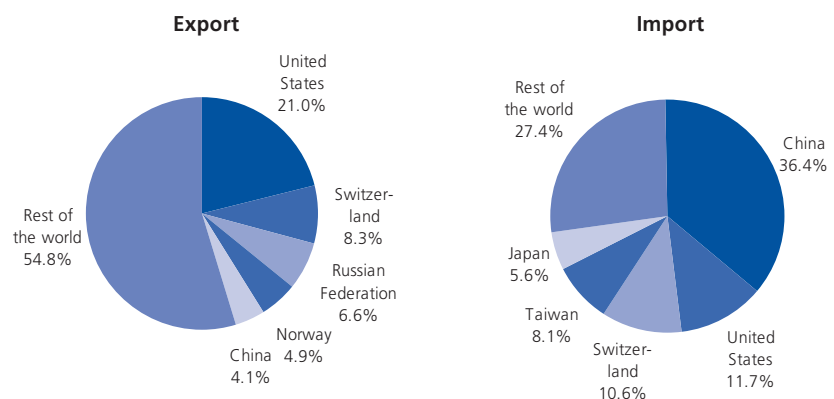
Source: Eurostat (Comext)

EXTERNAL TRADE

The EU-25 ran a trade surplus with non-member countries of EUR 2.3 billion for cutlery, tools and general hardware, and other fabricated metal products (CPA Groups 28.6 and 28.7) in 2005 – see Table 7.25. Of these two CPA groups, the largest trade surplus was recorded for cutlery, tools and general hardware (CPA Group 28.6) – some EUR 1.3 billion – compared with a surplus of EUR 1.0 billion for other fabricated metal products (CPA Group 28.7). Moreover, it is interesting to note that the trade surplus for cutlery, tools and general hardware had grown to be nearly five times as high as it was in 2000 by 2005, whereas for other fabricated metal products there was almost no change in the surplus (1.1 times as high). In contrast to the majority of Member States that recorded trade deficits for both CPA Groups 28.6 and 28.7, Germany ran a surplus of EUR 4.1 billion for cutlery, tools and general hardware, while Italy ran a surplus of EUR 4.2 billion for other fabricated metal products.

Figure 7.10

Cutlery, tools and general hardware, and other fabricated metal products (CPA Groups 28.6 and 28.7)
Share in extra-EU trade, 2005 (%)



Source: Eurostat (Comext)

Table 7.26

Manufacture of basic metals (NACE Division 27)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million) (2)	240 000	13 256	4 824	1 120	62 952	20	:	20 245	28 709	385 39 356	:	232	31 8 247	1 982	:	:	:
Production (EUR million)	:	12 946	4 694	1 106	58 803	20	:	20 216	27 646	369 38 844	:	237	29 2 159	1 864	:	:	:
Value added at factor cost (EUR million) (2)	54 000	2 787	1 043	312	16 659	2	:	4 447	6 200	110 7 346	:	73	7 459	253	:	:	:
Gross operating surplus (EUR million) (2)	16 000	580	469	69	4 232	1	:	1 645	1 373	32 2 595	:	53	1 60	26	:	:	:
Purchases of goods and services (EUR million)	:	10 333	3 930	849	46 188	18	:	16 102	22 103	275 32 495	:	163	23 7 808	1 721	:	:	:
Gross investment in tangible goods (EUR million) (3)	:	457	148	67	2 401	1	:	953	972	21 1 994	:	14	1 122	83	:	:	:
Number of persons employed (thousands) (2)	1 100	36	61	6	259	0	:	76	118	2 138	:	3	1 7	21	:	:	:
Personnel costs (EUR million) (2)	38 000	2 207	573	244	12 427	1	:	2 802	4 827	78 4 751	:	21	6 399	227	:	:	:
App. labour productivity (EUR thous./pers. emp.) (2)	51.0	76.7	17.1	55.0	64.3	7.6	:	58.1	52.6	51.5 53.1	:	21.0	6.3 66.2	12.0	:	:	:
Average personnel costs (EUR thous./employee) (2)	37.0	61.3	9.5	43.3	48.2	4.1	:	36.9	41.0	37.3 35.8	:	6.0	5.4 57.6	11.0	:	:	:
Wage adjusted labour productivity (%) (2)	140.0	125.1	179.9	126.9	133.4	188.0	:	157.6	128.4	138.2 148.1	:	352.9	116.1 115.0	109.7	:	:	:
Gross operating rate (%) (2)	6.5	4.4	9.7	6.1	6.7	5.2	:	8.1	4.8	8.2 6.6	:	22.7	3.4 0.7	1.3	:	:	:
Investment per person employed (EUR thousand) (3)	:	12.5	2.4	11.8	9.3	2.5	:	12.5	8.2	9.8 14.4	:	3.9	0.8 17.5	4.0	:	:	:
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million) (4)	5 440	7 688	4 878	1 649	854	2 455	5 623	8 402	18 384	997	:	2 513	:	:	:	8 912	:
Production (EUR million) (4)	5 410	7 597	4 942	1 587	842	2 382	5 438	8 410	17 779	1 043	:	2 593	:	:	:	5 122	:
Value added at factor cost (EUR million) (5)	1 608	2 377	966	349	222	586	1 281	2 519	3 752	123	:	527	:	:	:	1 328	:
Gross operating surplus (EUR million) (5)	522	840	397	156	83	318	557	892	395	20	:	227	:	:	:	629	:
Purchases of goods and services (EUR million) (4)	3 863	5 559	4 072	1 310	643	1 849	4 523	5 944	14 671	967	:	2 215	:	:	:	7 631	:
Gross investment in tangible goods (EUR million) (4)	243	536	118	85	77	161	323	390	506	121	:	253	:	:	:	421	:
Number of persons employed (thousands) (4)	22	32	68	11	8	30	16	37	89	23	:	80	:	:	:	13	:
Personnel costs (EUR million) (5)	1 086	1 536	569	193	139	268	722	1 627	3 357	103	:	300	:	:	:	700	:
App. labour productivity (EUR thous./pers. emp.) (5)	74.4	73.6	14.3	30.7	26.9	19.8	78.6	67.7	42.0	5.2	:	6.6	:	:	:	103.7	:
Average personnel costs (EUR thous./employee) (5)	50.3	47.6	8.6	17.2	17.0	9.1	44.3	43.9	38.0	4.4	:	3.8	:	:	:	54.6	:
Wage adjusted labour productivity (%) (5)	148.1	154.4	166.5	178.2	158.6	218.8	177.5	154.4	110.6	118.0	:	175.1	:	:	:	189.8	:
Gross operating rate (%) (5)	9.6	10.9	8.1	9.4	9.7	13.0	9.9	10.7	2.1	2.0	:	9.0	:	:	:	7.1	:
Investment per person employed (EUR thousand) (4)	11.3	16.6	1.7	7.4	9.4	5.4	19.8	10.7	5.7	5.2	:	3.2	:	:	:	32.8	:

(1) Hungary, 2002. (2) EU-25, rounded estimate based on non-confidential data. (3) Belgium, 2002. (4) Sweden, provisional. (5) Sweden, 2002.
Source: Eurostat (SBS)

Table 7.27

Manufacture of fabricated metal products, except machinery and equipment (NACE Division 28)
Main indicators, 2003

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million)	371 055	9 655	5 654	5 117	91 194	397	:	33 346	52 702	1 520	75 415	:	156	241	669	2 620	:
Production (EUR million)	:	9 360	5 586	4 931	87 665	351	:	32 413	50 915	1 461	76 004	:	150	235	633	2 247	:
Value added at factor cost (EUR million)	140 796	3 249	1 901	2 252	37 084	109	:	12 176	18 805	550	26 775	:	53	74	203	734	:
Gross operating surplus (EUR million)	42 548	889	891	534	9 075	42	:	3 782	3 191	143	10 936	:	25	26	50	281	:
Purchases of goods and services (EUR million)	:	6 331	3 955	2 936	53 805	287	:	21 809	33 195	967	49 357	:	110	175	447	1 882	:
Gross investment in tangible goods (EUR million) (1)	:	518	328	267	3 306	15	:	1 706	1 859	44	3 898	:	17	22	18	207	:
Number of persons employed (thousands) (2)	3 730	66	169	45	793	10	:	358	449	13	708	:	8	13	4	72	:
Personnel costs (EUR million)	98 247	2 360	1 011	1 717	28 009	67	:	8 395	15 613	407	15 838	:	28	48	152	454	:
App. labour productivity (EUR thous./pers. emp.) (2)	37.7	49.4	11.3	50.2	46.8	10.5	:	34.0	41.9	42.6	37.8	:	6.6	5.5	47.4	10.2	:
Average personnel costs (EUR thous./employee) (2)	29.1	39.3	7.9	40.1	36.9	6.5	:	25.3	35.3	32.2	28.2	:	3.5	3.7	36.4	6.8	:
Wage adjusted labour productivity (%) (2)	130.0	125.6	143.1	125.3	126.9	160.3	:	134.3	118.7	132.5	134.2	:	187.3	150.1	130.1	150.7	:
Gross operating rate (%)	11.5	9.2	15.8	10.4	10.0	10.6	:	11.3	6.1	9.4	14.5	:	16.0	10.6	7.5	10.7	:
Investment per person employed (EUR thousand) (1)	:	8.3	1.9	6.0	4.2	1.5	:	4.8	4.0	3.4	5.5	:	2.1	1.7	4.3	2.9	:
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million) (3)	14 660	9 031	7 718	3 969	1 975	937	5 115	9 313	37 584	451	:	1 158	:	:	:	2 413	:
Production (EUR million) (3)	14 054	8 630	7 188	3 930	1 818	888	4 966	9 048	35 943	390	:	1 114	:	:	:	2 283	:
Value added at factor cost (EUR million) (4)	4 929	3 774	2 312	1 360	654	272	1 946	3 598	17 092	99	:	350	:	:	:	969	:
Gross operating surplus (EUR million) (4)	1 347	1 298	1 136	443	231	99	579	933	6 246	40	:	129	:	:	:	186	:
Purchases of goods and services (EUR million) (3)	9 791	5 529	5 403	2 661	1 328	680	3 208	5 428	20 503	369	:	909	:	:	:	1 463	:
Gross investment in tangible goods (EUR million) (3)	425	442	326	253	144	43	246	463	1 425	44	:	118	:	:	:	63	:
Number of persons employed (thousands) (3)	95	69	220	80	33	31	42	79	357	35	:	92	:	:	:	19	:
Personnel costs (EUR million) (4)	3 582	2 477	1 176	917	423	173	1 383	2 666	10 845	59	:	221	:	:	:	783	:
App. labour productivity (EUR thous./pers. emp.) (4)	51.6	55.0	10.5	17.0	20.1	8.8	46.9	45.6	47.8	2.8	:	3.8	:	:	:	52.1	:
Average personnel costs (EUR thous./employee) (4)	39.4	37.6	6.6	12.6	14.4	5.6	34.3	35.9	32.0	1.9	:	2.4	:	:	:	42.4	:
Wage adjusted labour productivity (%) (4)	131.1	146.1	159.2	134.9	139.7	156.2	136.8	126.9	149.3	151.5	:	156.3	:	:	:	123.0	:
Gross operating rate (%) (4)	9.2	14.4	14.7	11.2	11.7	10.5	11.3	10.1	16.6	8.9	:	11.2	:	:	:	7.7	:
Investment per person employed (EUR thousand) (3)	4.5	6.4	1.5	3.2	4.4	1.4	5.9	5.9	4.0	1.3	:	1.3	:	:	:	3.4	:

(1) Belgium and France, 2002. (2) EU-25, rounded estimate based on non-confidential data. (3) Sweden, provisional. (4) Sweden, 2002.
Source: Eurostat (SBS)

Machinery and equipment



Machinery and equipment manufacturing plays a key role in the EU economy as supplier of capital goods for other sectors, therefore influencing greatly those sectors' potential to increase their productivity. Machinery and tools produced within the machinery and equipment manufacturing sector cover items for both general use and specific use, such as agricultural, industrial or construction process machinery. The sector is very sensitive to the overall levels of investment, primarily in the EU, and more generally in the global economy. The sector tends to flourish when there are high levels of investment, which is usually associated with a stable macro-economic environment, when downstream customers invest as a result of an encouraging overall business climate.

The sector of machinery and equipment manufacturing is regulated by some important pieces of Community legislation such as the so-called machinery Directive ⁽¹⁾ of the European Parliament and Council that provides the regulatory basis for the harmonisation of health and safety requirements across the EU. It covers machinery for professional use and also machinery sold to consumers for domestic use. The European Parliament and Council Directive on noise emissions ⁽²⁾ sets out both noise limits and labelling requirements for a number of types of machines intended for use outdoors. With a view to progressively reducing permitted noise limits, the directive has been introduced in two phases: the first stage became mandatory on 3 January 2002; the second came into force at the beginning of 2006. Finally, the European Parliament and Council Directive 2005/32/EC on the eco-design of Energy-using Products (EuP), such as electrical and electronic devices or heating equipment aims to make the design of products such as hairdryers, computers, or fridges more environmentally-friendly (for example, with regard to energy consumption).

STRUCTURAL PROFILE

With EUR 163.5 billion of value added in 2003, machinery and equipment manufacturing (NACE Subsection DK) represented 9.6 % of total industrial (NACE Sections C to E) value added, while there were 3.5 million persons employed in this sector, which corresponded to 9.9 % of the industrial workforce – see Table 8.1.

Within the subchapters that follow, industrial processing machinery (NACE Groups 29.2, 29.4 and 29.5, all included in Subchapter 8.2) was the largest in terms of wealth creation, accounting for 64.2 % of the added value generated in the EU-25's machinery and equipment manufacturing sector. The next largest subsector was that of power machinery manufacturing (NACE Group 29.1, see Subchapter 8.1), that generated more than one fifth of machinery equipment manufacturing value added.

Germany alone contributed 37.7 % of the EU-25's value added in machinery and equipment manufacturing in 2003 – see Table 8.2. This was the second highest proportion of EU-25 value added accounted for by Germany among the industrial NACE subsections, behind the manufacture of transport equipment (NACE Subsection DM). The next largest Member States in this sector were Italy (17.0 % of EU-25 value added) and the United Kingdom (10.2 %), while no other Member State ⁽³⁾ generated a double-digit share of EU-25 value added.

⁽³⁾ Greece and Malta, not available.

This chapter covers NACE Subsection DK (Division 29), in other words all mechanical machinery and equipment, except for transport equipment. This sector provides equipment for use in many mining, manufacturing, energy and construction sectors, as well as producing domestic appliances. Furthermore, the machinery and equipment manufacturing sector covers weapons and ammunition, whether for military or sporting uses, including some military vehicles such as tanks, but not military aircraft or warships (which are classified under the manufacture of transport equipment – see Chapter 10).

NACE

- 29: manufacture of machinery and equipment n.e.c.;
- 29.1: manufacture of machinery for the production and use of mechanical power, except aircraft, vehicle and cycle engines;
- 29.2: manufacture of other general purpose machinery;
- 29.3: manufacture of agricultural and forestry machinery;
- 29.4: manufacture of machine-tools;
- 29.5: manufacture of other special purpose machinery;
- 29.6: manufacture of weapons and ammunition;
- 29.7: manufacture of domestic appliances n.e.c.

⁽¹⁾ Directive 98/37/EC of 22 June 1998.

⁽²⁾ Directive 2000/14/EC of 8 May 2000.

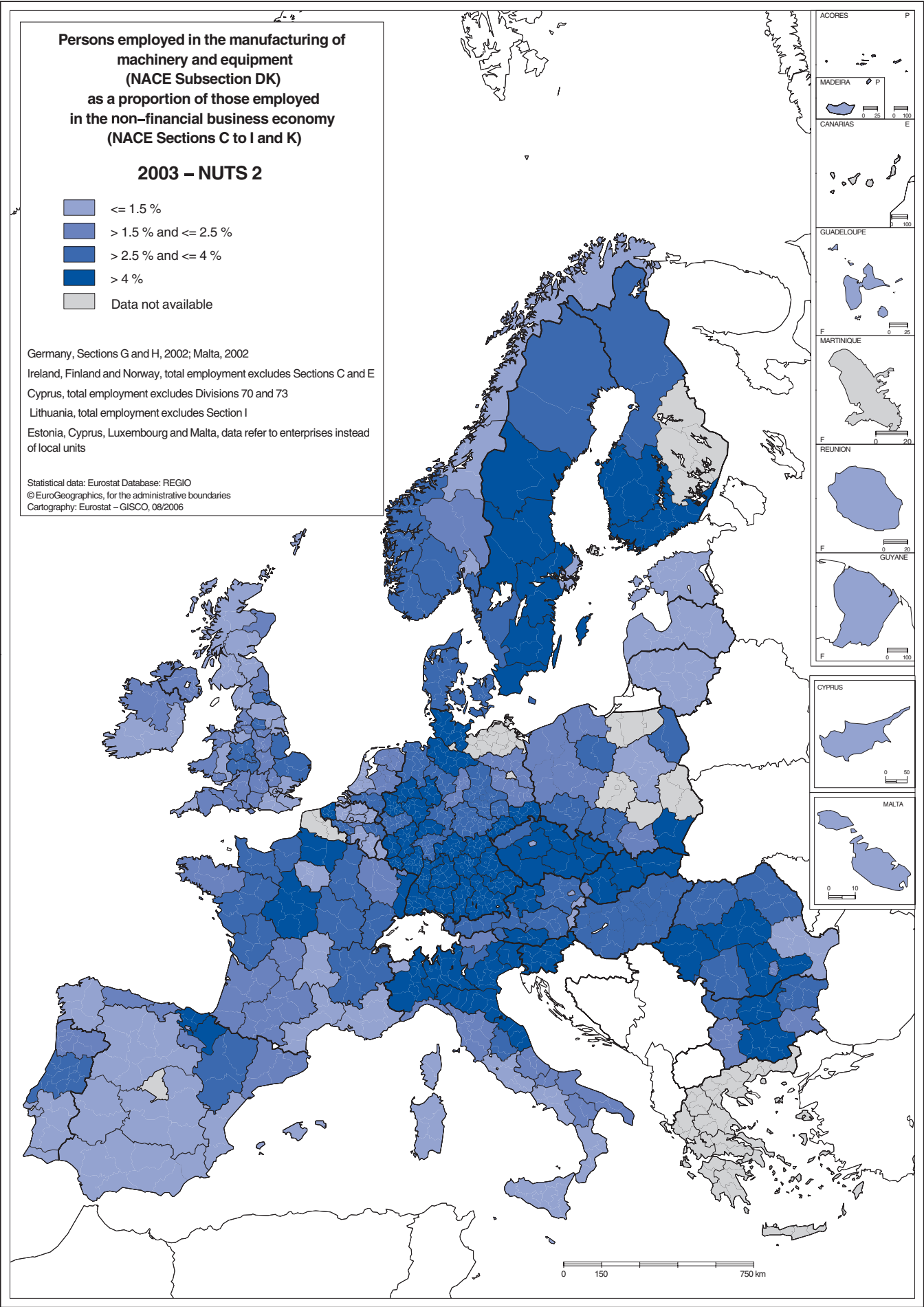


Table 8.1

Manufacture of machinery and equipment n.e.c. (NACE Subsection DK)
Structural profile, EU-25, 2003

	Value added (EUR million)	Share of industrial value added (%)	Number of persons employed (thousands)	Share of industrial employment (%)
Manufacture of machinery and equipment n.e.c.	163 515	9.6	3 475	9.9
Manufacture of power machinery (1)	34 600	2.0	663	1.9
Manufacture of industrial processing machinery (2)	105 000	6.2	2 260	6.4
Manufacture of agricultural and forestry machinery (3)	7 876	0.5	200	0.6
Manufacture of arms and ammunition	3 517	0.2	70	0.2
Manufacture of domestic appliances n.e.c. (2)	12 600	0.7	270	0.8

(1) Value added and related share, rounded estimates based on non-confidential data.

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

(3) Number of persons employed and related share, rounded estimates based on non-confidential data.

Source: Eurostat (SBS)

Table 8.2

Manufacture of machinery and equipment n.e.c. (NACE Subsection DK)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (61 574.3)	37.7	Germany (1 072.2)	30.9	Germany (13.6)	Germany (14.0)
2	Italy (27 839.8)	17.0	Italy (585.4)	16.8	Italy (12.5)	Denmark (14.0)
3	United Kingdom (16 660.2)	10.2	France (318.1)	9.2	Sweden (12.3)	Finland (13.1)
4	France (16 258.0)	9.9	United Kingdom (304.0)	8.7	Austria (11.7)	Sweden (12.6)
5	Spain (7 912.0)	4.8	Spain (193.5)	5.6	Denmark (11.1)	Austria (12.2)

(1) Malta and Sweden, 2002; Greece, not available.

(2) Sweden, provisional; Malta, 2002; Greece, not available.

(3) Malta and Sweden, 2002; Greece and Ireland, not available.

(4) Sweden, provisional; Malta, 2002; Greece and Ireland, not available.

Source: Eurostat (SBS)

With the exception of the manufacture of arms and ammunition (NACE Group 29.6, see Subchapter 8.4), Germany was the largest manufacturer among the Member States in value added terms for each of the machinery and equipment manufacturing subsectors. Its highest contribution was in the manufacture of power machinery (NACE Group 29.1), where Germany accounted for 42.0 % of the EU-25's value added. Germany was also the most specialised Member State in the manufacture of machinery and equipment in terms of this sector's share of industrial value added: indeed, machinery and equipment manufacturing accounted for 13.6 % of German industrial value added. Italy was also relatively specialised in machinery and equipment manufacturing, as value added from this activity contributed 12.5 % to the Italian industrial total. In 2003, other Member States that were relatively specialised in machinery and equipment manufacturing included Austria (11.7 % of industrial value added) and Denmark (11.1 %), as was Sweden in 2002 (12.3 %).

The regional specialisation in machinery and equipment manufacturing in employment terms is shown on the map on page 152. The top seven most specialised regions (at the level

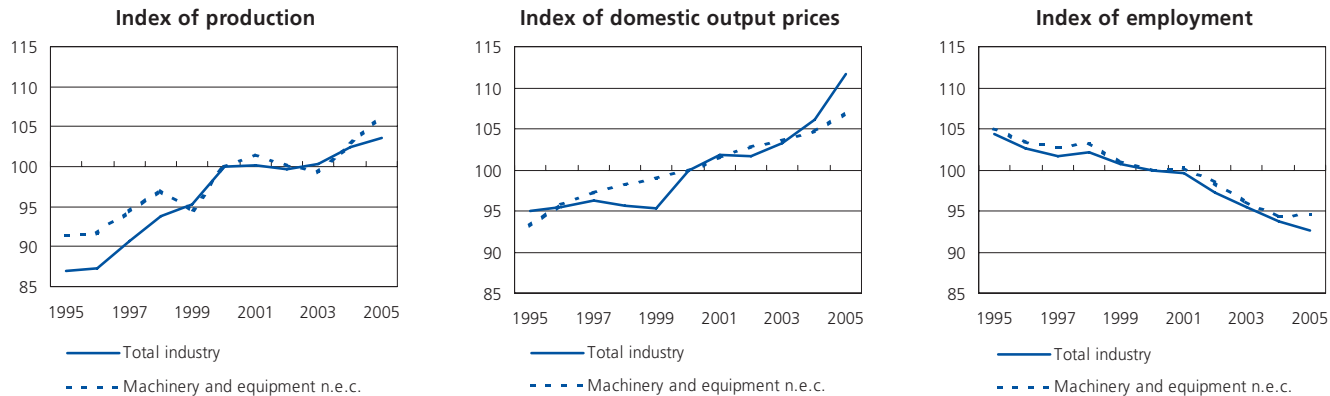
of detail shown in the map) were all in Germany, while several regions in the Czech Republic, Italy and Sweden were also particularly specialised in this sector.

Annual short-term statistics show that over the years 1995 to 2005, the EU-25's production index for machinery and equipment manufacturing generally recorded an upward trend, similar to that for industry as a whole. However, during the years 1999 and 2003 the production index of machinery and equipment fell by 2.5 % and 0.8 % respectively (compared with the previous year) in contrast to overall growth for industrial output during these years. The average growth rate for the index of production in the EU-25's machinery and equipment manufacturing activity was 1.5 % per annum over the period 1995 to 2005, compared with an industrial average of 1.8 %. In more recent years, output expanded by 3.5 % in both 2004 and 2005 (compared with the previous year), a faster rhythm to that recorded for the whole of the industrial economy. Among the NACE groups that make up the manufacture of machinery and equipment, the manufacture of agricultural and forestry machinery (NACE Group 29.3) recorded the fastest average annual growth for

the production index (2.1 % per annum) from 1995 to 2005.

The index of domestic output prices grew systematically from one year to the next in the EU-25's machinery and equipment manufacturing activity from 1995 to 2005, in contrast to overall industrial prices that posted some falls over the same period of time, as shown in Figure 8.1. Nevertheless, the average growth rate of domestic output prices in the EU-25 was 1.4 % per annum from 1995 to 2005 for the manufacture of machinery and equipment, which was slightly lower than the rate of price increases for total industry, which averaged 1.6 % per annum. Over the same period, the fastest price increases among the NACE groups that compose the manufacture of machinery and equipment were recorded for the manufacture of agricultural and forestry machinery, while the lowest price increases were registered for the manufacture of domestic appliances (NACE Group 29.7), with average annual growth rates of 1.9 % and 0.5 % per annum respectively; note that no data is available for price developments of arms and ammunitions (NACE Group 29.6).

Figure 8.1
Manufacture of machinery and equipment n.e.c. (NACE Subsection DK)
Evolution of main indicators, EU-25 (2000=100)



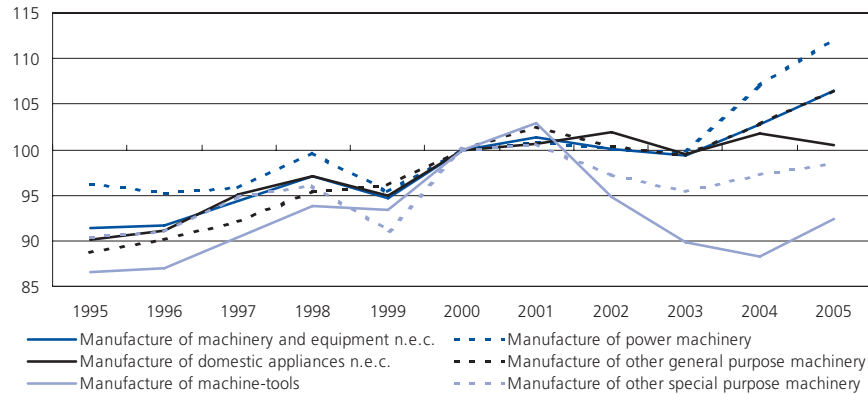
Source: Eurostat (STS)

Turning to the index of employment, from 1955 to 2005 the reduction in the number of persons employed was slightly faster for the manufacture of machinery and equipment (-1.0 % per annum, on average) than for industry as a whole (-0.8 %). More recently, employment in the machinery and equipment sector appeared to stabilise, as the number of persons employed rose by 0.1 % in the EU-25 in 2005 (compared with 2004).

Turning to an analysis of wealth generated by the EU-25's machinery and equipment manufacturing sector by enterprise size class, half (49.7 %) of the value added generated in this sector in 2003 came from large enterprise (with 250 or more persons employed), a somewhat lower proportion than the industrial average (57.6 %) – see Figure 8.3. Medium-sized enterprises (with 50 to 249 persons employed) generated 27.3 % of value added in the machinery and equipment sector, more than their contribution to industry as a whole (20.7 %).

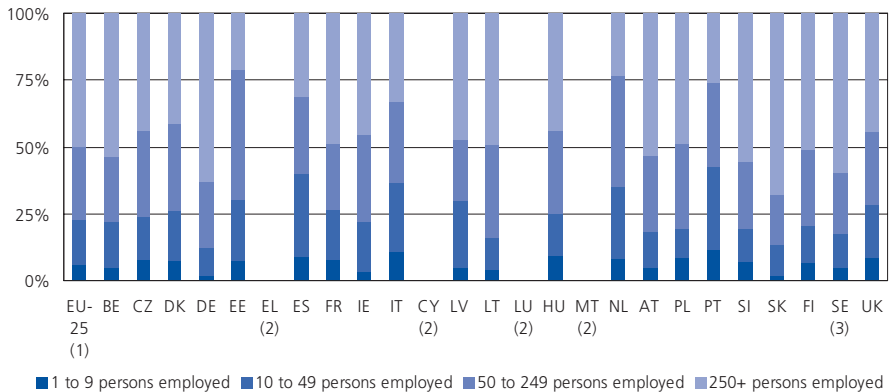
This relatively high level of importance for medium-sized enterprises was re-enforced in terms of employment, as more than one quarter (28.7 %) of the EU-25's machinery and equipment workforce were employed by medium-sized enterprises in 2003, some 6.6 percentage points above the industrial average.

Figure 8.2
Manufacture of machinery and equipment n.e.c. (NACE Subsection DK)
Production index, EU-25 (2000=100) (1)



(1) Only the five largest NACE groups of NACE Division 29 (in terms of gross value added) are shown.
Source: Eurostat (STS)

Figure 8.3
Manufacture of machinery and equipment n.e.c. (NACE Subsection DK)
Share of value added by enterprise size class, 2003 (%)



(1) Rounded estimates based on non-confidential data, except for 10 to 49 persons employed.
(2) Not available.
(3) 2002.
Source: Eurostat (SBS)

Table 8.3

Manufacture of machinery and equipment n.e.c. (NACE Subsection DK)
Labour force characteristics, 2005

	Male		Full-time		Breakdown by age (% share of total)		
	Proportion of those employed (%)	Index (industry=100)	Proportion of those employed (%)	Index (industry=100)	< 30 years	30-49 years	50+ years (1)
EU-25	82.2	115.3	94.3	102.2	20.5	55.3	24.1
BE	84.1	111.0	90.9	102.1	23.7	57.0	19.3
CZ	77.6	120.5	98.3	100.8	21.0	48.6	30.4
DK	80.3	115.4	93.2	103.6	15.1	60.9	24.0
DE	83.1	114.6	93.2	105.3	19.8	55.0	25.2
EE	84.8	152.2	100.0	102.5	:	51.2	50.9
EL	90.2	121.6	99.0	100.9	24.2	52.2	23.6
ES	85.6	113.8	96.5	101.3	26.8	50.1	23.1
FR	83.2	116.5	94.7	100.8	20.1	57.7	22.2
IE	84.3	119.4	96.1	101.5	28.8	50.9	:
IT	80.4	112.5	95.3	102.1	21.1	61.2	17.7
CY	80.4	116.3	92.7	98.9	:	:	:
LV	71.9	122.6	95.6	99.1	:	58.6	30.2
LT	84.0	157.7	100.0	102.2	:	60.8	37.4
LU	83.6	102.5	98.4	104.9	:	60.6	:
HU	81.9	131.3	97.9	100.7	21.8	47.1	31.1
MT	:	:	:	:	:	:	:
NL	88.6	114.5	88.4	120.9	16.5	59.5	24.0
AT	87.2	116.7	93.7	104.1	27.3	56.0	16.8
PL	82.1	119.0	97.3	101.1	18.1	58.1	23.8
PT	82.6	139.4	99.1	102.1	23.7	51.7	24.6
SI	78.8	123.3	97.0	101.0	23.3	56.8	20.0
SK	81.9	128.4	99.5	100.5	26.8	56.3	16.9
FI	85.9	120.2	95.6	100.7	18.5	52.2	29.3
SE	84.4	112.4	93.8	104.1	16.0	52.4	31.6
UK	78.0	104.1	90.7	99.3	18.5	49.4	32.1

(1) Estonia and Lithuania, 2004.

Source: Eurostat (LFS)

LABOUR FORCE CHARACTERISTICS

The proportion of men working in the EU-25's machinery and equipment manufacturing sector was well above the industrial average in 2005 (82.2 % compared with 71.3 %) – see Table 8.3. This higher proportion of male employment was observed in all the Member States ⁽⁴⁾, with the largest differences being posted in Lithuania and Estonia.

Full-time employment was also common (in keeping with most industrial activities), accounting for 94.3 % of those employed in the EU-25's machinery and equipment workforce in 2005, a somewhat higher proportion than the industrial average (92.4 %). Only in Cyprus, Latvia and the United Kingdom did full-time employment account for a slightly lower proportion of the workforce within the manufacture of machinery and equipment than for total industry.

A breakdown by age of the workforce for the EU-25's machinery and equipment manufacturing sector shows that 20.5 % of those employed in 2005 were aged between 15 and 29, some 55.3 % between 30 and 49, while the remainder were persons aged 50 or more; these proportions were similar to respective industrial averages.

⁽⁴⁾ Malta, not available.

Table 8.4

Manufacture of machinery and equipment n.e.c. (NACE Subsection DK)**Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003**

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	3.1	73.2	26.8	47.1	37.2	126.5	7.9
1	Malta (10.2)	Slovakia (82.5)	Germany (32.2)	Austria (62.8)	Germany (48.7)	Latvia (183.9)	Latvia (19.1)
2	Latvia (8.8)	Hungary (81.9)	Denmark (31.4)	Luxembourg (61.8)	Belgium (47.2)	Ireland (168.5)	Ireland (15.2)
3	Hungary (7.3)	Luxembourg (80.6)	Cyprus (28.2)	Belgium (61.1)	Luxembourg (46.0)	Poland (159.1)	Poland (14.3)
4	Slovakia (7.1)	Italy (79.4)	Austria (28.1)	Sweden (58.5)	Denmark (44.3)	Slovakia (156.0)	Malta (13.1)
5	Czech Republic (6.6)	Slovenia (78.5)	United Kingdom (27.9)	Ireland (58.2)	Netherlands (44.2)	Estonia (148.1)	Austria (11.5)

(1) Latvia, Malta and Sweden, 2002; Belgium and Greece, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Malta and Sweden, 2002; Greece, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Malta and Sweden, 2002; Greece, not available.

Source: Eurostat (SBS)

COSTS, PRODUCTIVITY AND PROFITABILITY

The ratio of investment in tangible goods relative to total operating costs was 3.1 % for the EU's ⁽⁵⁾ machinery and equipment manufacturing sector (NACE Subsection DK) – see Table 8.4. This was a relatively low rate compared with most other industrial NACE subsections or the EU average ⁽⁶⁾ for the whole of total industry (5.0 %). A split of total operating costs between purchases of goods and services, on the one hand, and personnel costs on the other, shows that the latter represented 26.8 % of operating costs in the EU ⁽⁷⁾, the highest share among industrial NACE subsections.

⁽⁵⁾ EU average, 2003; Latvia, Malta and Sweden, 2002; excluding Belgium and Greece.

⁽⁶⁾ EU average, 2003; France, Malta and Sweden, 2002; excluding Belgium, Greece and Ireland.

⁽⁷⁾ EU average, 2003; Malta and Sweden, 2002; excluding Greece.

Apparent labour productivity was EUR 47 100 per person employed in the EU-25's machinery and equipment manufacturing sector in 2003, a level of productivity that was EUR 2 500 below the industrial average, while machinery and equipment manufacturing employees cost an average of EUR 37 200 each in 2003, some EUR 4 600 above the industrial average. The combination of lower apparent labour productivity and higher average personnel costs led to a relatively low wage adjusted labour productivity ratio of 126.5 %, compared with an industrial average of 152 %. Among the activities presented in the following subchapters wage adjusted labour productivity was highest for the manufacture of domestic appliances (NACE Group 29.7) where it reached 140 %.

The gross operating rate expresses the relationship between the gross operating surplus and turnover: in the EU-25's machinery and equipment sector this was 7.9 % in 2003, well below the industrial average of 10.3 %.

EXTERNAL TRADE

A surplus of EUR 85.3 billion was generated through the external trade of machinery and equipment (CPA Subsection DK) in the EU-25 in 2005, the largest of any CPA subsection for industrial goods – see Table 8.5. The EU-25 exported EUR 152.4 billion of machinery and equipment to non-member countries, while imports were value at EUR 67.1 billion. All of the CPA groups that make up the CPA Subsection DK recorded a trade surplus, the largest being for other special purpose machinery (CPA Group 29.5) that is part of industrial processing machinery – see Subchapter 8.2 – with a surplus of EUR 37.0 billion, equivalent to almost half (43.3 %) of the trade surplus for all machinery and equipment products. There were also considerable surpluses recorded for another type of industrial processing machinery – other general purpose machinery (EUR 21.4 billion, CPA Group 29.2) as well as for power machinery (EUR 16.8 billion, CPA Group 29.1).

Looking at the contribution of each machinery and equipment CPA group to exports and imports in 2000 and 2005, the most significant change concerned domestic appliances (CPA Group 29.7) which represented 7.3 % of the EU-25's imports of machinery and equipment in 2000 and 11.8 % by 2005. However, the increase in imports does not seem to have displaced domestic production, as according to annual short-term statistics, the EU-25 index of production for the manufacture of domestic appliances remained relatively stable over the same period (rising 0.1 % per annum on average).

Among the Member States, Germany was the largest exporter of machinery and equipment in 2005, with exports of these goods valued at EUR 108.1 billion (intra and extra-EU trade combined). The second largest exporter was

Table 8.5

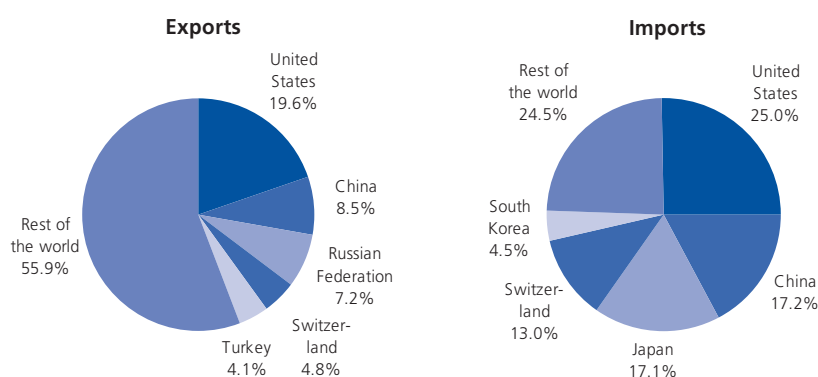
Machinery and equipment n.e.c. (CPA Subsection DK)
External trade, EU-25, 2005

	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Machinery and equipment n.e.c.	152 407	15.3	67 097	6.2	85 310	227.1
Power machinery	35 963	3.6	19 131	1.8	16 832	188.0
Industrial processing machinery	101 284	10.2	37 722	3.5	63 562	268.5
Agricultural and forestry machinery	5 659	0.6	2 076	0.2	3 583	272.6
Weapons and ammunition	861	0.1	241	0.0	620	357.0
Domestic appliances n.e.c.	8 228	0.8	7 922	0.7	306	103.9

Source: Eurostat (Comext)

Italy (EUR 58.6 billion), while the United Kingdom (EUR 26.4 billion) followed in the ranking. Exports of machinery and equipment accounted for 21.2 % of all Italian exports of industrial goods, the highest proportion among the Member States, while Germany (15.7 % of industrial exports) and Slovenia (15.3 %) were the next most specialised Member States for exporting these products. Germany was also the largest importer of machinery and equipment, with EUR 41.2 billion in 2005 (intra and extra-EU trade combined), followed by France (EUR 30.7 billion) and the United Kingdom (EUR 28.5 billion). Machinery and equipment represented 11.2 % of the Czech Republic's total imports of industrial goods, the largest share among the Member States, closely followed by Latvia (11.0 %).

Figure 8.4

Machinery and equipment n.e.c. (CPA Subsection DK)
Share in extra-EU trade, 2005 (%)


Source: Eurostat (Comext)

8.1: POWER MACHINERY

The manufacture of power machinery (NACE Group 29.1) concerns the manufacture of machinery for the production and use of mechanical power. This includes internal combustion engines, as well as steam, gas, wind and hydraulic turbines, pumps, compressors, taps, valves, bearings and transmission equipment. This NACE group excludes the manufacture of propulsion engines for aircraft, vehicles or cycles. Power machines transform different forms of energy, for example, thermal or electrical energy into motion.

The power machinery subsector covers a wide range of products, from relatively standardised mass produced items to engines and turbines often requiring high levels of research and development (R&D). R&D, as well as technical innovations, is important for this sector, as witnessed in the increased use of electronics and miniaturisation in some areas. A wide range of industrial clients are served by manufacturers of power machinery equipment.

STRUCTURAL PROFILE

The EU-25's power machinery manufacturing sector (NACE Group 29.1) generated EUR 34.6 billion of value added in 2003 and employed 662 500 persons, therefore generating 21.2 % of the total value added for machinery and equipment manufacturing (NACE Subsection DK) and accounting for a slightly smaller share (19.1 %) of the machinery and equipment workforce.

Among the four NACE classes that compose the power machinery sector, the manufacture of pumps and compressors (NACE Class 29.12) was the largest, generating just under 30 % of sectoral value added. Slightly smaller was the manufacture of bearings, gears, gearing and driving elements (NACE Class 29.14) with more than one quarter of sectoral value added, and the manufacture of taps and valves (NACE Class 29.13) with one quarter of the total. The manufacture of engines and turbines (NACE Class 29.11) was the smallest subsector contributing around 16 % of power machinery manufacturing value added.

Table 8.6

Manufacture of machinery for the production and use of mechanical power, except aircraft, vehicle and cycle engines (NACE Group 29.1)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (14 524.2)	42.0	Germany (234.5)	35.4	Denmark (3.5)	Denmark (4.2)
2	Italy (5 430.9)	15.7	Italy (96.1)	14.5	Germany (3.2)	Germany (3.1)
3	France (3 702.8)	10.7	France (68.4)	10.3	Slovakia (2.7)	Slovakia (3.0)
4	United Kingdom (3 566.0)	10.3	United Kingdom (65.9)	10.0	Italy (2.4)	Finland (2.2)
5	Sweden (1 170.0)	3.4	Poland (30.7)	4.6	Sweden (2.4)	Sweden (2.2)

(1) Malta and Sweden, 2002; Estonia, Greece and Luxembourg, not available.

(2) Sweden, provisional; Malta, 2002; Estonia, Greece and Luxembourg, not available.

(3) Malta and Sweden, 2002; Estonia, Greece, Ireland and Luxembourg, not available.

(4) Sweden, provisional; Malta, 2002; Estonia, Greece, Ireland and Luxembourg, not available.

Source: Eurostat (SBS)

Table 8.7

Manufacture of machinery for the production and use of mechanical power, except aircraft, vehicle and cycle engines (NACE Group 29.1)
Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	3.9	72.5	27.5	52.3	39.5	132.0	8.8
1	Slovakia (13.2)	Hungary (82.9)	Cyprus (35.2)	Belgium (85.3)	Belgium (53.7)	Slovakia (193.9)	Poland (18.8)
2	Hungary (11.8)	Slovakia (82.8)	Germany (34.0)	Austria (71.0)	Germany (50.5)	Poland (185.1)	Ireland (17.8)
3	Portugal (7.0)	Belgium (80.9)	Denmark (32.5)	Ireland (65.4)	Austria (46.3)	Latvia (175.1)	Latvia (15.7)
4	Latvia (6.8)	Italy (80.0)	Austria (31.0)	Netherlands (65.1)	Sweden (45.1)	Portugal (172.1)	Austria (15.3)
5	Lithuania (6.4)	Portugal (79.9)	Lithuania (31.0)	Sweden (63.8)	Netherlands (44.8)	Ireland (170.6)	Slovakia (13.9)

(1) Malta and Sweden, 2002; Belgium, Estonia, Greece and Luxembourg, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Malta and Sweden, 2002; Estonia, Greece and Luxembourg, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Malta and Sweden, 2002; Estonia, Greece and Luxembourg, not available; EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

Table 8.8

Machinery for the production and use of mechanical power, except aircraft, vehicle and cycle engines (CPA Group 29.1)
External trade, EU-25, 2005

	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Power machinery	35 963	3.6	19 131	1.8	16 832	188.0
Engines and turbines except aircraft, vehicle and cycle engines	7 862	0.8	5 955	0.6	1 907	132.0
Pumps and compressors	13 269	1.3	5 920	0.5	7 349	224.1
Taps and valves	7 740	0.8	3 504	0.3	4 236	220.9
Bearings, gears, gearing and driving elements	7 092	0.7	3 752	0.3	3 341	189.0

Source: Eurostat (Comext)

Germany was by far the largest contributor to the EU-25's power machinery value added in 2003, generating more than 40 % of the total – see Table 8.6. Italy, with a power machinery manufacturing sector that accounted for 15.7 % of the EU-25's value added, was the second largest contributor, followed by France (10.7 %) and the United Kingdom (10.3 %).

Annual short-term statistics for the production index for the manufacture of power machinery in the EU-25 showed an upward trend over the period 1995 to 2005, with similar developments to those for the whole of machinery and equipment manufacturing, albeit with more pronounced movements (see Figure 8.2). Over the ten years observed, the index of employment contracted, on average, by 1.5 % per annum for power machinery manufacturing, the same rhythm as that recorded for the manufacture of machinery and equipment as a whole. The evolution of domestic output prices for the manufacture of power machinery also closely followed the index for machinery and equipment from 1995 to 2005. Domestic output prices went up, on average, by 1.6 % per annum for power machinery manufacturing, compared with 1.4 % for machinery and equipment.

COSTS, PRODUCTIVITY AND PROFITABILITY

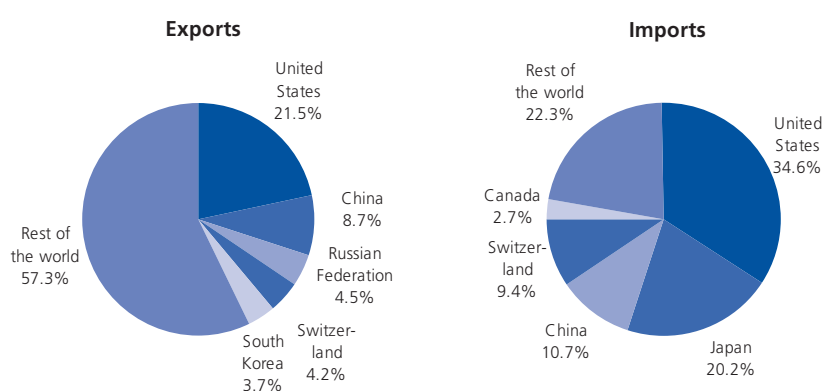
Power machinery (NACE Group 29.1) had the highest ratio of investment in tangible goods relative to operating costs within the machinery and equipment manufacturing sector, with an EU ⁽⁸⁾ average of 3.9 % - see Table 8.7. The share of personnel costs in total operating costs was 27.5 % in the EU ⁽⁹⁾, slightly above the EU average ⁽¹⁰⁾ for the whole of machinery and equipment manufacturing (26.8 %).

⁽⁸⁾ EU average, 2003; Malta and Sweden, 2002; excluding Belgium, Estonia, Greece and Luxembourg.

⁽⁹⁾ EU average, 2003; Malta and Sweden, 2002; excluding Estonia, Greece and Luxembourg.

⁽¹⁰⁾ EU average, 2003; Malta and Sweden, 2002; excluding Greece.

Figure 8.5

Machinery for the production and use of mechanical power, except aircraft, vehicle and cycle engines (CPA Group 29.1)
Share in extra-EU trade, 2005 (%)


Source: Eurostat (Comext)

Apparent labour productivity was EUR 52 300 per person employed in the EU-25's power machinery manufacturing sector in 2003, some EUR 5 200 above the average for the manufacture of machinery and equipment. Once adjusted by the share of employees in the number of persons employed, value added for the EU-25's power machinery manufacturing sector was equivalent to 132 % of personnel costs, which was somewhat higher than the ratio for the whole of machinery and equipment (126.5 %). Turning to profitability, the gross operating rate was 8.8 % for the EU-25's power machinery manufacturing sector, showing that the gross operating surplus relative to turnover was somewhat higher than the average rate for the whole of machinery and equipment (7.9 %).

EXTERNAL TRADE

The EU-25 exported EUR 36.0 billion of power machinery (CPA Group 29.1) in 2005, while importing goods to the value of EUR 19.1 billion, leading to a trade surplus of EUR 16.8 billion – see Table 8.8. Among the four CPA classes making up power machinery, pumps and compressors (CPA Class 29.12) accounted for the largest proportion of exports (36.9 %), while engines and turbines accounted for the largest proportion of imports (31.1 %).

As in the majority of machinery and equipment CPA groups, Germany had by far the largest trade surplus among the Member States (EUR 15.5 billion) for power machinery, followed by Italy (EUR 6.4 billion). At the other end of the spectrum, the largest trade deficits were recorded in Spain and Poland, where deficits rose to above EUR 1.1 billion in 2005.

8.2: INDUSTRIAL PROCESSING MACHINERY

The manufacture of industrial processing machinery is made up of the manufacture of general purpose machinery, machine-tools, and special purpose machinery, as covered by NACE Groups 29.2, 29.4 and 29.5.

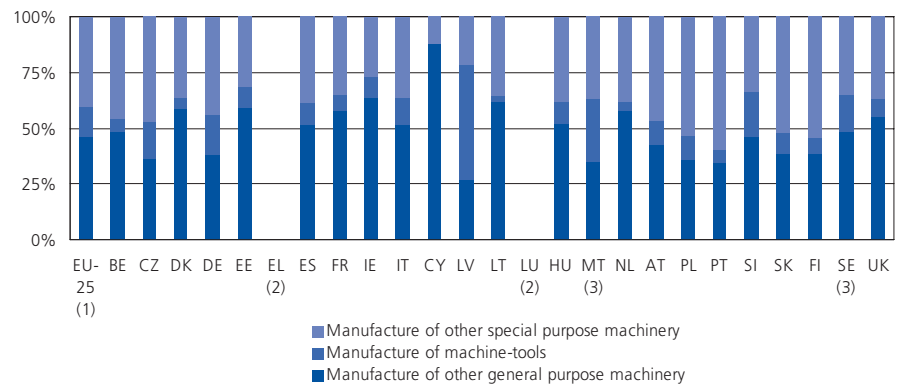
Within industrial processing machinery, the distinction between general and special purpose machinery is based on the use made of the machinery by industrial customers. General purpose machinery (for instance lifting, handling and cooling equipment) are used by a broad range of downstream sectors within mining and quarrying, manufacturing, energy, construction, distribution and transport sectors. Manufacturers of special purpose equipment are, on the other hand, focused on providing equipment designed for specific sectors of the economy, generally in mining, specialist manufacturing activities, or construction. A large part of the output of machine-tools manufacturing is used within the various engineering sectors covered by the remainder of this chapter, as well as Chapters 9 and 10.

STRUCTURAL PROFILE

Value added generated in the EU-25's industrial processing machinery manufacturing sector (NACE Groups 29.2, 29.4 and 29.5) was EUR 105.0 billion in 2003, equivalent to 6.2 % of the industrial (NACE Sections C to E) total and 64.2 % of the machinery and equipment manufacturing (NACE Subsection DK) total. In the EU-25's industrial processing machinery sector there were 2.3 million persons employed in 2003, and as such this sector contributed 6.4 % to EU-25's industrial employment and 65.3 % of the machinery and equipment workforce.

Figure 8.6

Manufacture of industrial processing machinery (NACE Groups 29.2, 29.4 and 29.5)
Breakdown of sectoral value added, 2003 (%)



(1) Rounded estimates based on non-confidential data, except for the manufacture of other general purpose machinery.

(2) Not available.

(3) 2002.

Source: Eurostat (SBS)

Three NACE groups make up the manufacture of industrial processing machinery, of which the manufacture of other general purpose machinery (NACE Group 29.2) accounted for the largest share of EU-25 value added in 2003, almost half of the sectoral total (45.5 %), followed closely by other special purpose machinery (NACE Group 29.5) with a 41.2 % share – see Figure 8.6; the manufacture of machine tools (NACE Group 29.4) was by far the smallest of the three activities covered in this subchapter.

More than one third of the EU-25's industrial processing machinery manufacturing sector value added came from Germany (38.3 %) in 2003, more than double the share of Italy (17.1 %) – see Table 8.9. Germany was the largest manufacturer in each of the three subsectors, particularly for the manufacture of machine-tools, where its share of EU-25 value added rose to 53.1 %. Germany was the most specialised Member State in industrial

processing machinery manufacturing, with 8.8 % of its industrial value added coming from industrial processing machinery manufacturing, compared with an EU-25 average of 6.2 %; Austria, Italy, Sweden (2002) and Finland were also relatively specialised in this sector.

EU-25 production indices for the three NACE groups that make up the manufacture of industrial processing machinery generally followed a similar progression to the index for the manufacture of machinery and equipment as a whole over the period between 1995 and 2005 (see Figure 8.2). However, fluctuations in output were more pronounced for the manufacture of machine-tools (NACE Group 29.4). Over these 10 years, the fastest growth in output among the three NACE groups was recorded for the manufacture of other general purpose machinery (NACE Group 29.2), where production rose, on average, by 1.8 % per annum, compared with more modest growth for the manufacture of

Table 8.9

Manufacture of industrial processing machinery (NACE Groups 29.2, 29.4 and 29.5)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (40 165.8)	38.3	Germany (721.5)	31.9	Germany (8.8)	Germany (9.4)
2	Italy (17 986.0)	17.1	Italy (388.4)	17.2	Austria (8.5)	Finland (9.2)
3	United Kingdom (10 035.2)	9.6	France (193.3)	8.6	Italy (8.1)	Austria (8.7)
4	France (9 844.8)	9.4	United Kingdom (183.7)	8.1	Sweden (8.1)	Sweden (8.5)
5	Spain (5 446.6)	5.2	Spain (136.3)	6.0	Finland (6.4)	Italy (7.9)

(1) Malta and Sweden, 2002; Greece and Luxembourg, not available.

(2) Sweden, provisional; Malta, 2002; Greece and Luxembourg, not available.

(3) Malta and Sweden, 2002; Greece, Ireland and Luxembourg, not available.

(4) Sweden, provisional; Malta, 2002; Greece, Ireland and Luxembourg, not available.

Source: Eurostat (SBS)

Table 8.10

Manufacture of industrial processing machinery (NACE Groups 29.2, 29.4 and 29.5)**Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003 (1)**

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	2.8	71.6	28.4	46.3	37.5	124.0	7.7
1	Malta (11.6)	Hungary (78.4)	Malta (35.5)	Austria (64.1)	Germany (48.2)	Latvia (198.0)	Latvia (22.5)
2	Latvia (10.1)	Slovakia (78.3)	Denmark (33.3)	Sweden (57.7)	Belgium (46.0)	Malta (154.9)	Malta (15.1)
3	Czech Republic (7.7)	Italy (77.9)	Germany (33.0)	Belgium (57.1)	Netherlands (45.1)	Estonia (148.6)	Poland (13.3)
4	Portugal (7.1)	Czech Republic (76.9)	Portugal (31.9)	Germany (55.7)	Denmark (45.0)	United Kingdom (144.6)	United Kingdom (12.5)
5	Hungary (6.6)	Sweden (75.1)	Lithuania (31.3)	Netherlands (55.1)	Austria (44.7)	Austria (143.3)	Austria (12.1)

(1) Latvia, Malta and Sweden, 2002; Belgium, Greece, Luxembourg and the United Kingdom, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Malta and Sweden, 2002; Greece and Luxembourg, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Malta and Sweden, 2002; Greece and Luxembourg, not available; EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

other special purpose machinery (NACE Group 29.5) and the manufacture of machine tools, where output rose by 0.9 % and 0.7 % per annum respectively. Turning to the index of domestic output prices, the three NACE groups displayed a very similar trend of rising prices between 1995 and 2005, with price increases averaging 1.3 % or 1.4 % per annum; as such, price increases were in line with those for the whole of machinery and equipment (1.4 % per annum).

COSTS, PRODUCTIVITY AND PROFITABILITY

Investment in tangible goods, relative to total operating costs, was equivalent to 2.8 % for the industrial processing machinery sector ⁽¹¹⁾, the lowest rate among the activities covered in Subchapters 8.1 to 8.5, and almost half the industrial average. Personnel costs accounted for a 28.4 % share of total operating costs in the industrial processing machinery sector in 2003 ⁽¹²⁾, which was the highest proportion among the subchapters covered by machinery and equipment.

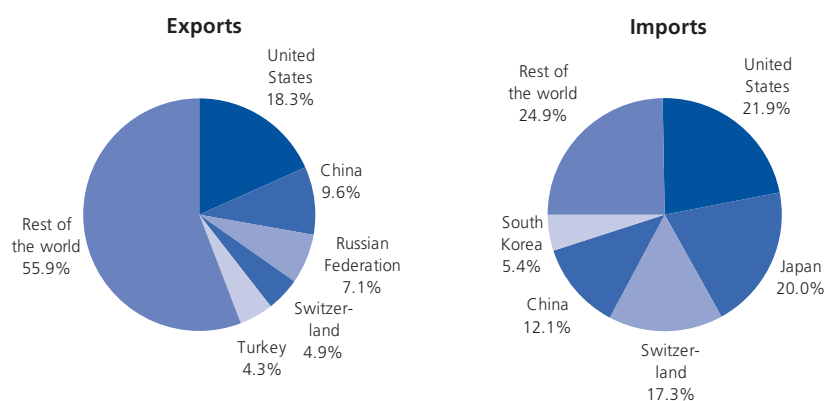
Apparent labour productivity was EUR 46 300 per person employed in the EU-25's industrial processing machinery sector, therefore slightly lower (by EUR 800 per person) than the machinery and equipment manufacturing average for 2003; there was no major difference in labour productivity between the three subsectors (NACE Groups 29.2, 29.4 and 29.5). Turning to average personnel costs per employee, these were EUR 37 500 for the industrial processing machinery sector, and as such stood close to the average for the whole of machinery and equipment; there was also a

⁽¹¹⁾ EU average, 2003; Latvia, Malta and Sweden, 2002; excluding Belgium, Greece, Luxembourg and the United Kingdom.

⁽¹²⁾ EU average, 2003; Malta and Sweden, 2002; excluding Greece and Luxembourg.

Figure 8.7

Industrial processing machinery (CPA Groups 29.2, 29.4 and 29.5) Share in extra-EU trade, 2005 (%)



Source: Eurostat (Comext)

narrow range between the average personnel costs recorded for the three subsectors. In the EU-25's industrial processing machinery sector, value added was equivalent to 124 % of personnel costs, once adjusted for the share of employees in persons employed. This wage adjusted labour productivity ratio was slightly lower than the average for the machinery and equipment manufacturing sector (126.5 %).

The gross operating rate, a measure of profitability that compares the gross operating surplus with turnover, was 7.7 % in 2003 for the EU-25's manufacture of industrial processing machinery sector. The manufacture of other general purpose machinery (NACE Group 29.2) had the highest gross operating rate (8.5 %) among the three NACE groups covered, although this rate remained below the industrial average (10.3 %).

EXTERNAL TRADE

EU-25 exports of industrial processing machinery (CPA Groups 29.2, 29.4 and 29.5) were valued at EUR 101.3 billion in 2005, while imports amounted to EUR 37.7 billion, generating a EUR 63.6 billion trade surplus. More than half of the EU-25's exports in 2005 were of other special purpose machinery (CPA Group 29.5), while other general purpose machinery (CPA Group 29.2) accounted for 35.1 % of the total.

With exports of industrial processing machinery valued at EUR 67.8 billion in 2005, Germany was by far the largest exporter of these goods (intra- and extra-EU trade) in the EU-25, while the second largest exporter, Italy, recorded slightly more than half of this value (EUR 35.6 billion). Germany also recorded the highest value of imports (intra and extra-EU trade) of industrial processing machinery, at EUR 22.2 billion, while France had the second highest level of imports (EUR 16.3 billion), closely followed by the United Kingdom (EUR 15.4 billion).

8.3: AGRICULTURAL AND FORESTRY MACHINERY

NACE Group 29.3 covers the manufacture of agricultural tractors and other agricultural and forestry machinery; note that this NACE group does not cover the manufacture of agricultural hand tools.

Domestic demand for machines and tractors is influenced by the increasing trend for importing agricultural products from non-member countries, as well as by the size of agricultural holdings and the incidence of sharing equipment. All these factors have contributed to a slowdown in demand for agricultural machines and tractors within the EU. Moreover, the wide variety of machinery and tools for agricultural uses comes from the diversity of territories (quality of ground, geography and climates).

STRUCTURAL PROFILE

The EU-25 generated EUR 7.9 billion of value added through the manufacture of agricultural and forestry machinery (NACE Group 29.3) in 2003, which was equivalent to 4.8 % of machinery and equipment (NACE Subsection DK) value added and 0.5 % of the total for all industrial activities (NACE

Sections C to E). There were some 200 000 persons employed in the EU-25's manufacture of agricultural and forestry machinery sector in 2003, which represented 5.8 % of the machinery and equipment workforce or 0.6 % of the industrial total. More than three quarters of the EU-25's value added in 2003 was generated by the manufacture of other agricultural and forestry machinery (NACE Class 29.32), while the remainder was accounted for by the manufacture of agricultural tractors (NACE Class 29.31).

More than one quarter of EU-25's agricultural and forestry machinery value added was generated in Germany (26.2 %), while Italy was the second largest contributor (18.6 %) and France the third (14.4 %) – see Table 8.11; no other Member State contributed a double-digit share to EU-25 value added. In terms of this sector's contribution to industrial value added, Denmark (2002), Austria, Finland, Italy and the Netherlands (2002) were relatively more specialised in the manufacture of agricultural and forestry machinery than the other Member States ⁽¹³⁾.

⁽¹³⁾ Denmark, Luxembourg, the Netherlands and Sweden, 2002; Greece, Ireland and Malta, not available.

The increase in the index of production for the EU-25's manufacture of agricultural and forestry machinery was faster than for machinery and equipment manufacturing as a whole from 1995 to 2005, with average growth of 2.1 % per annum compared with 1.5 % – see Figure 8.8. While the manufacture of agricultural and forestry machinery recorded the fastest output growth of all the NACE groups that make up machinery and equipment manufacturing, it also recorded the fastest domestic output price increases; prices rose, on average, by 1.9 % per annum in the EU-25 over the same period.

Table 8.11

Manufacture of agricultural and forestry machinery (NACE Group 29.3) Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (2 067.4)	26.2	Germany (38.7)	19.3	Denmark (0.9)	Austria (1.2)
2	Italy (1 463.6)	18.6	Italy (35.6)	17.8	Austria (0.8)	Denmark (1.2)
3	France (1 131.8)	14.4	France (29.1)	14.5	Finland (0.8)	Finland (1.1)
4	United Kingdom (708.2)	9.0	Poland (16.7)	8.3	Italy (0.7)	Netherlands (1.0)
5	Netherlands (443.4)	5.5	United Kingdom (11.2)	5.6	Netherlands (0.7)	Hungary (0.8)

(1) Denmark, Luxembourg, the Netherlands and Sweden, 2002; Greece and Malta, not available.

(2) Sweden, provisional; Denmark and Luxembourg, 2002; Greece and Malta, not available.

(3) Denmark, Luxembourg, the Netherlands and Sweden, 2002; Greece, Ireland and Malta, not available.

(4) Sweden, provisional; Denmark and Luxembourg, 2002; Greece, Ireland and Malta, not available.

Source: Eurostat (SBS)

Table 8.12

Production value of selected agricultural and forestry machinery (CPA Group 29.3), EU-25, 2004 (EUR million)

	Prodcom code(s)	
New agricultural and forestry tractors, wheeled (excl. pedestrian-controlled tractors)	29.31.22.00, 29.31.23.30, 29.31.23.50 and 29.31.23.70	7 071
Combine harvester-threshers	29.32.34.10	835
Self-loading or self-unloading trailers for agricultural purposes	29.32.50.40	642
Machines for cleaning, sorting or grading eggs, fruit or other agricultural produce	29.32.61.00	407
Forestry machinery (1)	29.32.65.30	558

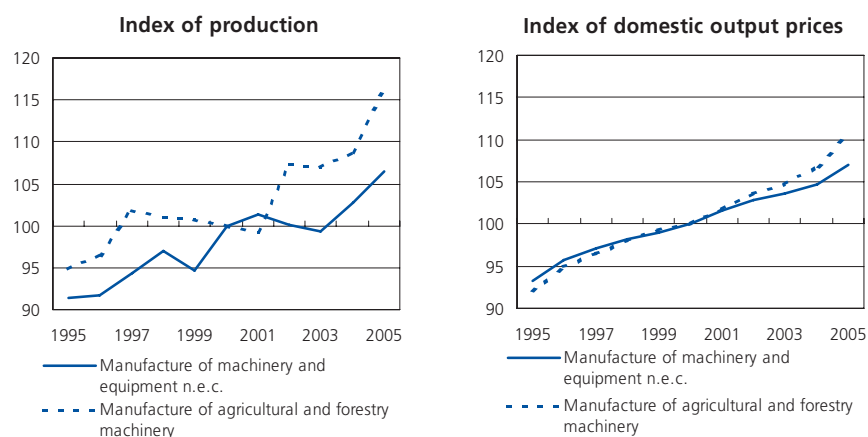
(1) Estimated.

Source: Eurostat (PRODCOM)

COSTS, PRODUCTIVITY AND PROFITABILITY

Apparent labour productivity in the EU-25's manufacture of agricultural and forestry machinery sector was EUR 40 000 per person employed in 2003, which was EUR 7 100 less than the machinery and equipment average – see Table 8.13. Average personnel costs per employee, at EUR 28 000, were also notably lower (EUR 4 600) than the machinery and equipment average. Combining these two indicators results in an EU-25 wage adjusted labour productivity ratio of 130 % for 2003, which was 3.5 percentage points above the corresponding figure for machinery and equipment as a whole. The profitability of this sector, as measured by the gross operating ratio, stood at 7.4 % for the EU-25 in 2003, slightly below the average for machinery and equipment as a whole.

Figure 8.8
Manufacture of agricultural and forestry machinery (NACE Group 29.3)
Evolution of main indicators, EU-25 (2000=100)



Source: Eurostat (STS)

Table 8.13
Manufacture of agricultural and forestry machinery (NACE Group 29.3)
Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (4)
EU-25	2.9	82.1	17.9	40.0	28.0	130.0	7.4
1	Czech Republic (20.8)	United Kingdom (87.0)	Lithuania (30.6)	United Kingdom (63.4)	Belgium (45.4)	Poland (169.2)	Poland (14.0)
2	Latvia (7.3)	Italy (85.5)	Portugal (28.9)	Sweden (55.5)	United Kingdom (41.4)	United Kingdom (153.0)	Cyprus (13.1)
3	Lithuania (7.2)	Finland (85.1)	Cyprus (28.6)	Netherlands (54.4)	Sweden (41.4)	Estonia (150.1)	Ireland (10.3)
4	Denmark (6.5)	Poland (84.4)	Latvia (27.3)	Germany (53.5)	Austria (41.0)	Ireland (144.1)	Slovenia (9.4)
5	Slovenia (5.5)	Hungary (83.4)	Denmark (26.3)	Finland (53.1)	Denmark (40.0)	Finland (143.0)	Netherlands (9.2)

(1) The Czech Republic, Denmark, Latvia, the Netherlands and Sweden, 2002; Belgium, Greece, Luxembourg and Malta, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Denmark, Luxembourg, the Netherlands and Sweden, 2002; Greece and Malta, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Denmark, Luxembourg, the Netherlands and Sweden, 2002; Greece and Malta, not available; EU-25, rounded estimate based on non-confidential data.

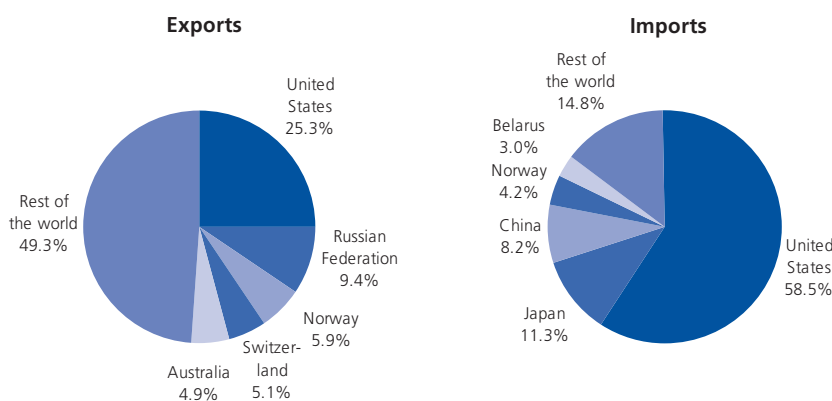
(4) Denmark, Luxembourg, the Netherlands and Sweden, 2002; Greece and Malta, not available.

Source: Eurostat (SBS)

EXTERNAL TRADE

In 2005, the EU-25 recorded a EUR 3.6 billion trade surplus for agricultural and forestry machinery (CPA Group 29.3). Other agricultural and forestry machinery (CPA Class 29.32) represented 61.7 % of all exports of agricultural and forestry machinery, while accounting for 69.1 % of imports into the EU-25. Germany exported agricultural and forestry machinery to the value of EUR 4.8 billion in 2005, and generated a EUR 3.3 billion trade surplus.

Figure 8.9
Agricultural and forestry machinery (CPA Group 29.3)
Share in extra-EU trade, 2005 (%)



Source: Eurostat (Comext)

8.4: ARMS AND AMMUNITION

The activity of NACE Group 29.6 covers the manufacture of tanks and other fighting vehicles, artillery material and ballistic missiles, small arms and ammunition. This activity also includes the manufacture of hunting, sporting or protective firearms and ammunition, as well as explosive devices (such as bombs, mines and torpedoes).

The availability of data on the weapons and ammunition sector is sometimes weaker than for many of the other sectors covered in this publication, usually as a result of confidentiality. Moreover, when analysing the data, the risk of under-reporting arms sales should be borne in mind.

STRUCTURAL PROFILE

Value added generated in the EU-25's manufacture of arms and ammunition sector (NACE Group 29.6) was EUR 3.5 billion, accounting for 2.1 % of machinery and equipment manufacturing (NACE Subsection DK) value added in 2003 and 0.2 %

of industrial (NACE Sections C to E) value added. The arms and ammunition sector employed 69 600 persons in the EU-25, equivalent to 2.0 % of the machinery and equipment workforce.

In contrast with the four other machinery and equipment subsectors, arms and ammunition manufacturing was the only one where Germany was not the largest contributor to value added. Indeed, the United Kingdom accounted for 25.8 % of EU-25 value added in 2003, followed nonetheless by Germany (22.2 %), with France contributing 15.9 % of the EU-25 total – see Table 8.14. Sweden (2002) and the United Kingdom were the most specialised Member States ⁽¹⁴⁾ in this activity in 2003, as 0.5 % and 0.4 % respectively of their industrial value added came from arms and ammunition manufacturing, compared with 0.2 % for the EU-25 as a whole.

⁽¹⁴⁾ Malta, the Netherlands and Sweden, 2002; Denmark, Estonia, Greece, Ireland, Latvia and Luxembourg, not available.

Annual short-term statistics show that the index of production for arms and ammunition manufacturing in the EU-25 grew, on average, by 1.9 % per annum from 1995 to 2005, therefore at a somewhat faster rhythm than for the manufacture of machinery and equipment as a whole (1.5 % per annum). However, looking in more detail at the developments during this period, the production of arms and ammunitions contracted over the period from 1998 to 2000, while output generally expanded by upwards of 4 % in the other years.

Table 8.14

Manufacture of weapons and ammunition (NACE Group 29.6)

Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	United Kingdom (908.8)	25.8	United Kingdom (14.6)	20.8	Sweden (0.5)	Sweden (0.4)
2	Germany (781.6)	22.2	Germany (12.2)	17.4	United Kingdom (0.4)	Czech Republic (0.4)
3	France (559.7)	15.9	France (7.4)	10.6	Czech Republic (0.3)	United Kingdom (0.4)
4	Italy (375.7)	10.7	Italy (6.7)	9.5	France (0.2)	Finland (0.3)
5	Sweden (260.5)	8.1	Czech Republic (5.9)	8.4	Finland (0.2)	Belgium (0.2)

(1) Malta, the Netherlands and Sweden, 2002; Denmark, Estonia, Greece, Latvia and Luxembourg, not available.

(2) Sweden, provisional; Malta, 2002; Denmark, Estonia, Greece, Luxembourg and the Netherlands, not available.

(3) Malta, the Netherlands and Sweden, 2002; Denmark, Estonia, Greece, Ireland, Latvia and Luxembourg, not available.

(4) Sweden, provisional; Malta, 2002; Denmark, Estonia, Greece, Ireland, Luxembourg and the Netherlands, not available.

Source: Eurostat (SBS)

Table 8.15

Manufacture of weapons and ammunition (NACE Group 29.6)

Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	:	72.6	27.4	50.2	42.0	119.4	5.6
1	Poland (9.2)	Cyprus (83.9)	Germany (35.0)	France (75.6)	France (64.1)	Lithuania (241.7)	Lithuania (39.5)
2	Slovakia (6.3)	Austria (82.9)	Slovakia (34.1)	Belgium (70.7)	Germany (56.3)	Slovenia (179.0)	Slovenia (28.0)
3	Spain (4.1)	Portugal (81.8)	Hungary (29.5)	Germany (64.1)	Belgium (52.1)	Poland (151.2)	Finland (10.7)
4	Italy (3.7)	Lithuania (78.6)	Poland (28.6)	United Kingdom (62.3)	United Kingdom (51.4)	Finland (144.0)	Poland (10.5)
5	Hungary (3.1)	Spain (77.5)	Slovenia (28.6)	Finland (59.2)	Austria (47.9)	Belgium (135.7)	Belgium (9.6)

(1) Sweden, 2002; Belgium, the Czech Republic, Denmark, Greece, Estonia, Ireland, Latvia, Luxembourg, Malta, the Netherlands and the United Kingdom, not available.

(2) Malta, the Netherlands and Sweden, 2002; Denmark, Estonia, Greece, Latvia and Luxembourg, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Sweden, 2002; Denmark, Estonia, Greece, Ireland, Latvia, Luxembourg, Malta and the Netherlands, not available.

Source: Eurostat (SBS)

COSTS, PRODUCTIVITY AND PROFITABILITY

The EU-25's arms and ammunition manufacturing sector recorded apparent labour productivity of EUR 50 200 per person employed in 2003, slightly above the machinery and equipment average (EUR 47 100) – see Table 8.15. However, relatively high average personnel costs (EUR 42 000 per employee) led to a wage adjusted labour productivity ratio of 119.4 %, which was well below the average for machinery and equipment (126.5 %).

EXTERNAL TRADE

Exports of weapons and ammunition (CPA Group 29.6) from the EU-25 to non-member countries were valued at EUR 861.5 million in 2005, some EUR 620.2 million more than imports. Italy and France were by far the largest exporters (intra and extra-EU trade) of weapons and ammunition in 2005, exporting goods to the value of EUR 360.1 million and EUR 352.1 million respectively. On the other hand, Poland (EUR 160.9 million) and the United Kingdom (EUR 144.4 million) were the largest importers of weapons and ammunition in 2005.

8.5: DOMESTIC APPLIANCES

The activities of NACE Group 29.7 cover the manufacture of domestic electrical appliances (such as white goods and vacuum cleaners), heating appliances, and non-electric domestic cooking equipment.

In contrast with the other activities covered by the machinery and equipment manufacturing sector, the manufacture of domestic appliances is the only one for which households are the main customers. Competition and regulation in the single market has led to product innovations as regards the aesthetics and ergonomics of domestic appliances, as well as their efficiency and environmental impact.

STRUCTURAL PROFILE

In 2003, the EU-25's manufacturers of domestic appliances (NACE Group 29.7) generated EUR 12.6 billion of value added, equivalent to 7.7 % of the machinery and equipment manufacturing (NACE Subsection DK) total. There were some 270 000 persons employed in this sector, which equated to 7.8 % of the

machinery and equipment workforce. Among the two NACE classes that make up the manufacture of domestic appliances, value added was mainly generated within the subsector concerned with the manufacture of electric domestic appliances (NACE Class 29.71) that accounted for 87.0 % of the total value added created in the domestic appliances sector; the remaining share came from the manufacture of non-electric domestic appliances subsector (NACE Class 29.72).

Value added within the domestic appliances manufacturing sector was highest in Germany which recorded a level of EUR 4.0 billion in 2003, corresponding to almost one third of the EU-25 total, while Italy was the second largest contributor (20.5 %), followed by the United Kingdom (11.4 %) – see Table 8.16. However, Slovenia stood out from the other Member States as by far the most specialised Member State ⁽¹⁵⁾ in the manufacture of domestic

⁽¹⁵⁾ Sweden, 2002; Greece, Ireland, Latvia, Luxembourg and Malta, not available.

appliances in 2003, as value added generated within this sector contributed 4.2 % to Slovenian industrial value added, compared with an EU-25 average of 0.7 %. Italy was the only other Member State where the manufacture of domestic appliances generated more than 1 % of national, industrial value added.

Annual short-term statistics show an upward trend for the EU-25's domestic appliances manufacturing production index from 1995 to 2005, with developments following fairly closely those for the manufacture of machinery and equipment as a whole (see Figure 8.2). During this period, the average growth rate in output was 1.1 % per annum, somewhat less than the average for the manufacture of machinery and equipment (1.5 %). Looking at the most recent developments, the output of domestic appliances declined by 1.2 % in the EU-25 in 2005 (compared with the previous year), in stark contrast to 3.5 % growth recorded for the whole of the machinery and equipment manufacturing sector. From 2000 to 2005, the index of domestic output prices for

Table 8.16

Manufacture of domestic appliances n.e.c. (NACE Group 29.7)

Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (4 035.4)	32.0	Germany (65.3)	24.2	Slovenia (4.2)	Slovenia (4.0)
2	Italy (2 583.6)	20.5	Italy (58.7)	21.7	Italy (1.2)	Italy (1.2)
3	United Kingdom (1 442.0)	11.4	United Kingdom (28.5)	10.6	Lithuania (0.9)	Hungary (1.0)
4	France (1 018.8)	8.1	Spain (21.9)	8.1	Hungary (0.9)	Sweden (1.0)
5	Spain (1 013.9)	8.0	France (19.9)	7.4	Germany (0.9)	Germany (0.9)

(1) Sweden, 2002; Greece, Latvia, Luxembourg and Malta, not available.

(2) Sweden, provisional; Greece, Luxembourg, Malta and the Netherlands, not available.

(3) Sweden, 2002; Greece, Ireland, Latvia, Luxembourg and Malta, not available.

(4) Sweden, provisional; Greece, Ireland, Luxembourg, Malta and the Netherlands, not available.

Source: Eurostat (SBS)

domestic appliances rose, on average, by a modest 0.5 % per annum, compared with an average increase of 1.4 % per annum for the whole of machinery and equipment.

COSTS, PRODUCTIVITY AND PROFITABILITY

Apparent labour productivity in 2003 was EUR 46 000 per person employed in the EU-25's domestic appliances manufacturing sector, very close to the machinery and equipment manufacturing average of EUR 47 100 – see Table 8.18. Given that average personnel costs per employee of EUR 33 000 within the domestic appliances sector were EUR 4 200 below the machinery and equipment manufacturing average, the wage adjusted labour productivity ratio for domestic appliances manufacturing was, at 140 %, well above the average for machinery and equipment manufacturing (126.5 %).

Table 8.17

Production value of selected domestic appliances (CPA Group 29.7), EU-25, 2004 (EUR million)

	Prodcom code	
Combined refrigerators-freezers, with separate external doors	29.71.11.10	1 646
Household-type refrigerators (incl. compression-type, electrical absorption-type) (excl. built-in)	29.71.11.33	1 424
Household dishwashing machines	29.71.12.00	2 268
Fully-automatic washing machines of a dry linen capacity <= 10 kg (incl. machines which both wash and dry)	29.71.13.30	4 709
Domestic vacuum cleaners with a self-contained electric motor for a voltage >= 110 V	29.71.21.13	1 582

Source: Eurostat (PRODCOM)

Table 8.18

Manufacture of domestic appliances n.e.c. (NACE Group 29.7)

Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (4)
EU-25	3.6	79.4	20.6	46.0	33.0	140.0	7.9
1	Cyprus (8.4)	Slovakia (93.8)	Estonia (50.0)	Ireland (83.1)	Germany (51.4)	Ireland (275.5)	Ireland (27.1)
2	Slovenia (7.5)	Poland (89.7)	Austria (27.5)	Austria (68.3)	Denmark (43.2)	Poland (233.0)	Austria (20.0)
3	Czech Republic (6.3)	Hungary (88.2)	Germany (26.1)	Denmark (63.2)	Belgium (37.4)	Slovakia (213.2)	Czech Republic (13.7)
4	Lithuania (5.9)	Portugal (85.5)	Belgium (26.0)	Germany (61.8)	Austria (36.6)	Portugal (205.5)	United Kingdom (13.7)
5	Finland (5.2)	Lithuania (85.0)	Finland (26.0)	France (51.2)	France (35.4)	Hungary (186.6)	Portugal (13.5)

(1) Sweden, 2002; Belgium, Greece, Latvia, Luxembourg, Malta and the Netherlands, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Sweden, 2002; Greece, Latvia, Luxembourg and Malta, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Sweden, 2002; Greece, Latvia, Luxembourg, Malta and the Netherlands, not available; EU-25, rounded estimate based on non-confidential data.

(4) Sweden, 2002; Greece, Latvia, Luxembourg and Malta, not available; EU-25, rounded estimate based on non-confidential data.

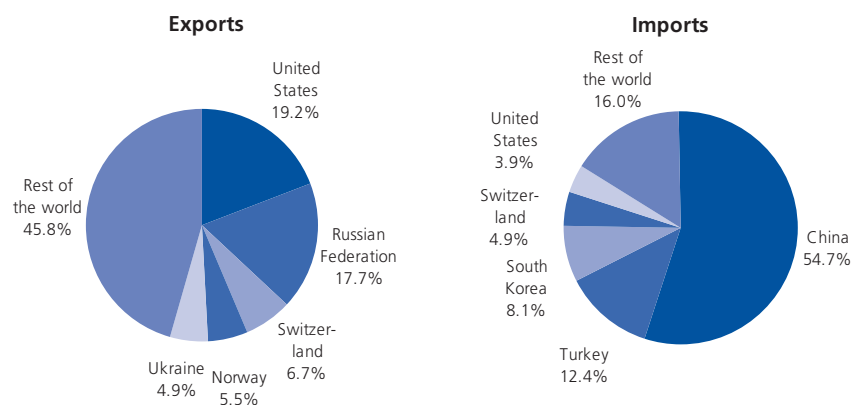
Source: Eurostat (SBS)

EXTERNAL TRADE

EU-25 exports of domestic appliances (CPA Group 29.7) to non-member countries were valued at EUR 8.2 billion in 2005, while imports were valued at EUR 7.9 billion, leading to a EUR 306.3 million trade surplus. Electric domestic appliances (CPA Class 29.71) accounted for 87.8 % of the EU-25's exports of domestic appliances in 2005 and 91.8 % of its imports. The two largest exporters of domestic appliances in the EU-25 were Germany and Italy, with exports of these goods valued respectively at EUR 7.1 billion and EUR 6.8 billion.

Figure 8.10

Domestic appliances n.e.c. (CPA Group 29.7)
Share in extra-EU trade, 2005 (%)



Source: Eurostat (Comext)

Table 8.19

Manufacture of machinery and equipment n.e.c. (NACE Division 29)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million)	499 212	8 953	5 978	9 464	169 589	155	:	24 368	57 410	1 909	96 505	76	113	227	587	3 474	18
Production (EUR million)	:	8 166	5 784	9 159	161 080	146	:	22 983	49 935	1 830	95 151	70	109	227	529	2 889	17
Value added at factor cost (EUR million)	163 515	2 590	1 871	3 508	61 574	52	:	7 912	16 258	706	27 840	28	47	73	143	883	8
Gross operating surplus (EUR million)	39 293	662	619	713	9 930	17	:	2 213	3 302	290	9 479	7	22	19	37	304	2
Purchases of goods and services (EUR million)	:	6 376	4 392	6 104	108 873	107	:	16 799	40 633	1 188	70 770	52	72	162	442	2 616	9
Gross investment in tangible goods (EUR million) (2)	:	214	374	355	4 356	8	:	776	1 186	49	3 090	3	9	13	16	234	1
Number of persons employed (thousands)	3 475	42	154	64	1 072	5	:	193	318	12	585	1	7	11	2	69	0
Personnel costs (EUR million)	124 222	1 928	1 252	2 795	51 645	35	:	5 699	12 956	416	18 361	20	26	54	106	579	5
App. labour productivity (EUR thous./pers. emp.)	47.1	61.1	12.2	54.9	57.4	10.2	:	40.9	51.1	58.2	47.6	21.0	6.7	6.5	61.8	12.8	17.5
Average personnel costs (EUR thous./employee)	37.2	47.2	8.7	44.3	48.7	6.9	:	30.7	41.3	34.6	35.0	16.8	3.7	4.8	46.0	8.9	12.7
Wage adjusted labour productivity (%)	126.5	129.4	140.2	123.9	117.9	148.1	:	133.0	123.7	168.5	135.9	124.6	183.9	134.6	134.3	143.7	137.8
Gross operating rate (%)	7.9	7.4	10.4	7.5	5.9	11.0	:	9.1	5.8	15.2	9.8	9.6	19.1	8.5	6.4	8.7	13.1
Investment per person employed (EUR thousand) (2)	:	5.3	2.4	5.5	4.1	1.6	:	4.0	3.7	4.1	5.3	2.5	1.2	1.1	7.0	3.4	3.3
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million) (3)	15 870	13 599	6 619	2 866	1 851	1 744	10 491	19 143	46 332	790	:	1 559	:	:	:	4 518	:
Production (EUR million) (3)	14 689	13 032	6 157	2 715	1 723	1 674	10 172	18 474	42 720	759	:	1 593	:	:	:	4 388	:
Value added at factor cost (EUR million) (4)	4 726	5 069	2 236	1 022	542	433	3 005	6 031	16 660	229	:	491	:	:	:	1 530	:
Gross operating surplus (EUR million) (4)	1 072	1 570	944	326	179	156	819	1 567	5 217	59	:	60	:	:	:	395	:
Purchases of goods and services (EUR million) (3)	11 000	8 942	4 641	1 854	1 326	1 310	7 698	12 672	29 622	603	:	1 201	:	:	:	3 080	:
Gross investment in tangible goods (EUR million) (3)	348	476	269	160	101	113	250	643	1 215	60	:	214	:	:	:	102	:
Number of persons employed (thousands) (3)	84	81	184	43	24	44	58	101	304	68	:	147	:	:	:	21	:
Personnel costs (EUR million) (4)	3 654	3 500	1 292	697	364	277	2 323	4 464	11 443	170	:	432	:	:	:	1 134	:
App. labour productivity (EUR thous./pers. emp.) (4)	56.3	62.8	12.1	23.7	22.2	9.9	52.1	58.5	54.8	3.4	:	3.3	:	:	:	71.4	:
Average personnel costs (EUR thous./employee) (4)	44.2	44.1	7.6	16.6	15.5	6.4	40.9	44.2	38.8	2.6	:	3.1	:	:	:	53.2	:
Wage adjusted labour productivity (%) (4)	127.5	142.3	159.1	142.5	143.1	156.0	127.4	132.3	141.4	130.2	:	108.5	:	:	:	134.1	:
Gross operating rate (%) (4)	6.8	11.5	14.3	11.4	9.7	9.0	7.8	8.2	11.3	7.5	:	3.8	:	:	:	8.7	:
Investment per person employed (EUR thousand) (3)	4.2	5.9	1.5	3.7	4.1	2.6	4.3	6.4	4.0	0.9	:	1.5	:	:	:	4.8	:

(1) Malta, 2002.

(2) Belgium and Latvia, 2002.

(3) Sweden, provisional.

(4) Sweden, 2002.

Source: Eurostat (SBS)

Electrical machinery and optical equipment



Most of the products manufactured by the electrical machinery and optical equipment manufacturing sector are very sensitive to business cycles. As a result, when there is a downturn or even recession in the EU economy as a whole, there are depressions in this sector. However, the contrary is also true, namely an overall upward trend in industrial production is reflected by an even more marked growth in electrical machinery and optical equipment production (see Figure 9.3).

The range of goods produced by the manufacture of electrical machinery and optical equipment is diverse, but often strongly interconnected, from intermediate goods (such as electronic components) to capital goods (such as transmission equipment) and consumer goods (televisions, telephones, cameras or watches). For capital goods, demand is strongly linked to the general economic performance of the whole economy, with manufacturers facing considerable fluctuations in times of recession and expansion.

Producers of standardised products, for example many electronic components, face competition from Asia, as a large proportion of the world's consumer electronics are made in this region and subsequently local suppliers are often sourced for components. In particular, EU manufacturers face considerable competition from Chinese imports of electronic components (mainly integrated circuits), while China also exports computer and related equipment (mainly automatic data processing machines, magnetic readers and computer hardware) ⁽¹⁾.

This chapter covers NACE Subsection DL and is referred to as the manufacture of electrical machinery and optical equipment. There are four NACE divisions included, which cover the manufacture of computers and office machinery (NACE Division 30); the manufacture of electrical machinery and equipment (NACE Division 31); the manufacture of radio, television and communication equipment (NACE Division 32); and instrument engineering (NACE Division 33), which includes the manufacture of medical, precision and optical equipment.

NACE

- 30: manufacture of office machinery and computers;
- 31: manufacture of electrical machinery and apparatus n.e.c.;
- 31.1: manufacture of electric motors, generators and transformers;
- 31.2: manufacture of electricity distribution and control apparatus;
- 31.3: manufacture of insulated wire and cable;
- 31.4: manufacture of accumulators, primary cells and primary batteries;
- 31.5: manufacture of lighting equipment and electric lamps;
- 31.6: manufacture of electrical equipment n.e.c.;
- 32: manufacture of radio, television and communication equipment and apparatus;
- 32.1: manufacture of electronic valves and tubes and other electronic components;
- 32.2: manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy;
- 32.3: manufacture of television and radio receivers, sound or video recording or reproducing apparatus and associated goods;
- 33: manufacture of medical, precision and optical instruments, watches and clocks;
- 33.1: manufacture of medical and surgical equipment and orthopaedic appliances;
- 33.2: manufacture of instruments and appliances for measuring, checking, testing, navigating and other purposes, except industrial process control equipment;
- 33.3: manufacture of industrial process control equipment;
- 33.4: manufacture of optical instruments, photographic equipment;
- 33.5: manufacture of watches and clocks.

⁽¹⁾ More information at: <http://www.oecd.org>.

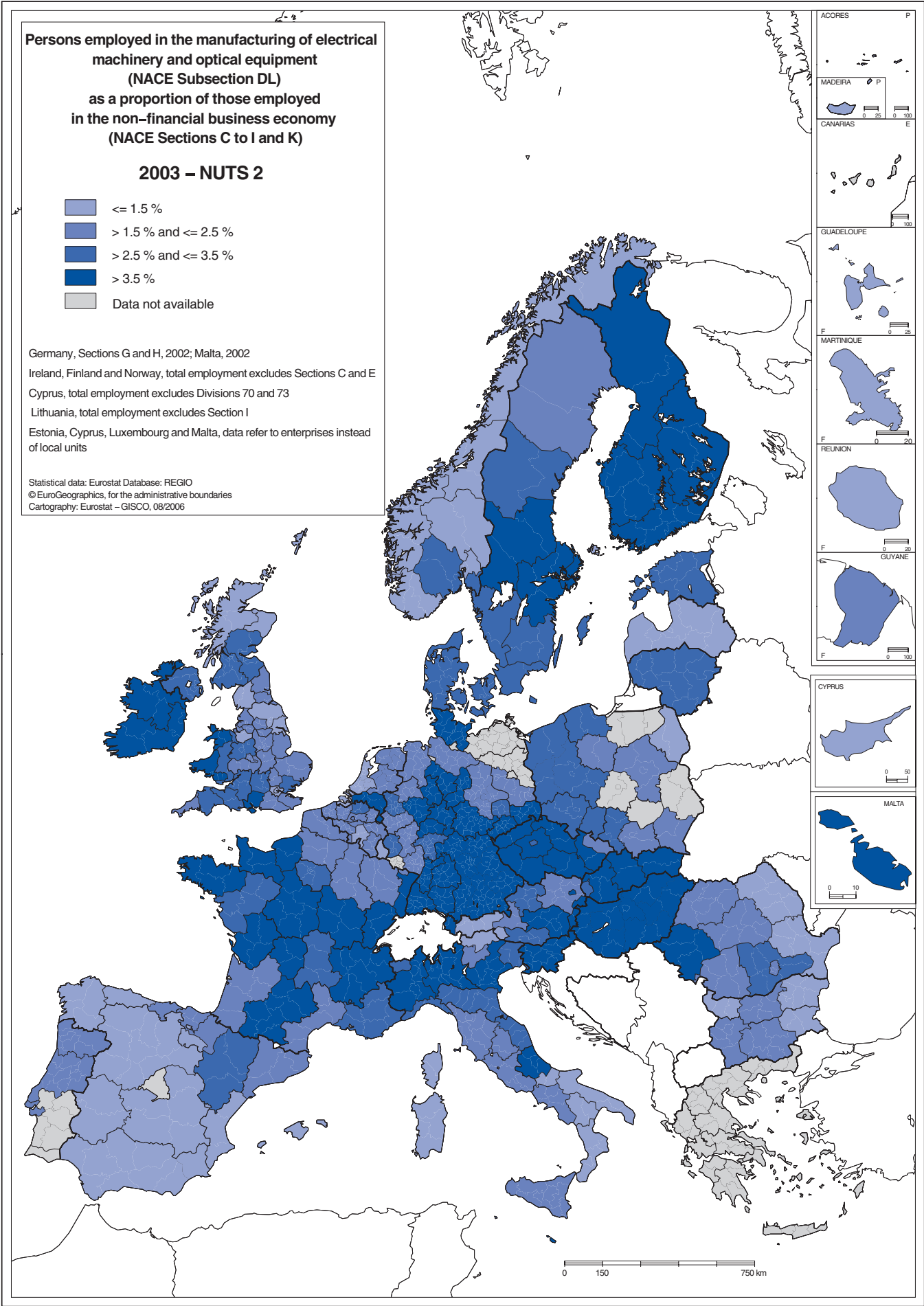


Table 9.1
Manufacture of electrical and optical equipment (NACE Subsection DL)
Structural profile, EU-25, 2003

	Value added (EUR million)	Share of industrial value added (%)	Number of persons employed (thousands)	Share of industrial employment (%)
Electrical and optical equipment	180 396	10.6	3 611	10.3
Instrument engineering (1)	50 000	2.9	998	2.8
Computers and office equipment (2)	13 000	0.8	190	0.5
Electrical machinery and equipment (2)	71 000	4.2	1 600	4.6
Radio, TV & communication equipment (2)	46 000	2.7	800	2.3

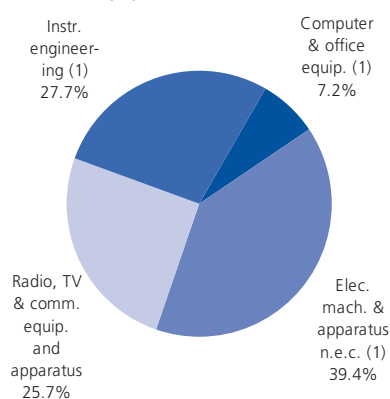
(1) Value added and related share, rounded estimates based on non-confidential data.

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

(3) Number of persons employed and related share, rounded estimates based on non-confidential data.

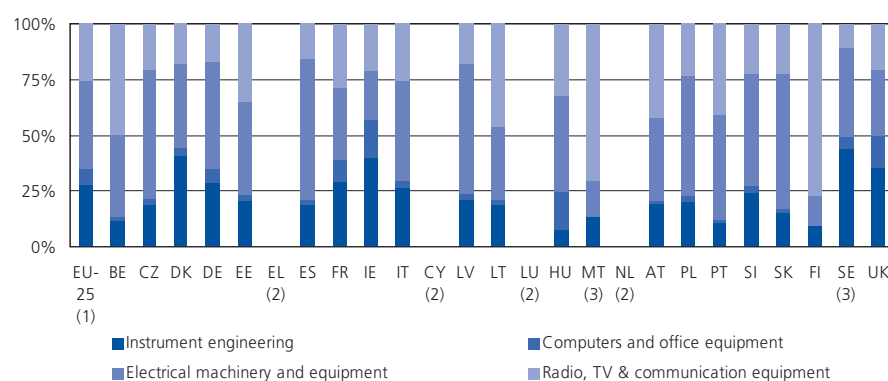
Source: Eurostat (SBS)

Figure 9.1
Manufacture of electrical and optical equipment (NACE Subsection DL)
Breakdown of sectoral value added, EU-25, 2003 (%)



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

Figure 9.2
Manufacture of electrical and optical equipment (NACE Subsection DL)
Breakdown of sectoral value added, 2003 (%)



(1) Rounded estimates based on non-confidential data, except for radio, TV and communication equipment.
 (2) Not available.
 (3) 2002.
 Source: Eurostat (SBS)

As well as facing competition from Asian manufacturers, European manufacturers of electronic consumer goods also face high levels of market saturation, as household equipment rates for some items, such as radios, televisions, or mobile hand-sets are often close to 100 %. New products are continuously launched on the market to stimulate demand, for instance, the recent integration of digital photography, colour displays and MP3 music players within mobile phones. Furthermore, there is increasing customisation of semi-finished products, for example, the installation of software and specific languages on mobile phones. Mobile wireless services (such as WAP ⁽²⁾ portals) and multimedia messaging are creating additional demand. Recent years have also seen the strengthening of the use of broadband communications, services and devices.

⁽²⁾ Wireless Application Protocol (WAP) is an open international standard for applications that use wireless communication; its principal application is to enable access to the Internet from a mobile phone or PDA (personnel digital assistant).

With respect to the legislative framework impacting on this sector, the Low Voltage Directive ⁽³⁾ regulates the free movement of electrical equipment designed for use between 50 and 1 000 volts for alternating current and between 75 and 1 500 volts for direct current, while ensuring a high level of protection to the public and property. According to the European Commission, the Low Voltage Directive needs to be modernised and provided with the flexibility to deal with new risks that were not foreseen at the time of its adoption. Work is on-going to develop a proposal that will give the required effect without changing the core, proven parts of the Directive.

⁽³⁾ Council Directive 73/23/EEC.

The Waste Electrical and Electronic Equipment (WEEE) Directive ⁽⁴⁾ and the Restriction of the Use of Certain Hazardous Substances in Electric and Electronic Equipment (RoHS) ⁽⁵⁾ are two recently introduced legislative texts of the European Parliament and of the Council of importance for electrical machinery and optical equipment manufacturing as well as other sectors. The WEEE Directive came into force in August 2005 with the purpose of encouraging the reuse, recycling and recovery of electrical and electronic equipment waste in order to reduce the amounts being subject to disposal. The RoHS Directive should ensure that after 1 July 2006 restrictions (in terms of maximum concentration values) are in place on the use of hazardous substances (such as lead, cadmium and mercury) in electrical and electronic equipment (see also the impact of these Directives on other non-metallic mineral products in Chapter 6).

⁽⁴⁾ Directive 2002/96/EC.

⁽⁵⁾ Directive 2002/95/EC.

Table 9.2

Manufacture of electrical and optical equipment (NACE Subsection DL)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (58 874.3)	32.6	Germany (1 008.8)	27.9	Malta (27.9)	Hungary (15.8)
2	France (25 898.1)	14.4	France (469.4)	13.0	Finland (24.9)	Malta (15.7)
3	United Kingdom (22 180.8)	12.3	Italy (438.1)	12.1	Hungary (20.1)	Finland (15.4)
4	Italy (19 013.6)	10.5	United Kingdom (386.4)	10.7	Germany (13.0)	Germany (13.2)
5	Finland (8 062.3)	4.5	Czech Republic (184.2)	5.1	France (11.1)	Czech Republic (12.4)

(1) Malta and Sweden, 2002; Greece, not available.

(2) Sweden, provisional; Malta, 2002; Greece, not available.

(3) Malta and Sweden, 2002; Greece and Ireland, not available.

(4) Sweden, provisional; Malta, 2002; Greece and Ireland, not available.

Source: Eurostat (SBS)

STRUCTURAL PROFILE

Information on the structural profile of the electrical and optical equipment manufacturing sector (NACE Subsection DL) in the EU-25 is shown in Table 9.1, specifically in terms of value added and employment. Value added in the EU-25 was EUR 180.4 billion in 2003, or 10.6 % of the industrial (NACE Sections C to E) total. There were 3.6 million persons employed in the EU-25's electrical machinery and optical equipment manufacturing sector, which was equivalent to 10.3 % of the industrial workforce. In relation to other NACE subsections, electrical and optical equipment manufacturing was the third largest activity within the EU-25's industrial economy in 2003, behind the manufacture of food, beverages and tobacco (NACE Subsection DA, see Chapter 2) and the manufacture of basic metals and fabricated metal products (NACE Subsection DJ, see Chapter 7).

Looking in more detail, the largest activity among the four NACE divisions that make-up the electrical machinery and apparatus manufacturing sector was the manufacture of

electrical machinery and equipment (NACE Division 31) - see Figure 9.1, which accounted for two fifths (39.4 %) of EU-25's electrical and optical equipment manufacturing value added in 2003. The second largest subsector was the manufacture of instrument engineering (NACE Division 33), with just over one quarter (27.7 %) of sectoral value added in 2003, closely followed by the manufacture of radio, television and telecommunication equipment and apparatus (NACE Division 32) which also generated one quarter (25.7 %) of the sectoral total. The manufacture of office machinery and computers (NACE Division 30) was the smallest subsector, as it contributed 7.2 % to sectoral value added.

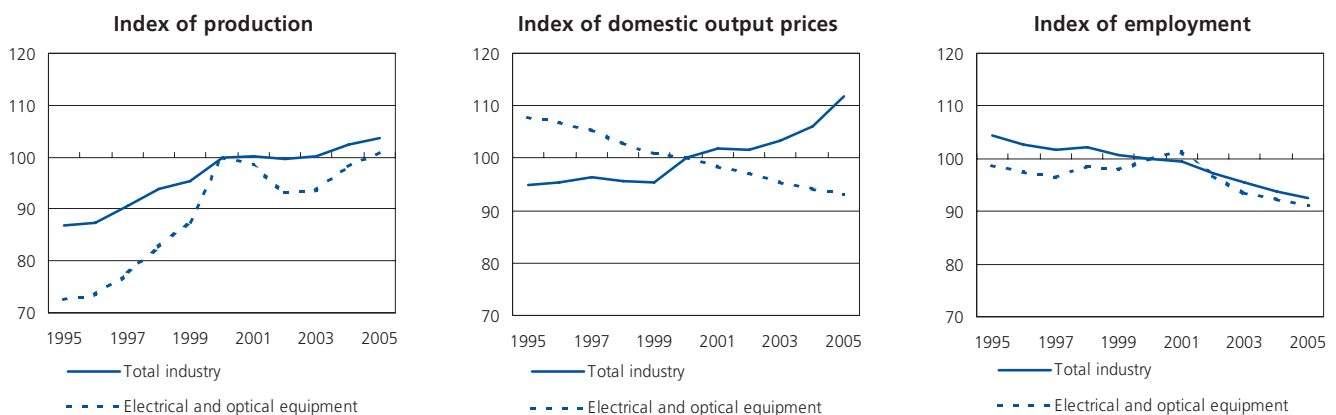
In 2003, Germany was by far the largest player in the EU-25's electrical and optical equipment manufacturing sector in terms of value added, contributing one third (32.6 %) of the EU-25 total, a share that was more than twice as high as for France (14.4 %), the second largest contributor. Wealth creation in the United Kingdom accounted for 12.3 % of the EU-25's value added in 2003, while Italy (10.5 %) was

the only other Member State with a double-digit share of the EU-25 total. Compared with the EU-25 average, value added in the electrical and optical equipment manufacturing sector contributed a relatively high proportion of national industrial value added in Malta (27.9 % in 2002), Finland (24.9 %), and, to a lesser extent, Hungary (20.1 %). Moreover, in Hungary, Malta (2002) and Finland, the electrical and optical equipment manufacturing sector was the largest sector within the industrial economy (at the level of NACE subsections) on the basis of value added data.

The map on page 170 shows the regional specialisation of the electrical and optical equipment manufacturing sector (NACE Subsection DL) based on the non-financial business economy employment share of this sector. The contribution of this sector to the non-financial business economy workforce was particularly high in several regions of Germany, Slovakia and the Czech Republic, as well as in Ireland.

Figure 9.3

Manufacture of electrical and optical equipment (NACE Subsection DL)
Evolution of main indicators, EU-25 (2000=100)

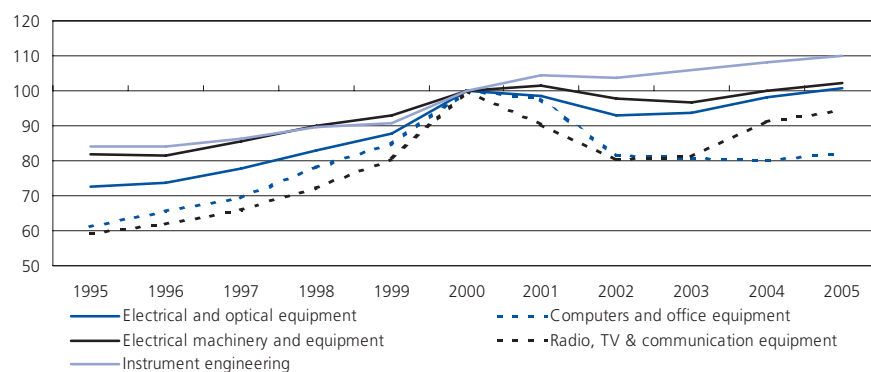


Source: Eurostat (STS)

The developments of the indices of production, domestic output prices and employment for the EU-25, are shown in Figure 9.3 for the period 1995 to 2005. As can be seen, changes (increases or decreases) for the production index for industry as a whole tend to be reflected more than proportionally in the index for electrical and optical equipment manufacturing. Between 1995 and 2000 output increased at a faster pace than for industry as a whole, growing on average by 6.7 % per annum for the manufacture of electrical and optical equipment, compared with an industrial average of 2.8 % per annum. Growth for the manufacture of electrical and optical equipment was driven by a rapid rise in the output of office machinery and computers (NACE Division 30) and radio, television and communication equipment and apparatus (NACE Division 32), rising on average by 10.3 % and 11.0 % per annum respectively during the same period. Nonetheless, in 2001 electrical and optical equipment manufacturing output contracted by 1.4 %, a downward trend that was confirmed and reinforced in 2002, as output fell by 5.6 %. Output stabilised in 2003 (0.6 % growth) and in 2004 and 2005 growth in electrical and optical employment manufacturing was once again more than double the industrial average. In contrast to the general upward trend followed by the index of domestic output prices for industry as a whole, prices for electrical and optical equipment manufacturing fell every year between 1995 (the beginning of the time series) and 2005 in the EU-25, with prices falling on average by 1.5 % per annum. Over the same period, none of the other manufacturing NACE subsections recorded falling prices, and industrial prices rose on average by 1.6 % per annum. The index of employment for the manufacture of electrical and optical equipment in the EU-25 went down on average by 0.8 % per annum between 1995 and 2005, a slower pace than the 1.2 % per annum reduction recorded for the whole of the industrial economy.

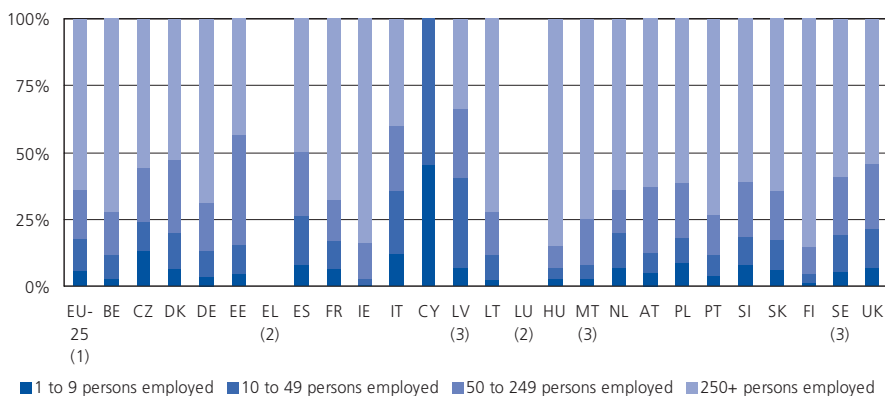
The EU-25's electrical machinery and optical equipment manufacturing sector had a relatively high reliance on large enterprises (with 250 or more persons employed), as these accounted for 63.7 % of sectoral value added in 2003 – see Figure 9.5. The contribution of large enterprises in this sector was 10.1 percentage points above the share of large enterprises within the whole of the industrial economy. In contrast, all of the remaining enterprise size classes recorded a smaller proportion of total value added within the activity of electrical machinery and optical equipment than their shares of industrial value added. This pattern could be observed across three of the four NACE divisions that make-up the electrical and optical equipment

Figure 9.4
Manufacture of electrical and optical equipment (NACE Subsection DL)
Production index, EU-25 (2000=100)



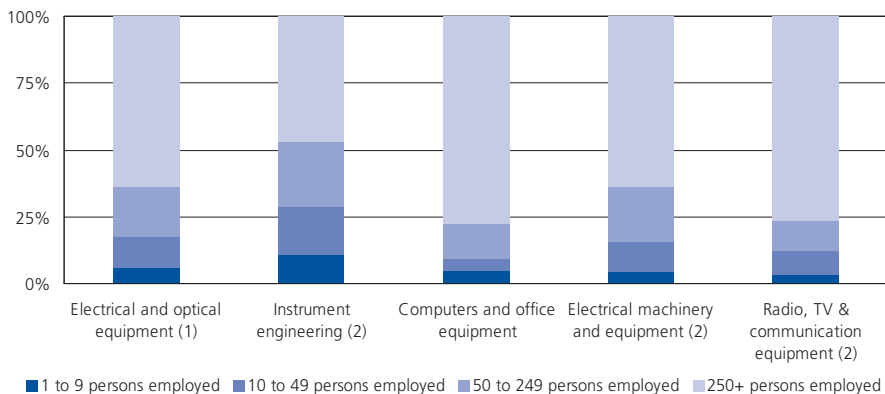
Source: Eurostat (STS)

Figure 9.5
Manufacture of electrical and optical equipment (NACE Subsection DL)
Share of value added by enterprise size class, 2003 (%)



(1) Rounded estimates based on non-confidential data for 1 to 9 and for 50 to 249 persons employed.
(2) Not available.
(3) 2002.
Source: Eurostat (SBS)

Figure 9.6
Manufacture of electrical and optical equipment (NACE Subsection DL)
Share of value added by enterprise size class, EU-25, 2003 (%)



(1) Rounded estimates based on non-confidential data for 1 to 9 and for 50 to 249 persons employed.
(2) Rounded estimates based on non-confidential data.
Source: Eurostat (SBS)

manufacturing sector, the exception being the instrument engineering subsector where large enterprises generated a smaller share (47 %) of value added than the industrial average. The

highest contribution from large enterprises (77.4 % of sectoral value added) was recorded for computers and office equipment manufacturing.

Table 9.3

Manufacture of electrical and optical equipment (NACE Subsection DL)
Labour force characteristics, 2005

	Male		Full-time		Breakdown by age (% share of total)		
	Proportion of those employed (%) (1)	Index (industry=100) (1)	Proportion of those employed (%)	Index (industry=100)	< 30 years	30-49 years	50+ years
EU-25	66.4	93.2	93.5	101.2	22.8	57.6	19.6
BE	69.5	91.9	87.7	98.5	22.1	61.0	16.8
CZ	52.6	81.8	98.1	100.6	30.7	48.7	20.5
DK	64.9	93.3	94.9	105.6	15.8	62.7	21.4
DE	69.1	95.3	90.1	101.8	19.8	57.6	22.6
EE	43.2	77.4	97.6	100.1	30.3	46.3	23.4
EL	74.7	100.7	100.0	101.9	17.4	72.3	:
ES	73.6	97.8	96.2	101.0	27.9	54.9	17.2
FR	64.8	90.7	95.0	101.2	18.7	60.7	20.6
IE	61.2	86.7	95.8	101.2	36.1	55.2	8.7
IT	69.4	97.1	93.1	99.7	24.0	63.3	12.6
CY (2)	78.9	119.7	100.0	105.5	:	71.8	:
LV	36.1	62.5	93.7	97.1	:	46.2	44.1
LT	47.0	88.2	99.0	101.2	23.7	53.6	22.7
LU	63.1	77.4	95.5	101.9	:	73.8	:
HU	49.0	78.6	98.9	101.7	32.8	49.0	18.2
MT	61.2	79.3	95.5	99.9	53.8	41.1	:
NL	77.3	99.9	81.2	111.1	18.3	62.8	18.9
AT	72.2	96.6	90.9	101.0	25.5	56.6	17.9
PL	64.6	93.7	96.9	100.6	30.6	54.0	15.3
PT	50.8	85.7	98.9	101.9	25.5	59.2	15.4
SI	53.8	84.2	96.9	100.9	22.8	61.3	16.0
SK	46.1	72.2	99.3	100.3	40.9	48.3	10.8
FI	69.4	97.0	96.3	101.4	21.8	63.1	15.1
SE	70.2	93.6	90.8	100.8	13.3	57.9	28.8
UK	72.4	96.7	93.8	102.7	17.7	56.5	25.8

(1) Latvia, 2004.

(2) 2004.

Source: Eurostat (LFS)

LABOUR FORCE CHARACTERISTICS

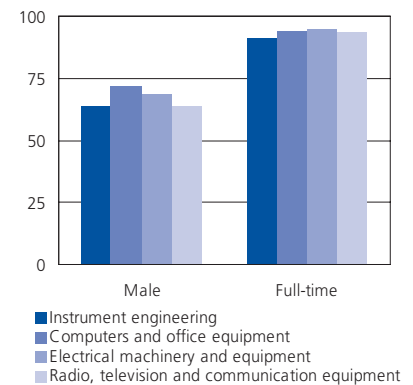
According to Labour Force Survey data for 2005 (see Table 9.3) the structure of the electrical and optical equipment manufacturing sector's workforce was very similar to the industrial average in terms of full-time employment and age composition. Full-time employment rates for electrical and optical equipment manufacturing stood at 93.5 % in the EU-25, which was very close to the equivalent figure for the industrial average (92.4 %). Some 22.8 % of those employed within the electrical and optical equipment manufacturing sector were aged between 15 and 29, while more than half (57.6 %) of the workforce were aged between 30 and 49, leaving 19.6 % of the workforce aged 50 or more. These proportions were similar to those recorded for the whole of the industrial economy, with a somewhat lower propensity to employ persons aged 50 or more within the electrical and optical equipment manufacturing sector (2.5 percentage points below the industrial average). This was largely due to the manufacture of radio, television and

communication equipment, which stood out somewhat from the other three subsectors, as almost one quarter (24.2 %) of its workforce were aged from 15 to 29, balanced by a lower propensity to employ persons aged 50 or over (18.2 %).

There was a relatively wide divergence between the proportion of men employed in the electrical and optical equipment manufacturing workforce compared with the industrial average, 66.4 % and 71.3 % respectively. Among the four NACE divisions that make-up the electrical and optical equipment manufacturing sector, the workforce for the manufacture of computer and office machinery recorded a significantly higher proportion of men (71.7 %) within its workforce, when compared with the remaining three divisions. Moreover, this proportion was slightly above that recorded for industry as a whole.

Figure 9.7

Manufacture of electrical and optical equipment (NACE Subsection DL)
Labour force characteristics, EU-25, 2005 (%)



Source: Eurostat (LFS)

Table 9.4

Manufacture of electrical and optical equipment (NACE Subsection DL)**Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003**

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	3.2	77.1	22.9	50.0	37.6	132.8	8.3
1	Lithuania (10.2)	Malta (91.5)	Luxembourg (39.2)	Ireland (129.7)	Belgium (55.6)	Ireland (348.5)	Ireland (18.0)
2	Estonia (7.8)	Ireland (91.4)	Cyprus (31.4)	Finland (119.0)	Sweden (52.5)	Malta (275.1)	Latvia (17.8)
3	Latvia (7.4)	Hungary (91.0)	Germany (27.8)	Belgium (73.5)	France (48.5)	Finland (266.0)	Finland (16.4)
4	Slovakia (7.3)	Finland (88.7)	Belgium (27.7)	Austria (65.0)	Germany (48.3)	Hungary (235.7)	Poland (15.5)
5	Slovenia (6.4)	Czech Republic (87.0)	Austria (27.2)	Netherlands (63.7)	Austria (48.3)	Latvia (214.1)	Malta (12.7)

(1) Malta and Sweden, 2002; Belgium and Greece, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Malta and Sweden, 2002; Greece, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Malta and Sweden, 2002; Greece, not available.

Source: Eurostat (SBS)

COSTS, PRODUCTIVITY AND PROFITABILITY

In 2003, as shown in Table 9.4, EU ⁽⁶⁾ investment in tangible goods was equivalent to 3.2 % of total operating costs in the electrical and optical equipment manufacturing sector, which was lower than the EU ⁽⁷⁾ industrial average (5.0 %). Among the electrical and optical equipment products manufacturing subsectors, the manufacture of office machinery and computers (NACE Division 30) had a relatively low ratio of investment in tangible goods relative to total operating costs based on available country data – see Subchapter 9.2. Investment as a share of total operating costs was highest for the electrical machinery and optical equipment manufacturing sector in the Baltic Member States (ranging from 7.4 % to 10.2 %), as well as in Slovakia (7.3 %).

Compared with the EU ⁽⁸⁾ industrial average (81.1 %), purchases of goods and services represented a somewhat smaller share of total operating costs in the electrical machinery and optical equipment manufacturing sector (77.1 %), based on available data ⁽⁹⁾, the remaining share being generated by personnel costs. Malta (2002), Ireland and Hungary stood out from the rest of the Member States, as at least 91.0 % of their operating costs within electrical machinery and optical equipment manufacturing was accounted for by purchases of goods and services.

The apparent labour productivity of the EU-25's electrical machinery and optical equipment manufacturing sector was EUR 50 000 per person employed in 2003, very similar to the industrial average (EUR 49 600). Note that in Finland, labour productivity was EUR 45 700 higher than the national, industrial average (EUR 73 300), while in Ireland, apparent labour productivity was EUR 38 300 higher than the national, manufacturing (NACE Section D) average.

Personnel costs for the EU-25's electrical machinery and optical equipment manufacturing sector averaged EUR 37 600 per employee, higher than the industrial average (EUR 32 600). As a result, the EU-25's wage adjusted labour productivity (which can be calculated as apparent labour productivity divided by personnel costs per employee) in this sector was 132.8 %, compared with 152 % for industry as a whole.

Among the subsectors, the highest apparent labour productivity was recorded for the manufacture of office machinery and computers (EUR 70 000 per person employed), where the highest average personnel costs were also recorded (EUR 44 000 per employee).

The gross operating rate for the electrical machinery and optical equipment manufacturing sector was 8.3 % for the EU-25, lower than the industrial average (10.3 %), indicating a lower operating profitability, which was also the case among most of the Member States, the exceptions being Finland, Lithuania and Slovenia.

⁽⁶⁾ EU average, 2003; Malta and Sweden, 2002; excluding Belgium and Greece.

⁽⁷⁾ EU average, 2003; France, Malta and Sweden, 2002; excluding Belgium, Greece and Ireland.

⁽⁸⁾ EU average, 2003; Malta and Sweden, 2002; excluding Greece and Ireland.

⁽⁹⁾ EU average, 2003; Malta and Sweden, 2002; excluding Greece.

Table 9.5
Electrical and optical equipment (CPA Subsection DL)
External trade, EU-25, 2005

	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Electrical and optical equipment	192 217	19.3	241 336	22.4	-49 119	79.6
Medical, precision and optical instruments; watches and clocks	51 015	5.1	42 129	3.9	8 886	121.1
Office machinery and computers	29 172	2.9	69 496	6.4	-40 323	42.0
Electrical machinery and apparatus n.e.c.	44 870	4.5	36 486	3.4	8 384	123.0
Radio, television and communication equipment and apparatus	67 160	6.8	93 226	8.6	-26 066	72.0

Source: Eurostat (Comext)

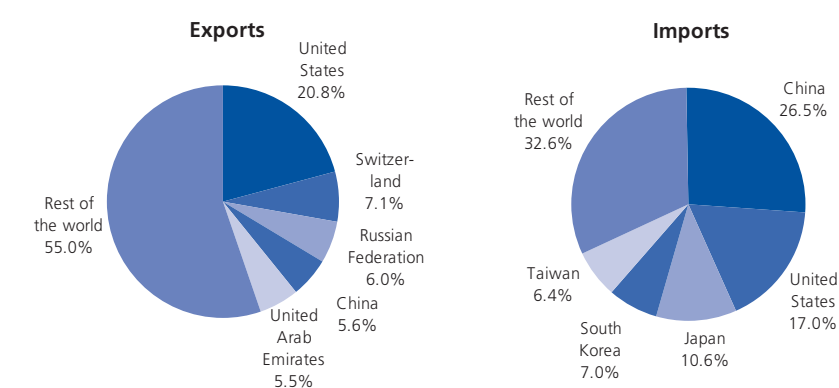
EXTERNAL TRADE

In 2005, the EU-25's exports of electrical and optical equipment (CPA Subsection DL) with non-member countries were valued at EUR 192.2 billion (19.3 % of all industrial exports), while imports amounted to EUR 241.3 billion (22.4 % of all industrial imports), resulting in a trade deficit of EUR 49.1 billion (see Table 9.5).

At a more detailed level, the EU-25 recorded a trade surplus for electrical machinery and apparatus (CPA Division 31) and for medical, precision and optical instruments, watches and clocks (CPA Division 33), valued at EUR 8.4 billion and EUR 8.9 billion respectively, while the deficit for radio, television and communication equipment and apparatus (CPA Division 32) was EUR 26.1 billion, and that for computer and office equipment (CPA Division 30) rose to EUR 40.3 billion.

Between 2000 and 2005 electrical machinery and apparatus, as well as medical, precision and optical instruments, watches and clocks, increased their relative shares of electrical and optical equipment exports. Nevertheless, the highest level of exports in 2005 was recorded for radio, television and communication equipment and apparatus, some EUR 67.2 billion in 2005, or 35.0 % of the total. In contrast to exports, there was no major shift in the structure of EU-25 imports between 2000 and 2005.

Figure 9.8
Electrical and optical equipment (CPA Subsection DL)
Share in extra-EU trade, 2005 (%)



Source: Eurostat (Comext.)

Among the Member States, the largest external trade surplus of electrical and optical equipment was recorded by Germany (EUR 18.8 billion, intra- and extra-EU trade combined) in 2005, followed by Ireland (EUR 12.1 billion), while the largest deficit for these goods was posted by Spain (EUR 15.2 billion). In addition, Italy (EUR 10.7 billion), France (EUR 10.4 billion) and the United Kingdom (EUR 10.1 billion) also recorded large trade deficits for these products.

In Malta, electrical and optical equipment accounted for more than 60 % of the value of national industrial exports, more than three times the EU-25 average of 19.3 %. These products also accounted for 34.9 % of Maltese industrial imports (the EU-25 average was 22.4 %); again the highest share among the Member States.

9.1: INSTRUMENT ENGINEERING

The manufacture of medical, precision and optical instruments, watches and clocks (NACE Division 33) includes activities related to the manufacture of instruments, industrial process control equipment, watches, clocks and photographic equipment (while photo-chemical products, flashbulbs or television cameras are not included). Together these activities are referred to here as instrument engineering.

Instrument engineering manufacturers produce a wide range of goods not only covering scientific and technical instruments (such as electro-diagnostic apparatus and avionic equipment) but also photographic and cinematographic equipment, industrial process control equipment, as well as personal goods (for example, watches and spectacles).

According to latest EUCOMED ⁽¹⁰⁾ data for 2003, the global medical technology market is valued at over EUR 184 billion, of which Europe ⁽¹¹⁾ accounted for about 30 %, a smaller share than the United States (some 43 %).

⁽¹⁰⁾ Eucomed (European Medical Technology Industry Association), more information at: <http://www.eucomed.org>.

⁽¹¹⁾ EU-25, Norway and Switzerland.

STRUCTURAL PROFILE

In 2003, more than one quarter (27.7 %) of the value added created within the EU-25's electrical and optical equipment manufacturing (NACE Subsection DL) sector was generated by instrument engineering (NACE Division 33), some EUR 50.0 billion of value added, which was equal to 2.9 % of industrial (NACE Sections C to E) value added. There were 1.0 million persons employed in the EU-25's instrument engineering sector in 2003, accounting for a slightly lower share of the electrical and optical equipment manufacturing workforce (27.6 %), or 2.8 % of industrial employment.

Across the five NACE groups which make-up instrument engineering, the manufacture of instruments and appliances for measuring, checking, testing, navigating and other purposes, except industrial process control equipment (NACE Group 33.2) generated the largest share of total value added in 2003 (see Table 9.6), contributing around 40 % of the total, closely followed by the manufacture of medical and surgical equipment and orthopaedic appliances (NACE Group 33.1). The next largest subsector was the manufacture of optical instruments and photographic equipment (NACE Group 33.4),

which accounted for slightly more than one tenth of the total. In employment terms, the same two NACE groups were the largest activities in 2003. The smallest activity, both in terms of value added and employment, was the manufacture of watches and clocks (NACE Group 33.5), which created EUR 528.5 million of value added and employed 13 000 persons in the EU-25 in 2003.

A high proportion of instrument engineering activity was concentrated in Germany, some 33.7 % of the EU-25's value added in 2003, while the United Kingdom (15.8 %), France (15.1 %) and Italy (10.0 %) were the next largest Member States (see Table 9.7). In terms of value added specialisation (relative to industry as a whole), Germany, Malta (2002) and Denmark were the most specialised Member States, all generating 3.7 % of their industrial value added in the instrument engineering sector.

Table 9.6

Instrument engineering (NACE Division 33)
Structural profile, EU-25, 2003

	Value added (EUR million)	Share of industrial value added (%)	Number of persons employed (thousands)	Share of industrial employment (%)
Instrument engineering (1)	50 000	2.9	998	2.8
Medical and surgical equipment and orthopaedic appliances	19 683	1.2	426	1.2
Instr. and appl. for measuring, checking, testing, navigating and other purp. (2)	20 000	1.2	350	1.0
Industrial process control equipment (3)	4 001	0.2	90	0.3
Optical instruments and photographic equipment (2)	6 000	0.4	120	0.3
Watches and clocks (3)	529	0.0	13	0.0

(1) Value added and related share, rounded estimates based on non-confidential data.

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

(3) Number of persons employed and related share, rounded estimates based on non-confidential data.

Source: Eurostat (SBS)

Table 9.7

Instrument engineering (NACE Division 33)

Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (16 874.0)	33.7	Germany (320.7)	32.1	Germany (3.7)	Luxembourg (4.9)
2	United Kingdom (7 890.3)	15.8	France (135.9)	13.6	Malta (3.7)	Germany (4.2)
3	France (7 552.3)	15.1	Italy (124.2)	12.4	Denmark (3.7)	Denmark (3.4)
4	Italy (5 020.3)	10.0	United Kingdom (123.9)	12.4	France (3.2)	United Kingdom (3.3)
5	Ireland (2 756.6)	5.5	Poland (49.6)	5.0	United Kingdom (3.2)	Malta (3.3)

(1) Malta, the Netherlands and Sweden, 2002; Greece and Cyprus, not available.

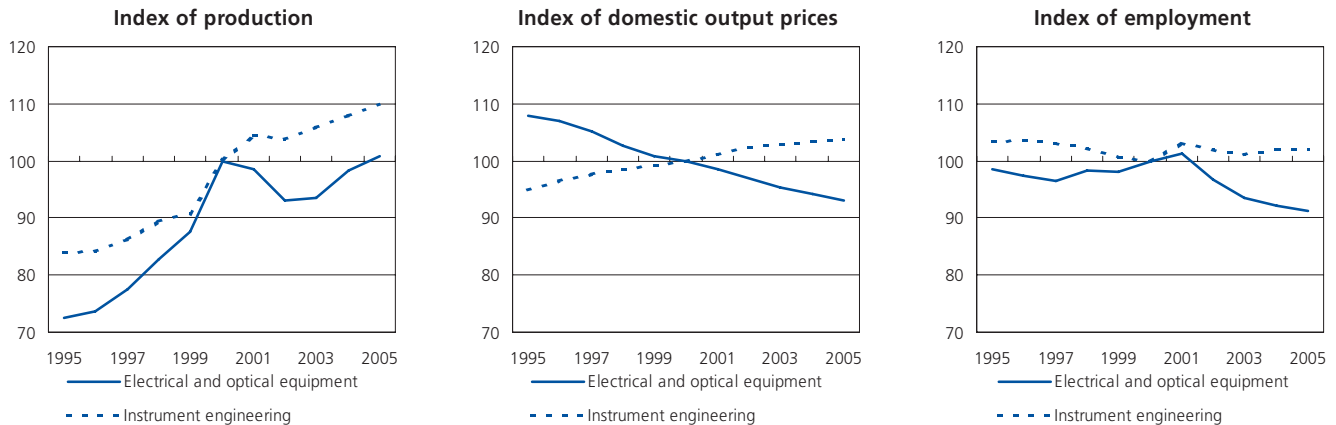
(2) Sweden, provisional; Malta, 2002; Greece and Cyprus, not available.

(3) Malta and Sweden, 2002; Greece, Ireland, Cyprus and the Netherlands, not available.

(4) Sweden, provisional; Malta, 2002; Greece, Ireland and Cyprus, not available.

Source: Eurostat (SBS)

Figure 9.9

Instrument engineering (NACE Division 33)
Evolution of main indicators, EU-25 (2000=100)


Source: Eurostat (STS)

Annual short-term statistics (see Figure 9.9) showed a fairly typical evolution for an industrial activity as regards the trend of the index of production for instrument engineering from 1995 to 2005. Output grew on average by 2.7 % per annum in the EU-25 (1.8 % per annum for the industrial average). Compared with the manufacture of electrical machinery and optical equipment as a whole, instrument engineering output rose at a slower pace between 1995 and 2000. However, faster growth was recorded during the years from 2001 to 2005 for instrument engineering, with output rising by at least 1.9 % every year except for 2002 when there was a 0.8 % reduction in the level of production.

Domestic output prices for instrument engineering rose on average by 0.9 % per annum over the period 1995 to 2005, with a gradual progression that was unmarked by major changes, in contrast to general downward trend (averaging 1.5 % per annum) for the manufacture of electrical machinery and optical equipment as a whole.

Table 9.8

Production value of selected items of medical, precision and optical instruments; watches and clocks (CPA Division 33), EU-25, 2004 (EUR million)

	Prodcom code(s)	
Apparatus based on the use of X-rays, (incl. radiography and radiotherapy apparatus)	33.10.11.15 and 33.10.11.19	3 259
Needles, catheters, cannulae and the like used in medical, surgical, dental or veterinary sciences (excl. tubular metal needles and needles for sutures)	33.10.15.17	2 493
Instruments and appliances for aeronautical or space navigation (excl. compasses)	33.20.11.55	2 667

Source: Eurostat (PRODCOM)

Table 9.9

Instrument engineering (NACE Division 33)
Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	3.4	69.2	30.8	50.0	35.0	136.0	13.0
1	Latvia (16.3)	Ireland (81.7)	Luxembourg (39.9)	Ireland (138.3)	Sweden (49.4)	Ireland (373.6)	Ireland (36.2)
2	Lithuania (10.0)	Slovakia (79.2)	Germany (36.5)	Denmark (76.1)	Denmark (47.4)	Malta (201.0)	Malta (24.8)
3	Czech Republic (8.4)	Latvia (77.5)	Austria (35.4)	United Kingdom (63.7)	France (46.7)	Latvia (191.8)	Poland (19.9)
4	Slovenia (7.5)	Estonia (76.6)	Denmark (34.2)	Finland (63.0)	Belgium (43.8)	Lithuania (164.8)	United Kingdom (17.9)
5	Estonia (6.2)	Czech Republic (76.3)	United Kingdom (32.9)	Sweden (58.3)	Finland (41.5)	United Kingdom (162.7)	Denmark (17.8)

(1) Malta and Sweden, 2002; Belgium, Greece, Cyprus and the Netherlands, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Malta and Sweden, 2002; Greece, Cyprus and the Netherlands, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Malta and Sweden, 2002; Greece, Cyprus and the Netherlands, not available; EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

Table 9.10

Medical, precision and optical instruments; watches and clocks (CPA Division 33)
External trade, EU-25, 2005 (1)

	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Medical, precision and optical instruments; watches and clocks	51 015	5.1	42 129	3.9	8 886	121.1
Medical and surgical equipment and orthopaedic appliances	20 154	2.0	16 491	1.5	3 663	122.2
Instr. and appl. for measuring, checking, testing, navigating and other purp.	21 311	2.1	15 279	1.4	6 032	139.5
Optical instruments and photographic equipment	7 875	0.8	5 765	0.5	2 110	136.6
Watches and clocks	1 666	0.2	4 146	0.4	-2 481	40.2

(1) Differences between the components and the aggregate values may be attributed to secret external trade flows.
Source: Eurostat (Comext)

COSTS, PRODUCTIVITY AND PROFITABILITY

In 2003, investment in tangible goods relative to total operating costs was 3.4 % in the EU ⁽¹²⁾ for instrument engineering, therefore very close to the EU ⁽¹³⁾ average for electrical machinery and optical equipment manufacturing as a whole (3.2 %) – see Table 9.9. The share of personnel costs in total operating costs was 30.8 % in the EU ⁽¹⁴⁾, the highest proportion among the four activities (NACE divisions) that make-up electrical machinery and optical equipment manufacturing.

Apparent labour productivity within the EU-25's instrument engineering sector was EUR 50 000 per person employed in 2003, while average personnel costs were EUR 35 000 per employee. As such, apparent labour productivity was similar to the electrical and optical equipment manufacturing average, while average personnel costs were EUR 2 600 per employee below the average. Combining these two ratios led to a wage adjusted labour productivity ratio of 136 % for instrument engineering in 2003, which was 3.2 percentage points above the electrical machinery and optical equipment manufacturing average.

⁽¹²⁾ EU average, 2003; Malta and Sweden, 2002; excluding Belgium, Greece, Cyprus and the Netherlands.

⁽¹³⁾ EU average, 2003; Malta and Sweden, 2002; excluding Belgium and Greece.

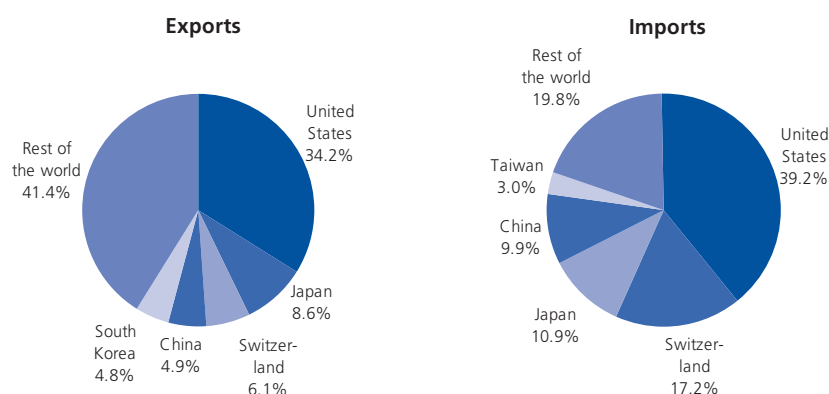
⁽¹⁴⁾ EU average, 2003; Malta and Sweden, 2002; excluding Greece, Cyprus and the Netherlands.

EXTERNAL TRADE

EU-25 exports to non-member countries of medical, precision and optical instruments, watches and clocks (CPA Division 33) were valued at EUR 51.0 billion in 2005, which was almost EUR 9 billion higher than the value of imports (EUR 42.1 billion) – see Table 9.10. These figures represented respectively 26.5 % of electrical and optical equipment (CPA Subsection DL) exports and 17.5 % of electrical and optical equipment imports. The largest trade surplus (intra- and extra-EU trade) among the Member States was recorded in Germany, at EUR 15.3 billion in 2005, while Ireland (EUR 5.0 billion) and the Netherlands (EUR 3.5 billion) had the next largest trade surpluses. At the other end of the scale, Spain and Italy reported the largest trade deficits for these goods (EUR 3.5 and 1.2 billion respectively).

Figure 9.10

Medical, precision and optical instruments; watches and clocks (CPA Division 33)
Share in extra-EU trade, 2005 (%)



Source: Eurostat (Comext)

9.2: COMPUTERS AND OFFICE EQUIPMENT

This subchapter covers the manufacture of office machinery, computers and peripherals, such as printers and terminals (NACE Division 30). Note that the manufacture of electronic games is classified under toys and is covered within Subchapter 13.2.

The computer and office equipment sector is characterised by a competitive environment, competition stemming mainly from south-east Asia, explaining why computers and office equipment represent a relatively small share of the EU-25's electrical machinery and optical equipment manufacturing sector. Some former computer manufacturers have reoriented their activities moving more towards service providers in the form of consultancy (see Subchapter 22.1).

STRUCTURAL PROFILE

In 2003, the EU-25's computer and office equipment manufacturing sector (NACE Division 30) generated EUR 13.0 billion of value added, which was equal to 7.2 % of the electrical and optical equipment manufacturing (NACE Subsection DL) total, or 0.8 % of industrial (NACE Sections C to E) value added; as such, it was the smallest activity (at the NACE division level) within the electrical and optical equipment manufacturing sector. There were 190 000 persons employed in the EU-25's computer and office equipment manufacturing sector in 2003, which was equivalent to 5.3 % of the electrical and optical equipment manufacturing workforce or 0.5 % of industrial employment.

The manufacture of computers and other information processing equipment (NACE Class 30.02) employed more than four out of every five members of the EU-25's computer and office equipment manufacturing sector in 2003, the remaining share being accounted for by the manufacture of office machinery (NACE Class 30.01).

Germany, the United Kingdom and France together accounted for 73.1 % of the EU-25's value added in the manufacture of computer and office equipment in 2003 (see Table 9.11), a relatively high share when compared with the 59.3 % proportion that was registered for the manufacture of electrical machinery and optical equipment as a whole. Germany alone contributed 28.3 % of the EU-25 total, followed by the United Kingdom (24.6 %) and France (20.2 %), while no other Member State ⁽¹⁵⁾ contributed more than 10 % to the EU-25 total.

⁽¹⁵⁾ Malta and Sweden, 2002; Greece and Luxembourg, not available.

Table 9.11
Manufacture of computers and office equipment (NACE Division 30)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (3 680.2)	28.3	Germany (43.6)	22.9	Hungary (3.4)	Hungary (1.4)
2	United Kingdom (3 196.2)	24.6	United Kingdom (34.9)	18.4	United Kingdom (1.3)	United Kingdom (0.9)
3	France (2 631.7)	20.2	France (29.2)	15.4	France (1.1)	France (0.7)
4	Ireland (1 179.1)	9.1	Italy (16.2)	8.5	Germany (0.8)	Germany (0.6)
5	Italy (631.6)	4.9	Ireland (13.1)	6.9	Netherlands (0.5)	Czech Republic (0.6)

(1) Malta and Sweden, 2002; Greece and Luxembourg, not available.

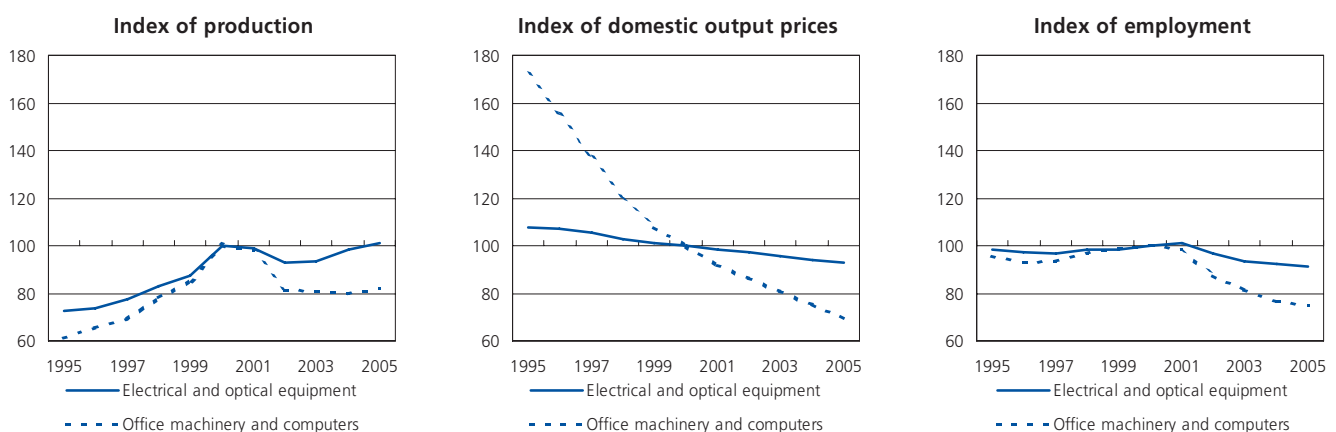
(2) Sweden, provisional; Malta, 2002; Greece, Luxembourg and the Netherlands, not available.

(3) Malta and Sweden, 2002; Greece, Ireland and Luxembourg, not available.

(4) Sweden, provisional; Malta, 2002; Greece, Ireland, Luxembourg and the Netherlands, not available.

Source: Eurostat (SBS)

Figure 9.11
Manufacture of computers and office equipment (NACE Division 30)
Evolution of main indicators, EU-25 (2000=100)



Source: Eurostat (STS)

However, compared with the EU-25 average, Hungary was by far the most specialised Member State in the computer and office equipment manufacturing sector in 2003, as this activity accounted for 3.4 % of Hungarian industrial value added, compared with an EU-25 average of 0.8 %. The next highest value added specialisation ratios ⁽¹⁶⁾ were recorded for the United Kingdom (where computer and office equipment manufacturing generated 1.3 % of industrial value added) and France (1.1 %). While no recent information is available as to the contribution of computer and office equipment manufacturing to Irish industrial value added, this activity was responsible for 3.1 % of Irish manufacturing (NACE Section D) value added, compared with an EU-25 average of 0.9 %. This relatively high share for Ireland is at least in part explained by Ireland acting as an entrance point into the EU-25 for some large international manufacturers.

Annual short-term statistics show that the index of production for the EU-25's computer and office equipment manufacturing sector rose at a fast pace over the years 1995 to 2000, as output grew on average by 10.3 % per annum, well above the 6.7 % average for electrical and optical equipment manufacturing (NACE Subsection DL) – see Figure 9.11. However, mirroring the contraction in many technology related activities, the production index for the manufacture of computer and office equipment fell during consecutive years from 2001 to 2004, with a particularly pronounced reduction in the level of production in 2002, down 16.8 %, after which output fell at a much slower pace in 2003 and 2004 (by no more than 1.0 %). In 2005 there were signs of recovery, as output increased by 2.8 %; one of the fastest rates of growth recorded by any of the industrial NACE divisions.

⁽¹⁶⁾ Malta and Sweden, 2002; Greece, Ireland and Luxembourg, not available.

Table 9.12

Production value of selected items of office machinery and computers (CPA Division 30), EU-25, 2004 (EUR million)

	Prodcom code	
Photocopiers incorporating an optical system, thermocopiers (excl. electrostatic photocopiers and thermo-printers)	30.01.21.85	690
Printers	30.02.16.30	776
Hard and floppy disk drives	30.02.17.57	684

Source: Eurostat (PRODCOM)

Computer specifications are constantly improving, which makes price comparisons over time in this area particularly difficult. Nevertheless, in contrast to the large majority of industrial NACE divisions, the domestic output price index for the manufacture of computers and office equipment in the EU-25 fell each year from 1995 to 2005, with an average reduction of 8.7 % per annum.

COSTS, PRODUCTIVITY AND PROFITABILITY

For the manufacture of computers and office equipment, investment in tangible goods was low relative to operating costs (1.6 %) in the EU ⁽¹⁷⁾. Indeed, the level of this ratio was equivalent to half the EU ⁽¹⁸⁾ average for electrical machinery and optical equipment manufacturing (3.2 %) – see Table 9.13. In the computer and office equipment manufacturing sector some 12.8 % of total operating costs were accounted for by personnel costs in the EU ⁽¹⁹⁾, the lowest share recorded in 2003 among the four NACE divisions that make-up electrical machinery and optical equipment manufacturing.

Apparent labour productivity was EUR 70 000 per person employed in the EU-25's computer and office equipment manufacturing sector, and average personnel costs per employee were EUR 44 000 in 2003. Both of these figures were above the levels recorded for the three other NACE divisions covered by electrical and optical equipment manufacturing. When adjusted for the share of employees in persons employed, value added in the computer and office equipment manufacturing sector covered personnel costs by 160 %, again the highest value among the NACE divisions within electrical machinery and optical equipment manufacturing.

The gross operating rate is one measure of operating profitability, and in the EU-25's computer and office equipment manufacturing sector this ratio stood at 7.7 % in 2003. As such, the gross operating surplus represented a lower proportion of turnover than for electrical and optical equipment manufacturing as a whole (8.3 %).

⁽¹⁷⁾ EU average, 2003; Malta and Sweden, 2002; excluding Belgium, Greece, Cyprus, Latvia, Luxembourg and the Netherlands.

⁽¹⁸⁾ EU average, 2003; France, Malta and Sweden, 2002; excluding Belgium, Greece and Ireland.

⁽¹⁹⁾ EU average, 2003; Malta and Sweden, 2002; excluding Greece, Cyprus and Luxembourg.

Table 9.13

Manufacture of computers and office equipment (NACE Division 30)

Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (4)	Wage adjusted labour productivity (%) (4)	Gross operating rate (%) (5)
EU-25	1.6	87.2	12.8	70.0	44.0	160.0	7.7
1	Slovakia (5.3)	Malta (100.0)	Sweden (26.2)	United Kingdom (91.5)	France (66.2)	Hungary (418.3)	Hungary (19.9)
2	Portugal (3.6)	Czech Republic (97.4)	Denmark (25.6)	France (90.2)	Germany (60.3)	United Kingdom (241.4)	United Kingdom (17.5)
3	Lithuania (3.5)	Ireland (96.5)	Netherlands (20.5)	Ireland (90.0)	Belgium (48.6)	Ireland (230.9)	Lithuania (15.4)
4	Italy (3.4)	Slovakia (94.8)	Spain (18.4)	Germany (84.4)	Denmark (48.2)	Lithuania (229.9)	Denmark (13.2)
5	Hungary (2.9)	Estonia (94.7)	France (17.7)	Denmark (75.3)	Sweden (44.2)	Latvia (224.5)	Belgium (11.6)

(1) Malta and Sweden, 2002; Belgium, Greece, Cyprus, Latvia, Luxembourg and the Netherlands, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Malta and Sweden, 2002; Greece, Cyprus and Luxembourg, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Malta and Sweden, 2002; Greece, Cyprus, Luxembourg and the Netherlands, not available; EU-25, rounded estimate based on non-confidential data.

(4) Sweden, 2002; Greece, Cyprus, Luxembourg, Malta and the Netherlands, not available; EU-25, rounded estimate based on non-confidential data.

(5) Malta and Sweden, 2002; Greece, Cyprus, Luxembourg, not available; EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

Table 9.14

Computers and office machinery (CPA Division 30)

External trade, EU-25, 2005

	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Computers and office machinery	29 172	2.9	69 496	6.4	-40 323	42.0
Office machinery and parts thereof	2 536	0.3	4 692	0.4	-2 156	54.0
Computers and other information processing equipment	26 636	2.7	64 804	6.0	-38 167	41.1

Source: Eurostat (Comext)

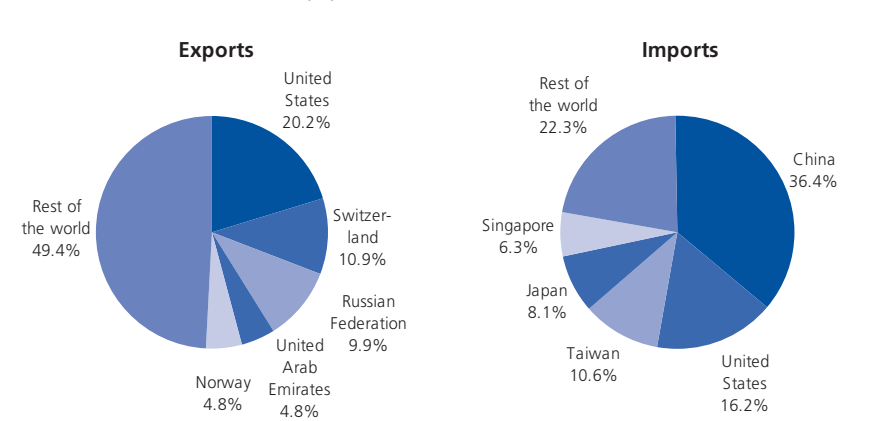
EXTERNAL TRADE

In 2005, the EU-25 ran a trade deficit of EUR 40.3 billion for office machinery and computers (CPA Division 30) as a result of EUR 69.5 billion of imports compared with EUR 29.2 billion of exports (see Table 9.14). In more detail, computers and other information processing equipment (CPA Class 30.02) represented 91.3 % of total exports, while accounting for 93.2 % of total imports in 2005, the remaining shares concerning office machinery and parts thereof (CPA Class 30.01). Among the Member States, the Netherlands was the largest trader, exporting (intra- and extra-EU trade combined) EUR 35.0 billion worth of office machinery and computers and importing EUR 33.8 billion worth of these products, while Germany was the second largest trader (EUR 21.6 billion and EUR 28.6 billion for exports and imports respectively). In contrast to most of the Member States recording a trade deficit for office machinery and computers in 2005, six countries stood out as they registered trade surpluses for these products, namely Ireland, the Netherlands, the Czech Republic, Hungary, Luxembourg and Slovakia.

Figure 9.12

Computers and office machinery (CPA Division 30)

Share in extra-EU trade, 2005 (%)



Source: Eurostat (Comext)

9.3: ELECTRICAL MACHINERY AND EQUIPMENT

This subchapter covers NACE Division 31 which includes the manufacture of electric motors, generators, transformers, electricity distribution equipment, insulated wires and cables, optical fibres for coded data transmission, batteries, lighting equipment, and other electrical equipment. The manufacture of metal cables, which are not used as a conductor of electricity, is not included.

Demand for electrical machinery and equipment products is largely driven by investment activities of other enterprises (and the public administration), while a small share of production is destined for households, for example, the after-sales market for car batteries or household lighting equipment.

According to a report on EU competitiveness published by the European Commission ⁽²⁰⁾, only two electro-technical activities offer expansion opportunities in Europe in the long term, namely electric motors, generators and transformers (NACE Group 31.1), and electrical equipment n.e.c. (NACE Group 31.6), which includes ignition wiring sets, sparking plugs and other electrical equipment for engines and vehicles as well as permanent magnets and electrical insulators among other equipment. As regards the manufacture of accumulators and batteries and lighting equipment, there is a progressive move towards the delocalisation of western European production to eastern Europe and other non-member countries (particularly in Asia).

⁽²⁰⁾ EU engineering competitive update - July 2006, see http://ec.europa.eu/enterprise/electr_equipment/engin/engineer_compet_2006.pdf.

STRUCTURAL PROFILE

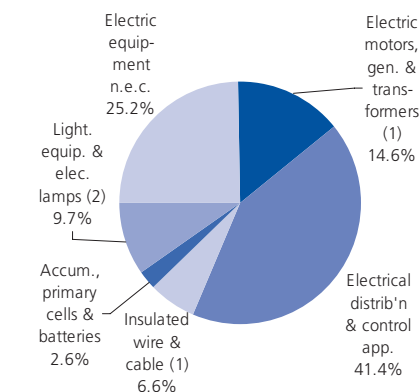
In 2003, the EU-25's manufacture of electrical machinery and equipment (NACE Division 31) generated EUR 71.0 billion of value added, therefore contributing 39.4 % of the added value within electrical and optical equipment manufacturing (NACE Subsection DL), or 4.2 % of industrial (NACE Sections C to E) value added – hence, this activity was the largest among the four NACE divisions covered within this chapter. There were 1.6 million persons employed in the electrical machinery and equipment manufacturing sector in 2003, which represented 39.4 % of the electrical machinery and optical equipment workforce, or 4.6 % of the industrial total.

At a more detailed level, the largest subsector, in terms of its contribution to EU-25 value added, was the manufacture of electricity distribution and control apparatus (NACE Group 31.2) which contributed EUR 28.4 billion of value added to the electrical machinery and equipment manufacturing sector, while the miscellaneous category of electrical equipment n.e.c. (NACE Group 31.6) generated EUR 17.3 billion. Figure 9.13 shows the relative importance of these subsectors in percentage terms.

Germany was by far the leading producer of electrical machinery and equipment within the EU-25 in 2003, accounting for 40.1 % of the wealth created, almost four times the share recorded by Italy (11.9 %), the second largest contributor, closely followed by France (11.6 %); these were the only Member States to generate more than 10 % of EU-25 value added. In terms of specialisation, the electrical machinery and equipment manufacturing sector accounted for the largest shares of national industrial value added in Hungary (8.6 %), Germany (6.3 %) and the Czech Republic (5.9 %).

Figure 9.13

Manufacture of electrical machinery and equipment (NACE Division 31)
Breakdown of sectoral value added, EU-25, 2003 (%)



(1) Rounded estimate based on non-confidential data.
(2) 2002.

Source: Eurostat (SBS)

The index of production for the manufacture of electrical machinery and equipment in the EU-25 generally followed the upward trend observed for electrical and optical equipment manufacturing during the years 1995 to 2005. The main exceptions were the years 1996, 2002 and 2003 when the output of electrical machinery and equipment manufacturing contracted by at least 0.3 %. As a result, the index of production grew on average by 2.2 % per annum for electrical machinery and equipment manufacturing between 1995 and 2005, which was 1.2 percentage points lower than the average for the whole of the electrical and optical equipment manufacturing sector.

Table 9.15

Manufacture of electrical machinery and equipment (NACE Division 31)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (28 442.9)	40.1	Germany (493.0)	30.8	Hungary (8.6)	Slovakia (8.3)
2	Italy (8 474.5)	11.9	Italy (203.1)	12.7	Germany (6.3)	Czech Republic (7.5)
3	France (8 263.9)	11.6	France (163.5)	10.2	Czech Republic (5.9)	Hungary (7.4)
4	United Kingdom (6 545.6)	9.2	United Kingdom (143.7)	9.0	Slovenia (5.6)	Germany (6.4)
5	Spain (4 298.1)	6.1	Czech Republic (111.0)	6.9	Malta (4.7)	Slovenia (5.6)

(1) Luxembourg, Malta and Sweden, 2002; Greece, not available.

(2) Sweden, provisional; Luxembourg and Malta, 2002; Greece, not available.

(3) Luxembourg, Malta and Sweden, 2002; Greece and Ireland, not available.

(4) Sweden, provisional; Luxembourg and Malta, 2002; Greece and Ireland, not available.

Source: Eurostat (SBS)

The domestic output price index for electrical machinery and equipment manufacturing rose on average by 0.6 % per annum between 1995 and 2005, although during this period the price index recorded three consecutive reductions starting in 1997.

Table 9.16

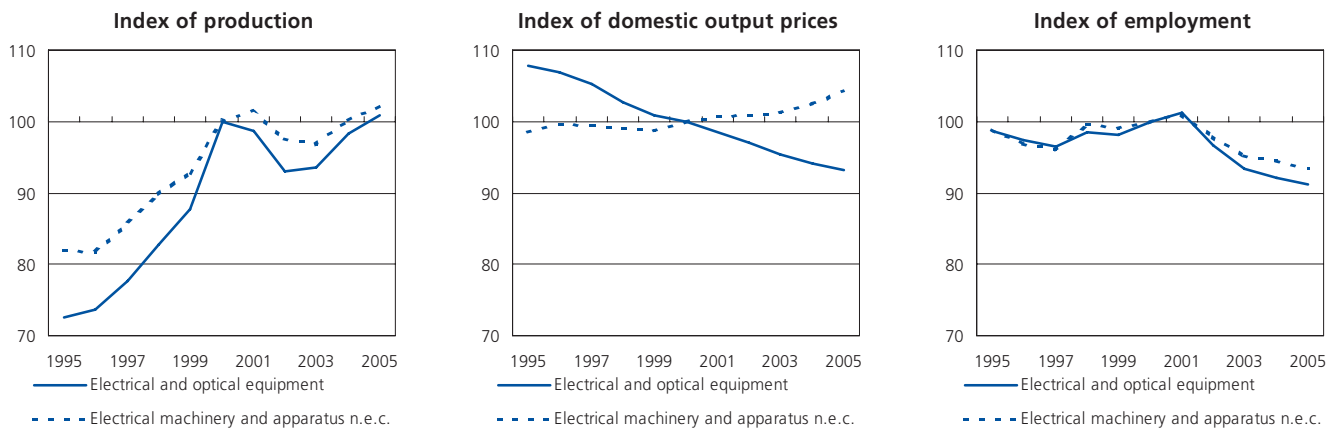
Production value of selected items of electrical machinery and apparatus n.e.c. (CPA Division 31), EU-25, 2004 (EUR million)

	Prodcom code	
Generating sets incl. turbo-generators, generating sets for welding equipt. without heads/appliances excl. with compression, internal & spark-ignition combustion piston engines	31.10.32.50	4 160
Plugs and sockets for a voltage <= 1 kV (excl. for coaxial cables, for printed circuits)	31.20.27.50	3 501
Installation of electricity distribution and control apparatus	31.20.91.00	3 910
Insulated electric conductors whether or not fitted with connectors, for a voltage > 80 V but <= 1 000 V	31.30.13.70	6 447
Insulated ignition wiring sets and other wiring sets of a kind used in vehicles, aircraft or ships	31.61.10.00	6 834

Source: Eurostat (PRODCOM)

Figure 9.14

**Manufacture of electrical machinery and equipment (NACE Division 31)
Evolution of main indicators, EU-25 (2000=100)**



Source: Eurostat (STS)

Table 9.17

Manufacture of electrical machinery and equipment (NACE Division 31)

Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	3.5	74.0	26.0	44.1	34.9	127.0	7.6
1	Estonia (9.1)	Lithuania (84.8)	Luxembourg (38.2)	Ireland (139.1)	Belgium (51.1)	Ireland (414.0)	Ireland (36.6)
2	Slovakia (8.6)	Poland (83.9)	Cyprus (30.5)	Netherlands (65.5)	Germany (50.3)	Hungary (220.8)	Malta (22.8)
3	Malta (8.0)	Hungary (83.6)	Germany (29.6)	Austria (62.9)	Netherlands (44.2)	Latvia (215.7)	Latvia (17.2)
4	Slovenia (7.9)	Latvia (83.5)	Malta (29.5)	Belgium (61.4)	Austria (43.6)	Malta (203.0)	Hungary (16.8)
5	Czech Republic (6.5)	Ireland (81.6)	Belgium (28.6)	Germany (57.7)	France (43.2)	Poland (199.1)	Poland (16.1)

(1) France, Malta and Sweden, 2002; Belgium, Greece and Luxembourg, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Luxembourg, Malta and Sweden, 2002; Greece, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Luxembourg, Malta and Sweden, 2002; Greece, not available; EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

COSTS, PRODUCTIVITY AND PROFITABILITY

Information on cost, productivity and profitability indicators are contained in Table 9.17, which shows that investment in tangible goods was equivalent to 3.5 % of total operating costs in the EU ⁽²¹⁾ in 2003. Total operating costs in the EU ⁽²²⁾ were split between purchases of goods and services that accounted for almost three quarters (74.0 %) of the total and personnel costs (26.0 %). Both the ratio of investment in tangible goods relative to total operating costs and the breakdown of total operating costs were close to the electrical machinery and optical equipment manufacturing sector averages.

EU-25 apparent labour productivity (EUR 44 100 per person employed) and average personnel costs (EUR 34 900 per employee) for the manufacture of electrical machinery and equipment were both below their average levels for the whole of electrical and optical equipment manufacturing. The wage adjusted labour productivity ratio was 127 % for the EU-25's electrical machinery and equipment manufacturing sector in 2003, which was 5.8 percentage points lower than the average for electrical and optical equipment manufacturing.

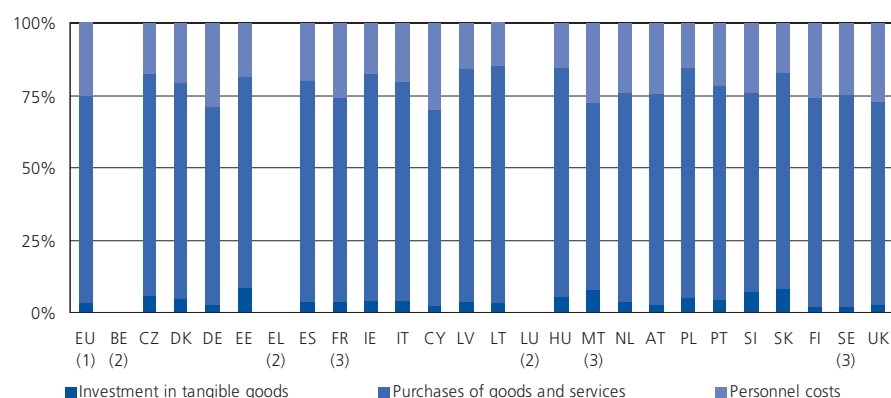
The gross operating rate (calculated as the gross operating surplus in relation to turnover) stood at 7.6 % for the EU-25's electrical machinery and equipment manufacturing sector in 2003, slightly below the average rate for the whole of electrical and optical equipment manufacturing (8.3 %).

⁽²¹⁾ EU average, 2003; France, Malta and Sweden, 2002; excluding Belgium, Greece and Luxembourg.

⁽²²⁾ EU average, 2003; Luxembourg, Malta and Sweden, 2002; excluding Greece.

Figure 9.15

Manufacture of electrical machinery and equipment (NACE Division 31) Structure of costs, 2003 (%)



(1) EU average based on available data for 2002 and 2003.

(2) Not available.

(3) 2002.

Source: Eurostat (SBS)

Among the Member States ⁽²³⁾, Ireland stood out in 2003, recording high levels of apparent labour productivity (EUR 139 100 per person employed), wage adjusted labour productivity (414 %) and gross operating rate (36.6 %) for the electrical machinery and equipment manufacturing sector. However, these figures for the Irish sector were in line with those recorded for the whole of the Irish electrical machinery and optical equipment manufacturing sector.

⁽²³⁾ Luxembourg, Malta and Sweden, 2002; Greece, not available

Table 9.18

Electrical machinery and apparatus n.e.c. (CPA Division 31) External trade, EU-25, 2005

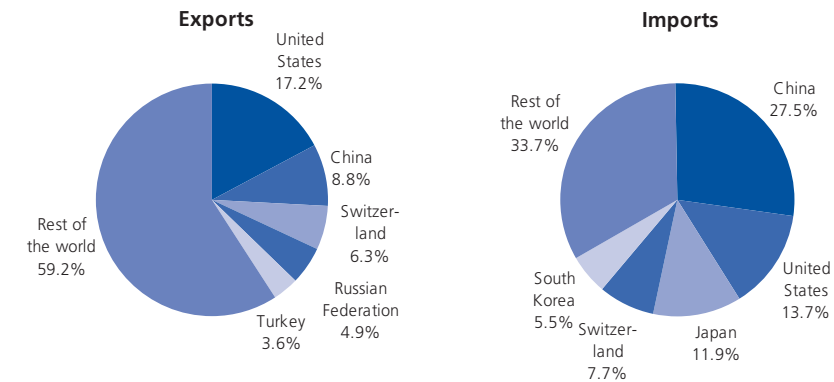
	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Electrical machinery and apparatus n.e.c.	44 870	4.5	36 486	3.4	8 384	123.0
Electric motors, generators and transformers	12 994	1.3	7 615	0.7	5 379	170.6
Electricity distribution and control apparatus	15 371	1.5	7 304	0.7	8 068	210.5
Insulated wire and cable	3 510	0.4	3 227	0.3	283	108.8
Accumulators, primary cells and primary batteries	1 161	0.1	1 443	0.1	-282	80.4
Lighting equipment and electric lamps	3 362	0.3	3 878	0.4	-517	86.7
Electrical equipment n.e.c.	8 473	0.9	13 019	1.2	-4 546	65.1

Source: Eurostat (Comext)

EXTERNAL TRADE

The EU-25's trade surplus with non-member countries for electrical machinery and apparatus (CPA Division 31) was EUR 8.4 billion in 2005, with exports of these goods valued at EUR 45.0 billion. Electricity distribution and control apparatus (CPA Group 31.2) accounted for more than one third (34.3 %) of electrical machinery and equipment exports from the EU-25 in 2005, while electrical equipment n.e.c. (CPA Group 31.6) represented the largest share (35.7 %) of EU-25 imports. Germany was by far the largest trader of electrical machinery and apparatus, as it exported (intra- and extra-EU trade combined) some EUR 37.2 billion worth of these products, while its imports were valued at EUR 24.7 billion. These values were almost twice those registered by the second largest trader, as France's exports were EUR 14.4 billion and imports EUR 13.3 billion during the same year. As a result, Germany (EUR 13.5 billion) ran the largest trade surplus for electrical machinery and apparatus in 2005, followed at some distance by Italy (EUR 2.6 billion), Denmark (EUR 1.4 billion), France (EUR 1.1 billion) and the Czech Republic (EUR 1.0 billion).

Figure 9.16 Electrical machinery and apparatus n.e.c. (CPA Division 31) Share in extra-EU trade, 2005 (%)



Source: Eurostat (Comext)

9.4: RADIO, TELEVISION AND COMMUNICATION EQUIPMENT

This subchapter covers the manufacture of radio, television and communication equipment, as covered by NACE Division 32. Electronic components, including active, passive and printed circuit boards (PCBs), are all included within NACE Group 32.1; the manufacture of television cameras, transmission apparatus for radio and television, telephonic switching apparatus (including LANs and modems), telephones and fax machines are found under NACE Group 32.2 (note that Chapters 21 and 22 deal with information, communication and media content that makes use of this equipment); while NACE Group 32.3 covers the manufacture of audio-visual equipment and related appliances, such as loudspeakers, headphones and aerials, as well as other electronic consumer appliances, such as telephone answering machines.

This subchapter covers all intermediate products for radio, television and communication equipment from professional equipment to that for the general public. There is significant competition within the EU-25's communication equipment subsector as indigenous manufacturers compete with enterprises from non-member countries to supply operators. For instance, direct investment by Japanese and American enterprise groups in manufacturing plants within the EU-25 has intensified competition. Japan and China dominate in terms of global manufacturing of consumer electronics, while both the EU-25 and the United States are net importers of these goods.

Technological innovations are also vital to the competitiveness of manufacturers of communications equipment, as has been seen with the development of ISDN (Integrated services digital network), GSM (the mobile pan-European technology), and DECT (Digital European cordless network). Increasing competition has also led to alliances between enterprises, GSM, for example, was the result of co-operation between the European public network operators.

The manufacture of semi-conductors is fairly concentrated within Europe. As is the case throughout the world, downstream integration with the telecommunications, computer and consumer electronics manufacturing sectors is a general feature in European semi-conductor manufacturing. Joint ventures and co-operation are common in such a rapidly changing and volatile activity which at the same time requires extremely high levels of R&D investment.

The 1999 R&TTE (Radio and Telecommunications Terminal Equipment) Directive ⁽²⁴⁾ is the main legal tool to regulate this sector, ensuring that equipment is safe and does not disturb radio services or other equipment. Other issues currently being addressed include requirements on functional safety, the potential health effects of mobile telephony, anti-theft requirements for cellular phones and non-regulatory ways to prevent this, as well as interoperability for 3rd generation mobile equipment.

(24) Directive 1999/5/EC of the European Parliament and Council.

Table 9.19

Manufacture of radio, television and communication equipment (NACE Division 32)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (9 877.3)	21.3	Germany (151.5)	18.9	Malta (19.5)	Malta (8.8)
2	France (7 450.2)	16.1	France (140.8)	17.6	Finland (19.2)	Finland (8.0)
3	Finland (6 201.9)	13.4	Italy (94.7)	11.8	Hungary (6.5)	Hungary (4.8)
4	Italy (4 887.1)	10.5	United Kingdom (83.9)	10.5	Austria (4.5)	Sweden (4.4)
5	United Kingdom (4 548.8)	9.8	Hungary (44.3)	5.5	Belgium (3.4)	Austria (3.9)

(1) Malta and Sweden, 2002; Greece, Cyprus, Luxembourg and the Netherlands, not available.

(2) Sweden, provisional; Malta, 2002; Greece, Cyprus, Luxembourg and the Netherlands, not available.

(3) Malta and Sweden, 2002; Greece, Ireland, Cyprus, Luxembourg and the Netherlands, not available.

(4) Sweden, provisional; Malta, 2002; Greece, Ireland, Cyprus, Luxembourg and the Netherlands, not available.

Source: Eurostat (SBS)

STRUCTURAL PROFILE

The EU-25's manufacture of radio, television and communication equipment (NACE Division 32) generated EUR 46 billion of value added in 2003, which was slightly more than one quarter of the electrical and optical equipment (NACE Subsection DL) manufacturing total, or 2.7 % of industrial (NACE Sections C to E) value added. There were 800 000 persons employed in the EU-25's radio, television and communication equipment manufacturing sector in 2003, some 22.2 % of the electrical and optical equipment manufacturing workforce, or 2.3 % of those working within the industrial economy.

The manufacture of electronic valves and tubes and other electric components subsector (NACE Group 32.1) and the television and radio transmitters and apparatus for line telephony and line telegraphy manufacturing subsector (NACE Group 32.2) both employed about 300 000 people in the EU-25 in 2003. A further 200 000 were employed in the manufacture of television and radio receivers, sound or video recording and reproducing apparatus (NACE Group 32.3).

Table 9.20

Production value of selected items of radio, television and communication equipment and apparatus (CPA Division 32), EU-25, 2004 (EUR million)

	Prodcom code	
Digital MOS integrated circuits (ICs): wafers not yet cut into chips	32.10.62.15	4 510
Linear (analogue) integrated circuits (ICs)	32.10.62.95	2 813
Telephonic or telegraphic switching apparatus (excl. relays and switching equipment such as selectors for automatic telephone exchangers)	32.20.20.40	7 721
Colour television receivers with integral tube (excl. television projection equipment, apparatus with a video recorder or player, video monitors)	32.30.20.50	3 895

Source: Eurostat (PRODCOM)

The largest contributors to the EU-25's value added within the manufacture of radio, television and communication equipment were Germany and France ⁽²⁵⁾, with EUR 9.9 billion and EUR 7.5 billion respectively in 2003 (see Table 9.19). Only two other Member States recorded double-digit shares of EU-25 value added, namely Finland and Italy. Malta (2002) was the most specialised Member States for the manufacture of radio, television and communication equipment, as this sector accounted for 19.5 % (2002) of Maltese industrial value added, closely followed by Finland where the corresponding share was 19.2 % in 2003; this ratio was considerably higher in both of these Member States than the EU-25 average of just 2.7 %.

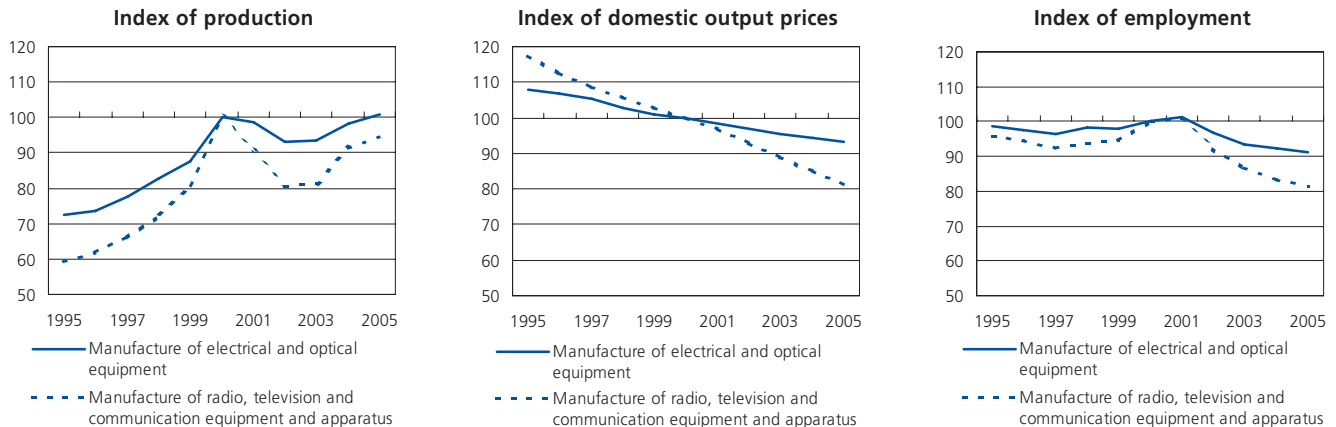
⁽²⁵⁾ Malta and Sweden, 2002; Greece, Cyprus, Luxembourg and the Netherlands, not available.

Figure 9.17 presents annualised short-term statistics for the EU-25's production index for the manufacture of radio, television and communication equipment. Output increased on average by 11.0 % per annum between 1995 and 2000 (when output peaked), marking the most rapid increase in production among manufacturing (NACE Section D) divisions ⁽²⁶⁾ in the second half of the 1990s. However, having expanded at a rapid pace, the EU-25's index of production subsequently fell for two years with output down by 9.6 % in 2001 and by a further 10.9 % in 2002. There was a modest change in the level of production in 2003, with 0.8 % growth registered, before a recovery in 2004, as output rebounded, rising by 12.4 %. The most recent rate of change showed that output continued to expand, although at a much reduced pace (rising by 3.6 % in 2005).

⁽²⁶⁾ Recycling (NACE Division 37), not available.

Figure 9.17

Manufacture of radio, television and communication equipment (NACE Division 32)
Evolution of main indicators, EU-25 (2000=100)



Source: Eurostat (STS)

Table 9.21

Manufacture of radio, television and communication equipment (NACE Division 32)
Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	3.5	81.6	18.4	60.0	40.0	:	:
1	Latvia (18.6)	Hungary (95.0)	Austria (29.9)	Finland (174.8)	Belgium (66.3)	Ireland (396.9)	Ireland (30.9)
2	Lithuania (15.6)	Malta (94.3)	Belgium (28.1)	Ireland (155.9)	Sweden (61.4)	Finland (356.5)	Latvia (26.1)
3	Estonia (9.7)	Finland (92.1)	Slovenia (24.8)	Belgium (101.5)	Austria (59.9)	Malta (326.3)	Finland (17.4)
4	Italy (7.7)	Poland (90.7)	Italy (24.6)	Austria (74.9)	Germany (54.5)	Latvia (237.4)	Belgium (14.2)
5	Slovakia (7.1)	Czech Republic (90.1)	France (23.6)	Germany (65.2)	France (52.6)	Hungary (233.8)	Poland (13.5)

(1) Latvia and Sweden, 2002; Belgium, Greece, Cyprus, Luxembourg, Malta and the Netherlands, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Malta and Sweden, 2002; Greece, Cyprus, Luxembourg, the Netherlands and Sweden, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Malta and Sweden, 2002; Greece, Cyprus, Luxembourg and the Netherlands, not available; EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

COSTS, PRODUCTIVITY AND PROFITABILITY

In 2003, investment in tangible goods were equivalent to 3.5 % of total operating costs in the EU's ⁽²⁷⁾ radio, television and communication equipment manufacturing sector (see Table 9.21), the second highest ratio among the four NACE divisions that make-up the electrical machinery and optical equipment manufacturing sector. In the EU ⁽²⁸⁾, personnel costs accounted for a smaller share of total operating costs in the manufacture of radio, television and communication equipment (18.4 %) compared with the whole of the EU's ⁽²⁹⁾ electrical machinery and optical equipment manufacturing sector.

Apparent labour productivity in the EU-25's manufacture of radio, television and communication equipment in 2003 was EUR 60 000 per person employed and average personnel costs per employee were EUR 40 000. Among the Member States with data available ⁽³⁰⁾, wage adjusted labour productivity ratios were generally higher for the manufacture of radio, television and communication equipment than for the whole of electrical machinery and optical equipment manufacturing. However, profitability, as measured by the gross operating rate (which is the ratio of gross operating surplus in relation to turnover) was lower for the radio, television and telecommunication equipment sector than the average for electrical machinery and optical equipment manufacturing in a large majority of the Member States.

⁽²⁷⁾ EU average, 2003; Latvia and Sweden, 2002; excluding Belgium, Greece, Cyprus, Luxembourg, Malta and the Netherlands.

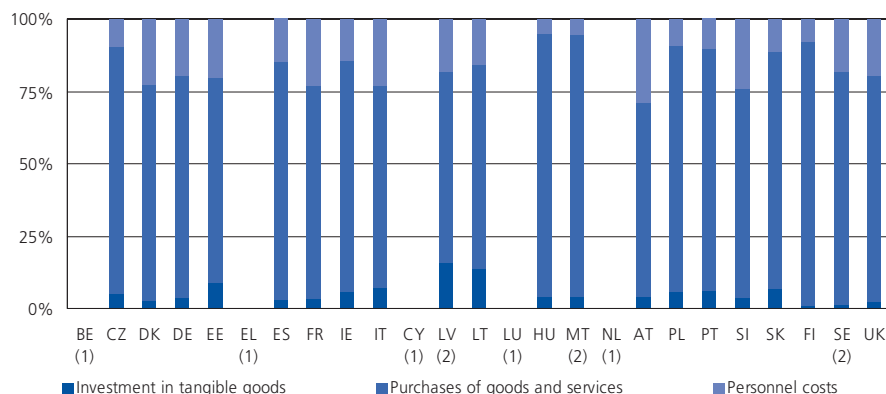
⁽²⁸⁾ EU average, 2003; Malta and Sweden, 2002; excluding Greece, Cyprus, Luxembourg, the Netherlands and Sweden.

⁽²⁹⁾ EU average, 2003; Malta and Sweden, 2002; excluding Greece.

⁽³⁰⁾ Malta and Sweden, 2002; Greece, Cyprus, Luxembourg and the Netherlands, not available.

Figure 9.18

Manufacture of radio, television and communication equipment (NACE Division 32)
Structure of costs, 2003 (%)



(1) Not available.

(2) 2002.

Source: Eurostat (SBS)

Table 9.22

Radio, television and communication equipment and apparatus (CPA Division 32)
External trade, EU-25, 2005

	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Radio, television and communication equipment and apparatus	67 160	6.8	93 226	8.6	-26 066	72.0
Electronic valves and tubes and other electronic components	22 560	2.3	29 821	2.8	-7 261	75.7
TV and radio transmitters; apparatus for line telephony and telegraphy	33 352	3.4	32 884	3.0	469	101.4
TV & radio receivers; sound or video recording or reproducing app.	11 248	1.1	30 522	2.8	-19 273	36.9

Source: Eurostat (Comext)

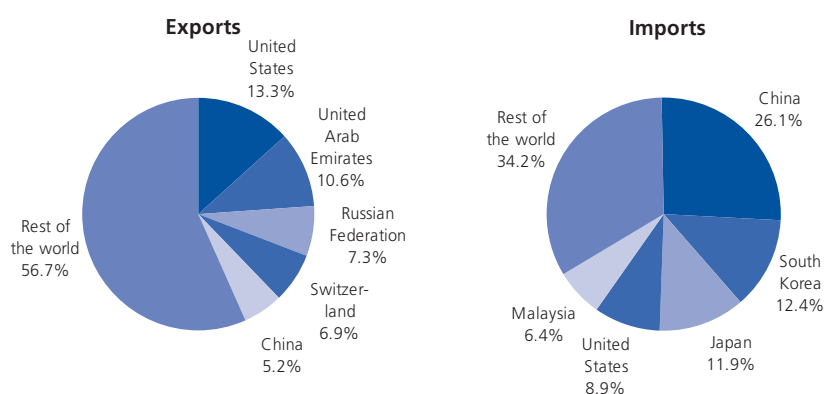
EXTERNAL TRADE

Exports of radio, television and communication equipment (CPA Division 32) from the EU-25 to non-member countries were valued at EUR 67.2 billion in 2005, while imports were valued at EUR 93.2 billion, resulting in a EUR 26.1 billion trade deficit (see Table 9.22). Among the three CPA groups covered in this subchapter, television and radio transmitters and apparatus for line telephony and line telegraphy (CPA Group 32.2) accounted for the highest share both of EU-25 exports (49.7 %) and EU-25 imports (35.3 %) in 2005.

Among the Member States, Germany accounted for the highest level of trade in 2005, with a 20.6 % share of radio, television and communication equipment exports (intra- and extra-EU trade combined) by EU-25 Member States, and the same share of imports. Finland, Sweden, Ireland, Hungary, Luxembourg, Malta and Estonia also recorded a trade surplus for radio, television and communication equipment in 2005.

Figure 9.19

Radio, television and communication equipment and apparatus (CPA Division 32)
Share in extra-EU trade, 2005 (%)



Source: Eurostat (Comext)

Table 9.23

Manufacture of office machinery and computers (NACE Division 30)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million) (2)	66 500	201	2 432	272	15 736	46	:	918	11 709	15 187	3 216	0	12	14	:	2 116	0
Production (EUR million)	:	192	2 435	275	13 247	28	:	872	10 697	15 031	3 127	0	10	9	:	1 961	0
Value added at factor cost (EUR million) (2)	13 000	55	74	98	3 680	3	:	177	2 632	1 179	632	0	2	4	:	553	0
Gross operating surplus (EUR million) (2)	5 130	23	12	36	1 085	1	:	7	702	669	172	0	1	2	:	422	0
Purchases of goods and services (EUR million)	:	147	2 369	180	12 114	43	:	752	8 946	14 026	2 614	0	10	10	:	1 555	0
Gross investment in tangible goods (EUR million) (3)	:	5	21	5	218	0	:	23	158	148	103	0	0	0	:	50	0
Number of persons employed (thousands) (2)	190	1	8	1	44	0	:	6	29	13	16	0	0	0	:	13	0
Personnel costs (EUR million) (2)	7 840	31	63	62	2 595	2	:	170	1 930	510	460	0	1	2	:	131	0
App. labour productivity (EUR thous./pers. emp.) (2)	70.0	71.6	8.8	75.3	84.4	11.7	:	29.5	90.2	90.0	39.0	:	13.3	8.1	:	42.7	2.0
Average personnel costs (EUR thous./employee) (2)	44.0	48.6	7.8	48.2	60.3	8.7	:	32.5	66.2	39.0	33.9	:	5.9	3.5	:	10.2	:
Wage adjusted labour productivity (%) (2)	160.0	147.4	112.5	156.4	140.1	135.0	:	90.8	136.2	230.9	115.2	:	224.5	229.9	:	418.3	:
Gross operating rate (%) (2)	7.7	11.6	0.5	13.2	6.9	2.1	:	0.8	6.0	4.4	5.4	:	9.3	15.4	:	19.9	6.7
Investment per person employed (EUR thousand) (3)	:	6.0	2.5	3.7	5.0	1.4	:	3.8	5.4	11.3	6.4	:	2.1	1.0	:	3.8	0.0
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million) (4)	1 387	836	363	131	108	219	94	524	10 905	55	:	133	:	:	:	123	:
Production (EUR million) (4)	1 297	726	254	127	68	218	71	484	9 755	37	:	58	:	:	:	114	:
Value added at factor cost (EUR million) (5)	293	57	66	25	22	8	17	184	3 196	3	:	7	:	:	:	15	:
Gross operating surplus (EUR million) (5)	8	2	34	7	6	-4	5	19	1 911	-1	:	0	:	:	:	-9	:
Purchases of goods and services (EUR million) (4)	1 103	792	319	109	85	219	78	332	7 633	53	:	129	:	:	:	108	:
Gross investment in tangible goods (EUR million) (4)	:	12	4	5	1	12	1	14	199	3	:	4	:	:	:	2	:
Number of persons employed (thousands) (4)	:	1	5	1	1	2	0	3	35	2	:	3	:	:	:	0	:
Personnel costs (EUR million) (5)	285	55	32	18	15	12	12	165	1 285	4	:	7	:	:	:	24	:
App. labour productivity (EUR thous./pers. emp.) (5)	:	41.6	13.5	29.9	25.5	4.3	46.7	46.6	91.5	1.7	:	2.3	:	:	:	39.4	:
Average personnel costs (EUR thous./employee) (5)	:	41.2	9.7	21.7	18.7	6.4	35.2	44.2	37.9	2.6	:	2.5	:	:	:	62.5	:
Wage adjusted labour productivity (%) (5)	:	101.1	138.6	137.9	136.0	67.7	132.4	105.5	241.4	65.0	:	91.6	:	:	:	63.0	:
Gross operating rate (%) (5)	0.6	0.3	9.5	5.5	5.8	-1.7	4.9	2.9	17.5	-2.2	:	0.0	:	:	:	-7.3	:
Investment per person employed (EUR thousand) (4)	:	8.6	0.9	5.5	1.5	6.4	1.5	4.7	5.7	1.7	:	1.4	:	:	:	3.8	:

(1) Malta and Norway, 2002. (2) EU-25, rounded estimate based on non-confidential data. (3) Belgium and Latvia, 2002. (4) Sweden, provisional. (5) Sweden, 2002.
Source: Eurostat (SBS)

Table 9.24

Manufacture of electrical machinery and apparatus n.e.c. (NACE Division 31)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million) (2)	225 000	3 941	4 416	4 012	88 351	160	:	14 682	27 215	3 101	28 634	28	108	224	50	4 564	96
Production (EUR million)	:	3 697	4 151	3 974	78 593	128	:	14 026	26 398	2 972	27 567	24	92	222	50	4 094	90
Value added at factor cost (EUR million) (2)	71 000	1 305	1 326	1 079	28 443	48	:	4 298	8 264	1 495	8 475	10	34	56	18	1 392	42
Gross operating surplus (EUR million) (2)	17 100	246	578	251	3 804	18	:	1 502	1 238	1 136	3 010	3	19	25	-2	767	22
Purchases of goods and services (EUR million)	:	2 644	3 228	2 937	58 564	116	:	10 680	19 045	1 589	20 546	17	80	173	32	3 181	49
Gross investment in tangible goods (EUR million) (3)	:	108	257	188	2 436	13	:	484	1 000	83	1 080	1	4	8	:	214	6
Number of persons employed (thousands) (2)	1 600	21	111	22	493	4	:	88	163	11	203	1	3	7	0	68	1
Personnel costs (EUR million) (2)	54 000	1 059	748	828	24 639	30	:	2 796	7 026	359	5 465	8	16	31	20	624	21
App. labour productivity (EUR thous./pers. emp.) (2)	44.1	61.4	12.0	49.7	57.7	13.5	:	48.9	50.6	139.1	41.7	18.8	11.0	8.3	38.6	20.3	33.3
Average personnel costs (EUR thous./employee) (2)	34.9	51.1	8.0	38.7	50.3	8.4	:	32.5	43.2	33.6	30.7	14.7	5.1	4.6	42.5	9.2	16.4
Wage adjusted labour productivity (%) (2)	127.0	120.0	149.7	128.4	114.7	160.4	:	150.8	117.1	414.0	135.8	127.9	215.7	179.4	90.9	220.8	203.0
Gross operating rate (%) (2)	7.6	6.2	13.1	6.3	4.3	11.4	:	10.2	4.5	36.6	10.5	9.2	17.2	11.3	-3.4	16.8	22.8
Investment per person employed (EUR thousand) (3)	:	4.7	2.3	8.7	4.9	3.8	:	5.5	5.9	7.7	5.3	1.1	1.1	1.1	:	3.1	4.4
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million) (4)	3 518	5 159	4 564	2 257	965	1 183	3 271	4 943	19 228	335	:	977	:	:	:	1 162	:
Production (EUR million) (4)	3 105	4 626	4 326	2 152	902	1 138	3 199	4 599	17 684	291	:	979	:	:	:	1 039	:
Value added at factor cost (EUR million) (5)	1 156	1 720	1 370	628	342	281	1 090	1 407	6 546	70	:	328	:	:	:	408	:
Gross operating surplus (EUR million) (5)	392	541	734	152	123	77	334	160	1 763	28	:	147	:	:	:	99	:
Purchases of goods and services (EUR million) (4)	2 347	3 521	3 324	1 624	637	901	2 218	3 335	12 445	266	:	698	:	:	:	771	:
Gross investment in tangible goods (EUR million) (4)	113	138	208	100	67	95	58	100	470	19	:	114	:	:	:	20	:
Number of persons employed (thousands) (4)	18	27	91	30	15	39	20	28	144	18	:	63	:	:	:	6	:
Personnel costs (EUR million) (5)	765	1 179	636	476	219	204	778	1 247	4 783	41	:	181	:	:	:	310	:
App. labour productivity (EUR thous./pers. emp.) (5)	65.5	62.9	15.1	20.9	23.4	7.2	54.6	47.7	45.5	3.8	:	5.2	:	:	:	67.5	:
Average personnel costs (EUR thous./employee) (5)	44.2	43.6	7.6	16.0	15.5	5.2	39.1	43.0	33.9	2.3	:	2.9	:	:	:	51.2	:
Wage adjusted labour productivity (%) (5)	148.0	144.2	199.1	130.6	151.0	137.6	139.6	111.0	134.4	162.5	:	180.4	:	:	:	131.7	:
Gross operating rate (%) (5)	11.1	10.5	16.1	6.8	12.7	6.5	10.2	3.1	9.2	8.4	:	15.1	:	:	:	8.5	:
Investment per person employed (EUR thousand) (4)	6.4	5.1	2.3	3.3	4.6	2.4	2.9	3.6	3.3	1.1	:	1.8	:	:	:	3.2	:

(1) Luxembourg and Malta, 2002. (2) EU-25, rounded estimate based on non-confidential data. (3) Belgium and France, 2002. (4) Sweden, provisional. (5) Sweden, 2002.
Source: Eurostat (SBS)

Table 9.25

Manufacture of radio, television and communication equipment and apparatus (NACE Division 32)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million) (2)	200 000	4 350	2 544	1 721	42 114	118	5 502	31 918	3 566	14 532	24	286	9 501	1 101			
Production (EUR million)	4 369	2 393	1 633	31 719	118	4 621	28 174	3 386	14 462	26	286	8 806	1 101				
Value added at factor cost (EUR million) (2)	46 000	1 735	463	510	9 877	41	1 096	7 450	1 474	4 887	11	80	1 049	176			
Gross operating surplus (EUR million)	617	220	165	1 676	11	253	58	1 103	1 714	6	34	609	122				
Purchases of goods and services (EUR million)	2 862	2 215	1 149	32 305	106	4 595	23 964	2 017	9 715	17	209	8 437	896				
Gross investment in tangible goods (EUR million) (3)	145	126	40	1 483	13	167	1 093	145	990	3	40	357	42				
Number of persons employed (thousands) (2)	800	17	32	9	152	5	27	141	9	95	1	8	44	3			
Personnel costs (EUR million) (2)	30 000	1 118	244	346	8 201	30	843	7 392	371	3 173	5	46	440	54			
App. labour productivity (EUR thous./pers. emp.) (2)	60.0	101.5	14.5	58.9	65.2	8.9	40.9	52.9	155.9	51.6	8.5	9.8	23.7	57.1			
Average personnel costs (EUR thous./employee) (2)	40.0	66.3	8.7	40.1	54.5	6.5	32.5	52.6	39.3	38.0	3.6	5.6	10.1	17.5			
Wage adjusted labour productivity (%)	153.0	167.3	146.9	119.5	135.3	126.0	100.5	396.9	135.8	237.4	174.0	233.8	326.3				
Gross operating rate (%)	14.2	8.6	9.6	4.0	9.2	4.6	0.2	30.9	11.8	26.1	12.0	6.4	11.1				
Investment per person employed (EUR thousand) (3)	8.1	3.9	4.7	9.8	2.9	6.2	7.8	15.3	10.4	2.5	4.9	8.0	13.7				
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million) (4)	5 459	2 731	2 944	500	507	25 778	9 635	19 923	160	256	1 461						
Production (EUR million) (4)	4 844	2 650	2 906	421	479	14 457	9 620	15 073	155	247	1 239						
Value added at factor cost (EUR million) (5)	1 926	601	552	149	102	6 202	356	4 549	43	99	377						
Gross operating surplus (EUR million) (5)	394	368	250	31	45	4 493	-2 271	905	26	50	40						
Purchases of goods and services (EUR million) (4)	3 593	2 261	2 404	357	418	20 177	8 564	14 933	122	157	1 108						
Gross investment in tangible goods (EUR million) (4)	226	152	178	18	34	241	91	407	8	35	22						
Number of persons employed (thousands) (4)	26	28	12	6	10	35	35	84	6	10	6						
Personnel costs (EUR million) (5)	1 532	233	302	118	57	1 738	2 627	3 644	17	49	337						
App. labour productivity (EUR thous./pers. emp.) (5)	74.9	21.2	45.5	24.0	10.4	174.8	8.3	54.2	7.5	9.8	66.9						
Average personnel costs (EUR thous./employee) (5)	59.9	9.8	25.1	19.7	5.8	49.0	61.4	44.3	3.0	4.9	59.9						
Wage adjusted labour productivity (%) (5)	125.1	216.3	181.4	121.9	178.1	356.5	13.5	122.3	245.9	200.6	111.7						
Gross operating rate (%) (5)	7.2	13.5	8.5	6.2	8.8	17.4	-19.1	4.5	16.3	19.6	2.7						
Investment per person employed (EUR thousand) (4)	8.8	5.4	14.6	3.0	3.4	6.8	2.6	4.8	1.4	3.4	3.9						

(1) Malta and Norway, 2002. (2) EU-25, rounded estimate based on non-confidential data. (3) Belgium and Latvia, 2002. (4) Sweden, provisional. (5) Sweden, 2002.
Source: Eurostat (SBS)

Table 9.26

Manufacture of medical, precision and optical instruments, watches and clocks (NACE Division 33)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million) (2)	120 000	1 325	1 126	2 516	39 138	82	3 346	23 012	5 571	14 654	35	86	165	707	68		
Production (EUR million)	1 304	1 080	2 449	36 615	78	3 202	21 427	5 493	13 903	35	81	167	586	68			
Value added at factor cost (EUR million) (2)	50 000	406	422	1 170	16 874	24	1 262	7 552	2 757	5 020	13	33	81	251	33		
Gross operating surplus (EUR million) (2)	16 000	94	194	449	4 230	6	440	1 429	2 020	1 978	6	14	22	105	17		
Purchases of goods and services (EUR million)	931	736	1 389	21 975	57	2 146	15 254	3 282	9 774	22	56	90	454	34			
Gross investment in tangible goods (EUR million) (3)	54	81	118	1 065	5	140	576	181	430	5	8	8	36	5			
Number of persons employed (thousands)	998	9	33	15	321	2	34	136	20	124	2	4	2	20	1		
Personnel costs (EUR million) (2)	30 000	312	228	721	12 644	17	823	6 123	737	3 042	7	19	60	146	16		
App. labour productivity (EUR thous./pers. emp.) (2)	50.0	47.7	12.8	76.1	52.6	9.8	37.2	55.6	138.3	40.4	7.8	8.8	43.0	12.6	29.1		
Average personnel costs (EUR thous./employee) (2)	35.0	43.8	8.3	47.4	40.6	7.2	27.5	46.7	37.0	32.8	4.1	5.3	32.0	8.2	14.5		
Wage adjusted labour productivity (%) (2)	136.0	108.9	154.4	160.6	129.5	135.7	135.3	119.1	373.6	123.1	191.8	164.8	134.2	153.7	201.0		
Gross operating rate (%) (2)	13.0	7.1	17.2	17.8	10.8	7.9	13.1	6.2	36.2	13.5	16.9	15.8	13.0	14.9	24.8		
Investment per person employed (EUR thousand) (3)	6.6	2.5	7.6	3.3	1.9	4.1	4.2	9.1	3.5	3.0	2.0	4.1	1.8	4.2			
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million) (4)	1 861	1 253	430	398	245	1 921	5 010	17 562	78	177	1 621						
Production (EUR million) (4)	1 686	1 187	412	372	222	1 937	4 639	16 138	72	171	1 542						
Value added at factor cost (EUR million) (5)	882	522	140	163	70	754	1 521	7 890	18	66	585						
Gross operating surplus (EUR million) (5)	314	249	46	54	24	267	276	3 149	7	34	112						
Purchases of goods and services (EUR million) (4)	1 038	763	288	246	175	1 197	3 088	9 652	61	125	1 048						
Gross investment in tangible goods (EUR million) (4)	96	78	53	14	27	7	49	160	502	7	22						
Number of persons employed (thousands) (4)	24	16	50	6	7	12	26	124	6	12	8						
Personnel costs (EUR million) (5)	569	273	93	109	46	487	1 245	4 741	12	32	473						
App. labour productivity (EUR thous./pers. emp.) (5)	54.8	10.5	23.2	22.0	10.0	63.0	58.3	63.7	2.9	5.5	75.2						
Average personnel costs (EUR thous./employee) (5)	37.6	7.5	16.4	15.1	6.6	41.5	49.4	39.1	2.2	2.7	60.9						
Wage adjusted labour productivity (%) (5)	145.8	140.6	141.8	145.5	151.3	151.7	117.9	162.7	133.4	200.9	123.4						
Gross operating rate (%) (5)	16.8	19.9	10.8	13.7	9.9	13.9	5.9	17.9	8.6	19.0	6.9						
Investment per person employed (EUR thousand) (4)	3.9	4.8	1.1	2.3	3.6	1.1	4.1	6.3	4.1	1.6	2.8						

(1) Malta, 2002. (2) EU-25, rounded estimate based on non-confidential data. (3) Belgium, 2002. (4) Sweden, provisional. (5) Sweden, 2002.
Source: Eurostat (SBS)

Transport equipment



The transport equipment manufacturing sector is central to economic development, as it provides the means for transporting both individuals and goods. Demand for transport equipment has risen as the volume of goods transported and the distance travelled by passengers have expanded greatly - see Chapter 20 which provides information on transport flows, as well as information on selected transport equipment stocks. Globalisation and international free trade have stimulated demand for goods transport, while improved living standards and access to transport equipment/networks, as well as more frequent holidays have led to rapid expansions in the distances travelled by passengers. These trends have been accompanied by a modal shift towards road transport, reflected in the increased number of goods vehicles and passenger cars on Europe's roads. At the same time, deregulation of air transport markets has stimulated considerable growth in low-cost air travel. Liberalisation in rail markets is expected to stimulate cross border rail transport and be accompanied by convergence in standards for railway rolling stock and infrastructure equipment.

The issue of sustainable development is likely to play an important role in future product developments, as transport equipment manufacturers try to meet demands for more environmentally friendly transport solutions, for example, motor vehicles that consume less fuel, consume alternative fuels, produce less emissions, or that are easier to recycle or dispose of at the end of their life. The European Commission has actively encouraged the introduction of greener vehicles. In December 2005 the European Commission put forward proposals ⁽¹⁾ (referred to as Euro 5 standards) to reduce the emissions of new passenger cars and light commercial vehicles. Under the proposal particulate emissions from diesel cars would be

reduced from 25 mg/km to 5 mg/km (requiring all new diesel cars to be fitted with filters), and nitrogen oxides (NOx) from 250 mg/km to 200 mg/km. For petrol cars, the Commission proposes to cut NOx emissions and hydrocarbons by 25 % to 60 mg/km and 75 mg/km respectively. At the time of adopting the proposal it was planned that the new standards would enter into force by mid 2008 at the earliest. The European Commission has also agreed voluntary reductions with the Association of European Automobile Manufacturers (ACEA) towards a target of 140 g of CO₂/km for all new passenger cars that are sold in the EU-25 by the year 2008; similar targets were agreed with Japanese and South Korean producers by 2009; the target for 2012 is 120 g of CO₂/km. Aside from emission standards for conventional fuelled cars, the European Commission has encouraged the use of alternative fuels, notably concerning biofuels, natural gas and hydrogen powered vehicles. In May 2003 the European Parliament and the Council adopted a Directive ⁽²⁾ on the promotion of the use of biofuels or other renewable fuels for transport and in February 2006 the European Commission adopted a communication ⁽³⁾ on an EU strategy for biofuels to further stimulate the use of biofuels. Looking further to the future, the European Commission has started work towards developing standards for hydrogen powered vehicles. Manufacturers are developing a range of engines running alternative fuels, and in the meantime some hybrid models (combining petrol engines and electric motors) have entered the market, most notably the Toyota Prius.

⁽²⁾ Directive 2003/30/EC.

⁽³⁾ COM(2006) 34.

The manufacture of transport equipment is covered by two NACE divisions, the first of which covers the manufacture of motor vehicles (NACE Division 34), while the other covers the manufacture of other types of transport equipment, namely, shipbuilding, railway rolling stock, aerospace equipment, motorcycles and bicycles, and a residual category of other transport equipment (all included under NACE Division 35).

NACE

- 34: manufacture of motor vehicles, trailers and semi-trailers;
- 34.1: manufacture of motor vehicles;
- 34.2: manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers;
- 34.3: manufacture of parts and accessories for motor vehicles and their engines;
- 35: manufacture of other transport equipment;
- 35.1: building and repairing of ships and boats;
- 35.2: manufacture of railway and tramway locomotives and rolling stock;
- 35.3: manufacture of aircraft and spacecraft;
- 35.4: manufacture of motorcycles and bicycles;
- 35.5: manufacture of other transport equipment n.e.c.

⁽¹⁾ COM(2005) 683.

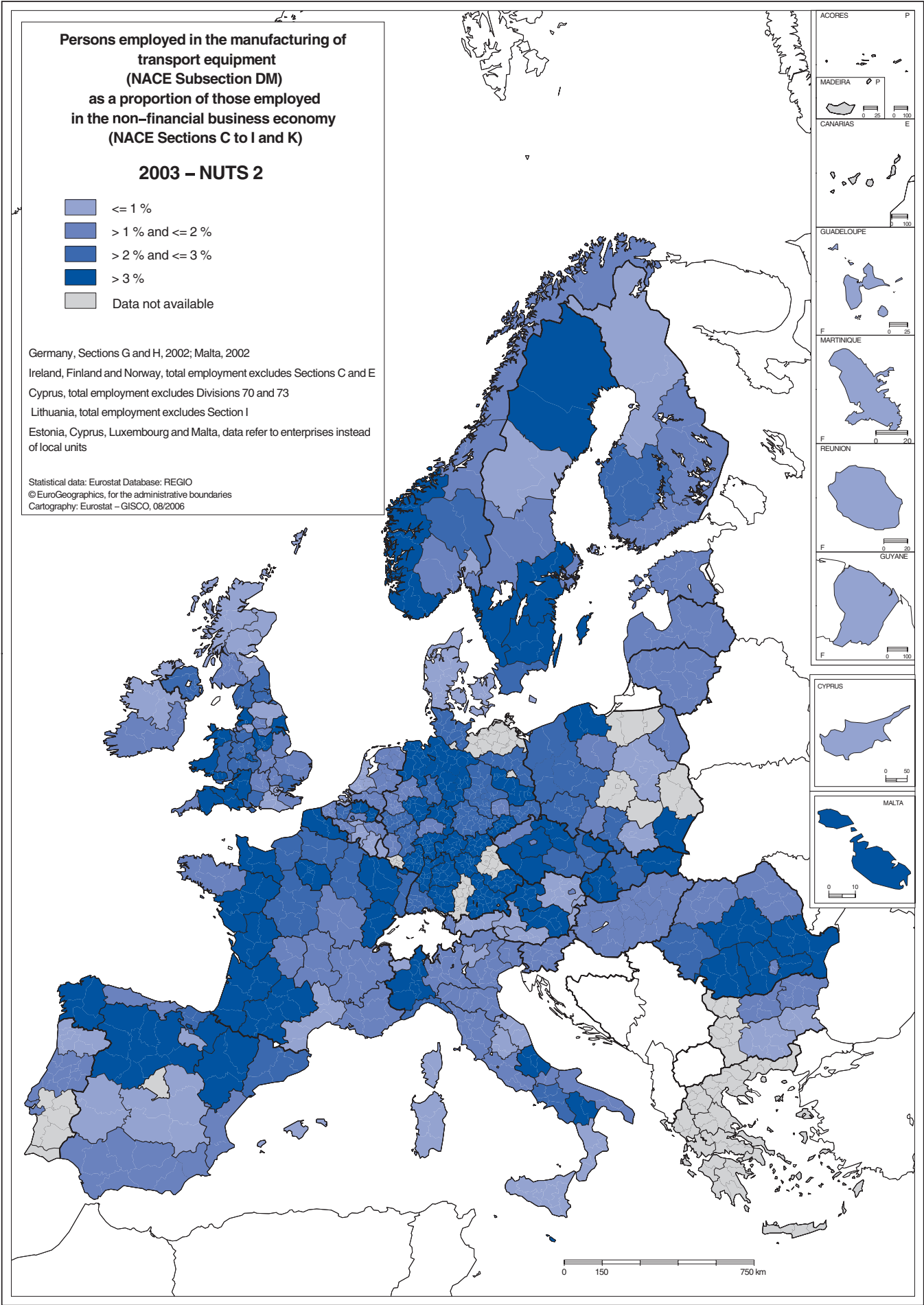


Table 10.1

Manufacture of transport equipment (NACE Subsection DM)
Structural profile, EU-25, 2003

	Value added (EUR million)	Share of industrial value added (%)	Number of persons employed (thousands)	Share of industrial employment (%)
Transport equipment	172 088	10.1	2 998	8.5
Motor vehicles, trailers and semi-trailers (1)	128 000	7.5	2 170	6.2
Motor vehicles including bodies (2)	85 124	5.0	1 300	3.7
Motor vehicles	77 923	4.6	1 123	3.2
Bodies; trailers and semi-trailers (2)	7 201	0.4	180	0.5
Motor vehicle parts and accessories (1)	42 000	2.5	870	2.5
Other transport equipment (1)	44 500	2.6	820	2.3
Aircraft and spacecraft (1)	26 000	1.5	350	1.0
Miscellaneous transport equipment (2)	18 000	1.1	460	1.3
Building and repairing of ships and boats	9 300	0.6	259	0.7
Railway and tramway locomotives and rolling stock	6 161	0.4	140	0.4
Motorcycles and bicycles (2)	2 485	0.2	60	0.2
Other transport equipment n.e.c. (3)	300	0.0	9	0.0

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

(2) Number of persons employed and related share, rounded estimates based on non-confidential data.

(3) Value added and related share, rounded estimates based on non-confidential data.

Source: Eurostat (SBS)

Most transport equipment manufacturing activities are structured on the basis of complex pyramidal relationships between major manufacturers and several tiers of component suppliers, ranging from fairly large enterprises that supply whole systems down to very small, specialised manufacturers that may provide a single component for a vehicle. Deliveries from one level of the pyramid to the next are often made on a just-in-time basis and it is common to find clusters of enterprises concentrated in regions around the leading producers, within close proximity of the main client.

STRUCTURAL PROFILE

The EU-25's transport equipment manufacturing sector (NACE Subsection DM) generated EUR 172.1 billion of value added in 2003, while employing almost 3 million persons. The transport equipment manufacturing sector accounted for 10.1 % of the value added created within the EU-25's industrial (NACE Sections C to E) economy and 8.5 % of the industrial workforce. The sector is dominated by the manufacture of motor vehicles, trailers and semi-trailers (NACE Division 34), as this activity represented 74.2 % of sectoral value added and 72.6 % of employment in 2003. The manufacture of motor vehicles and bodies (NACE Groups 34.1 and 34.2) accounted for almost half (49.7 %) of the value added generated within the EU-25's transport equipment manufacturing sector in 2003 - see Subchapter 10.1 - while the manufacture of parts and accessories for motor vehicles and their engines (NACE Group 34.3),

accounted for almost one quarter (24.5 %) of transport equipment manufacturing value added - see Subchapter 10.2. Among the EU-25's other transport equipment manufacturing (NACE Division 35) activities, the manufacture of aerospace equipment (NACE Group 35.3) was by far the largest activity in 2003, with a 15.2 % share of value added for the whole of the transport equipment manufacturing sector - see Subchapter 10.3. Of the miscellaneous transport equipment manufacturing subsectors (covered in Subchapter 10.4) the building and repairing of ships and boats (NACE Group 35.1) had a 5.4 % share of transport equipment manufacturing value added, the manufacture of railway and tramway locomotives and rolling stock (NACE Group 35.2) a 3.6 % share, the manufacture of motorcycles and bicycles (NACE Group 35.4) a 1.5 % share, and other transport equipment manufacturing n.e.c. (NACE Group 35.5) just 0.2 %.

Table 10.2

Manufacture of transport equipment (NACE Subsection DM)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (70 882.6)	41.2	Germany (1 002.7)	33.4	Germany (15.6)	Germany (13.1)
2	France (27 073.0)	15.7	France (427.2)	14.3	France (11.6)	Sweden (12.3)
3	United Kingdom (23 613.6)	13.7	United Kingdom (370.4)	12.4	Sweden (11.0)	Malta (10.9)
4	Spain (11 661.8)	6.8	Italy (256.5)	8.6	Czech Republic (10.6)	France (10.2)
5	Italy (11 236.0)	6.5	Spain (221.5)	7.4	Hungary (9.8)	United Kingdom (9.9)

(1) Malta and Sweden, 2002; Greece, not available.

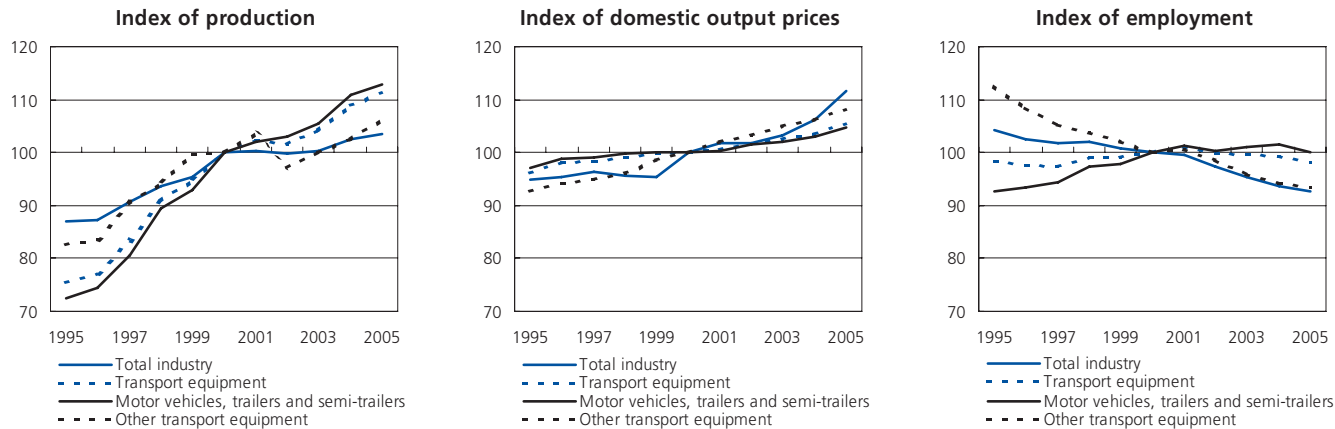
(2) Sweden, provisional; Malta, 2002; Greece, not available.

(3) Malta and Sweden, 2002; Greece and Ireland, not available.

(4) Sweden, provisional; Malta, 2002; Greece and Ireland, not available.

Source: Eurostat (SBS)

Figure 10.1
Manufacture of transport equipment (NACE Subsection DM)
Evolution of main indicators, EU-25 (2000=100)



As can clearly be seen from Table 10.2, Germany dominates the EU-25's transport equipment manufacturing sector: Germany's EUR 70.9 billion of value added was more than two fifths of the EU-25 total, and its workforce of just over 1 million persons was one third of the EU-25 workforce. It was not just in absolute size that Germany dominated this sector, as it was also the most specialised Member States, in that this sector contributed more to industrial value added (15.6 %) and industrial employment (13.1 %) than in any other Member State. The manufacture of transport equipment was particularly concentrated within the larger Member States, as Germany, France (15.7 % of EU-25 value added) and the United Kingdom (13.7 %) had a cumulative share of EU-25 value added equal to 70.6 % in 2003, compared with their 55.2 % share of total industrial value added. This high level of concentration meant that relatively few of the Member States were specialised in the manufacture of the transport equipment, with Germany, France, Sweden (2002) and the Czech Republic the only Member States ⁽⁴⁾ to report that their respective transport equipment manufacturing sectors contributed more to national industrial value added than the EU-25 average in 2003.

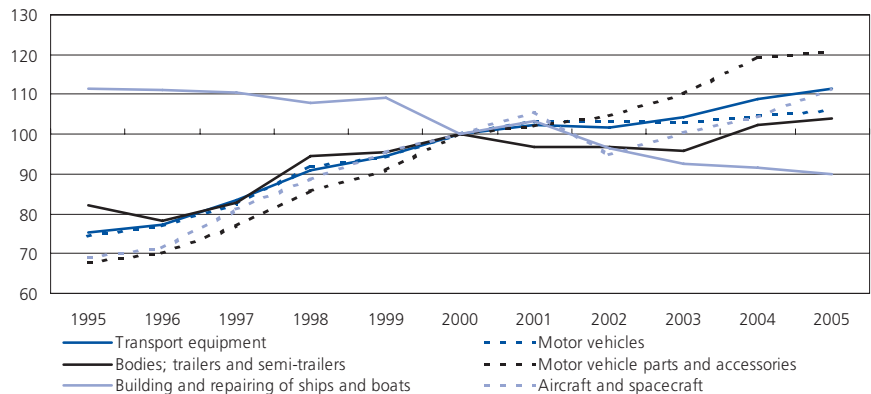
⁽⁴⁾ Malta and Sweden, 2002; Greece and Ireland, not available.

The regional specialisation of transport equipment manufacturing in employment terms is shown on the map on page 194. The top six most specialised regions (at the level of detail shown in the map) were all in Germany. Among the other Member States half or more of the regions in the Czech Republic, Slovakia and Sweden were relatively specialised in this sector, as were more than half the regions in Romania, providing evidence of a shift in European output towards the east.

Changes in the EU-25 index of production for the manufacture of transport equipment were generally at a more rapid pace than the industrial average during the period 1995 to 2005 - see Figure 10.1. On average, output rose by 4.0 % per annum compared with 1.8 % for the industrial economy as a whole. Year on year growth rates recorded for transport equipment manufacturing exceeded those for the industrial economy in each year from 1996 to 2005, except in 2002 when production fell by 0.5 % for the industrial economy as a whole and by 0.6 % for

transport equipment manufacturing. Particularly rapid growth was recorded for transport equipment manufacturing in the years 1997 to 2000, and more recently in 2004. The growth in output was largely driven by the manufacture of motor vehicles, trailers and semi-trailers (NACE Division 34), where the index of production rose on average by 4.5 % per annum between 1995 and 2005, while for other transport equipment manufacturing (NACE Division 35) growth averaged 2.6 % per annum during the same period. Figure 10.2 provides a more detailed analysis of the development of the production index and this shows a quite varied development for the various parts of other transport equipment manufacturing. The only part that recorded significant growth over the period 1995 to 2005 as a whole was aerospace equipment manufacturing (NACE Group 35.3) where the EU-25 production index rose by an average of 4.9 % per annum over the period considered.

Figure 10.2
Manufacture of transport equipment (NACE Subsection DM)
Production index, EU-25 (2000=100) (1)



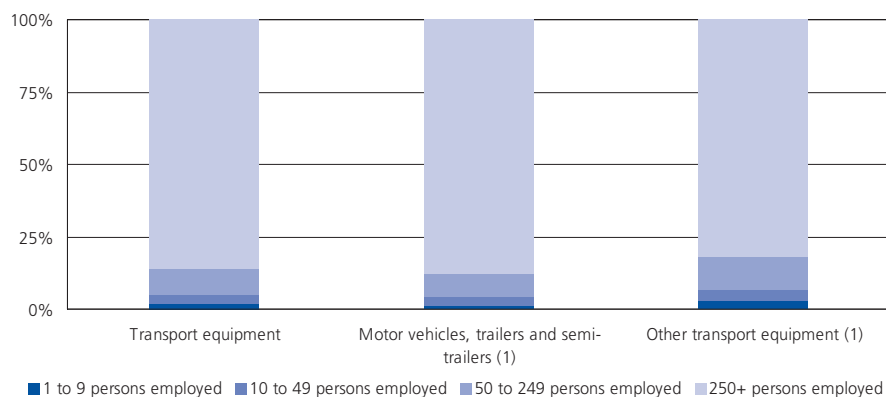
(1) Only the five largest NACE groups of NACE Subsection DM (in terms of gross value added) are shown.
Source: Eurostat (STS)

Figure 10.1 shows that while transport equipment manufacturing employment remained more or less stable in the EU-25 during the ten year period up to 2005, this resulted from an increase in the employment index for the manufacture of motor vehicles, trailers and semi-trailers combined with a more rapid decline in the employment index for other transport equipment manufacturing: for the latter employment increased just once during the ten year period analysed. The manufacture of motor vehicles, trailers and semi-trailers recorded uninterrupted employment growth between 1995 and 2001, followed by relative stability. The overall annual average growth rate of employment in the EU-25 was 0.8 % between 1995 and 2005, and as such, the manufacture of motor vehicles, trailers and semi-trailers was one of only three industrial NACE divisions⁽⁵⁾ to record an increase in employment levels over this period.

⁽⁵⁾ NACE Divisions 12, 13, 18 and 19, not available.

Figure 10.3

Manufacture of transport equipment (NACE Subsection DM)
Share of value added by enterprise size class, EU-25, 2003 (%)



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

Source: Eurostat (SBS)

While the manufacture of transport equipment was concentrated within the larger Member States, it was also concentrated within relatively large enterprises, as SMEs (employing less than 250 persons) generated just 13.8 % of the EU-25's value added in 2003 (see Figure 10.3), compared with an industrial average of

42.3 %. The dominance of large enterprises (with 250 or more persons employed) was particularly prevalent within the manufacture of motor vehicles, trailers and semi-trailers (NACE Division 34) where they accounted for 87.7 % of value added and 82.4 % of employment.

Table 10.3

Manufacture of transport equipment (NACE Subsection DM)
Labour force characteristics, 2005

	Male		Full-time		Breakdown by age (% share of total)		
	Proportion of those employed (%)	Index (industry=100)	Proportion of those employed (%)	Index (industry=100)	< 30 years (1)	30-49 years	50+ years
EU-25	82.5	115.6	96.3	104.3	21.8	56.4	21.8
BE	86.4	114.2	94.2	105.8	26.1	59.9	14.0
CZ	68.2	106.0	98.8	101.4	28.8	47.3	23.9
DK	77.9	111.9	91.9	102.2	14.7	63.6	21.7
DE	83.4	115.1	95.2	107.6	20.2	59.6	20.2
EE	75.9	136.1	99.6	102.0	:	48.8	32.6
EL	89.5	120.7	98.5	100.4	13.5	59.9	26.7
ES	82.2	109.3	97.6	102.4	26.4	50.0	23.6
FR	83.7	117.2	96.4	102.6	21.9	54.6	23.5
IE	75.2	106.6	97.3	102.7	29.9	56.7	:
IT	80.5	112.6	96.9	103.7	20.4	60.3	19.3
CY	:	:	91.2	97.3	:	:	:
LV	85.7	146.2	100.0	103.7	:	57.1	34.0
LT	73.5	138.0	100.0	102.2	:	54.3	:
LU	:	:	:	:	:	:	:
HU	76.2	122.2	99.2	102.0	25.6	53.8	20.6
MT	97.4	126.2	100.0	104.6	:	68.6	:
NL	91.2	117.9	90.7	124.1	18.2	57.6	24.2
AT	80.2	107.3	94.6	105.2	26.3	59.9	13.8
PL	79.0	114.6	98.0	101.9	28.4	51.9	19.8
PT	73.1	123.5	99.2	102.1	28.8	52.6	18.6
SI	74.5	116.5	98.6	102.6	28.3	61.7	10.0
SK	73.9	115.9	99.9	101.0	36.8	48.3	14.9
FI	87.5	122.5	97.8	103.0	16.5	47.0	36.6
SE	78.5	104.5	94.7	105.0	18.5	56.5	25.0
UK	88.0	117.4	96.6	105.8	16.7	56.5	26.8

(1) Ireland, 2004.

Source: Eurostat (LFS)

LABOUR FORCE CHARACTERISTICS

The most notable characteristics of the transport equipment manufacturing workforce are the very high proportions of men and the high propensity to employ on a full-time basis. Men accounted for 82.5 % of the transport equipment manufacturing workforce in 2005, compared with an industrial (NACE Sections C to E) average of 71.3 %. The proportion of the workforce that was male was above the industrial average for both the manufacture of motor vehicles, trailers and semi-trailers (NACE Division 34, 80.8 %) and the manufacture of other transport equipment (NACE Division 35, 86.7 %); in the latter case this was the fourth highest proportion of the industrial NACE divisions ⁽⁶⁾. Across the Member States, the proportion of men working in transport equipment manufacturing remained consistently above national, industrial averages in 2005 ⁽⁷⁾. As many as 96.3 % of the EU-25's transport equipment manufacturing workforce worked on a full-time basis in 2005, with no difference in the full-time rate between the manufacture of motor vehicles, trailers and semi-trailers and other transport equipment manufacturing. Among the Member States ⁽⁸⁾ only in Cyprus was full-time employment slightly less common in transport equipment manufacturing than in industry as a whole.

In terms of the age profile of the EU-25's transport equipment manufacturing workforce there was very little difference compared with the industrial average when analysed according to the three age classes presented in Table 10.3. Comparing the age structure of the two NACE divisions in this sector, the proportion of the workforce that was aged 50 or over in the manufacture of motor vehicles, trailers and semi-trailers was 20.8 %, compared

with 24.3 % for the manufacture of other transport equipment; as such, the latter recorded the second highest proportion of older workers among the manufacturing (NACE Section D) NACE divisions ⁽⁹⁾.

COSTS, PRODUCTIVITY AND PROFITABILITY

The transport equipment manufacturing sector recorded a ratio of gross tangible investment to gross operating expenditure (personnel costs plus purchases of goods and services) of 4.0 % in the EU ⁽¹⁰⁾, ranging from 4.1 % for motor vehicles, trailers and semi-trailers manufacturing (NACE Division 34) to 3.5 % for other transport equipment manufacturing (NACE Division 35); in both cases this ratio was below the industrial (NACE Sections C to E) average ⁽¹¹⁾ of 4.3 %. Based on the same data availability, EU averages for the proportion of gross operating expenditure used for personnel costs were lower for transport equipment manufacturing (14.9 %) than for industry as a whole (19.1 %). This however was not the case concerning other transport equipment manufacturing, where personnel costs made up 23.0 % of gross operating expenditure.

Apparent labour productivity in the EU-25's transport equipment manufacturing sector was EUR 57 400 per person employed in 2003 (see Table 10.4), which was 15.7 % higher than the industrial average. Average personnel costs were EUR 42 900 per employee, which was 31.6 % higher than the industrial average. As such, the transport equipment manufacturing sector recorded the third highest apparent labour productivity and average personnel costs among manufacturing (NACE Section D) NACE subsections.

Despite one of the highest levels of apparent labour productivity, relatively high average personnel costs weighed on the transport equipment manufacturing sector. The value added created within the EU-25's transport equipment manufacturing sector covered personnel costs (adjusted for the share of employees in persons employed) by 133.9 % in 2003, which was well below the 152 % average recorded for all industrial activities. This pattern was repeated in the majority of the Member States as the wage adjusted labour productivity ratio for transport equipment manufacturing was generally below national industrial averages. Hungary, Slovakia and the Czech Republic were the only Member States where wage adjusted labour productivity was more than 20 % above the national industrial average ⁽¹²⁾.

In a similar manner, the gross operating rate for the EU-25's transport equipment manufacturing sector stood at 5.1 % in 2003, which was less than half the industrial average (10.3 %), the high average personnel costs keeping the gross operating surplus low. Note that profitability (in this case measured by the gross operating rate) was particularly low in the subsectors within motor vehicles, trailers and semi-trailers manufacturing (NACE Division 34), and also for the building and repairing of ships and boats (NACE Group 35.1), and in none of the EU-25's transport equipment manufacturing subsectors did the gross operating rate exceed the industrial average in 2003.

⁽¹²⁾ Malta and Sweden, 2002; Greece, not available.

⁽⁹⁾ NACE Divisions 16, 19, 23, 30 and 37, not available.

⁽¹⁰⁾ EU average, 2003; Latvia, Malta and Sweden, 2002; excluding Belgium, Greece and Luxembourg.

⁽¹¹⁾ Excluding also Ireland.

⁽⁶⁾ NACE Divisions 12, 13 and 16, not available.

⁽⁷⁾ Cyprus and Luxembourg, not available.

⁽⁸⁾ Luxembourg, not available.

Table 10.4

Manufacture of transport equipment (NACE Subsection DM)

Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	4.0	85.0	15.0	57.4	42.9	133.9	5.1
1	Lithuania (12.1)	Slovakia (95.4)	Malta (69.6)	Austria (78.0)	Germany (58.4)	Hungary (276.0)	Luxembourg (16.4)
2	Latvia (11.3)	Hungary (91.9)	Ireland (32.1)	Germany (70.7)	Belgium (48.2)	Slovakia (258.2)	Estonia (13.4)
3	Poland (9.1)	France (91.6)	Luxembourg (30.9)	Belgium (67.5)	Austria (47.5)	Czech Republic (220.4)	Hungary (12.6)
4	Czech Republic (8.2)	Czech Republic (89.3)	Cyprus (27.5)	United Kingdom (63.8)	France (45.7)	Poland (195.2)	Czech Republic (11.9)
5	Austria (6.9)	Slovenia (88.8)	Lithuania (26.9)	France (63.4)	Sweden (45.1)	Estonia (179.6)	Cyprus (11.8)

(1) Latvia, Malta and Sweden, 2002; Belgium and Greece, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Malta and Sweden, 2002; Greece, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Malta and Sweden, 2002; Greece, not available.

Source: Eurostat (SBS)

Table 10.5

Transport equipment (CPA Subsection DM)
External trade, EU-25, 2005

	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Transport equipment	175 929	17.7	104 911	9.7	71 018	167.7
Motor vehicles, trailers and semi-trailers	112 846	11.3	46 037	4.3	66 809	245.1
Motor vehicles including bodies	85 938	8.6	32 847	3.0	53 091	261.6
Motor vehicles	83 719	8.4	32 386	3.0	51 333	258.5
Bodies; trailers and semi-trailers	2 219	0.2	461	0.0	1 758	481.5
Parts and accessories for motor vehicles and their engines	26 908	2.7	13 190	1.2	13 718	204.0
Other transport equipment	63 084	6.3	58 874	5.5	4 209	107.1
Aircraft and spacecraft	47 723	4.8	41 255	3.8	6 468	115.7
Miscellaneous transport equipment	15 361	1.5	17 620	1.6	-2 259	87.2
Ships and boats	11 540	1.2	10 958	1.0	583	105.3
Railway and tramway locomotives and rolling-stock	2 102	0.2	744	0.1	1 358	282.6
Motorcycles and bicycles	1 578	0.2	5 780	0.5	-4 201	27.3
Other transport equipment n.e.c.	140	0.0	139	0.0	1	100.9

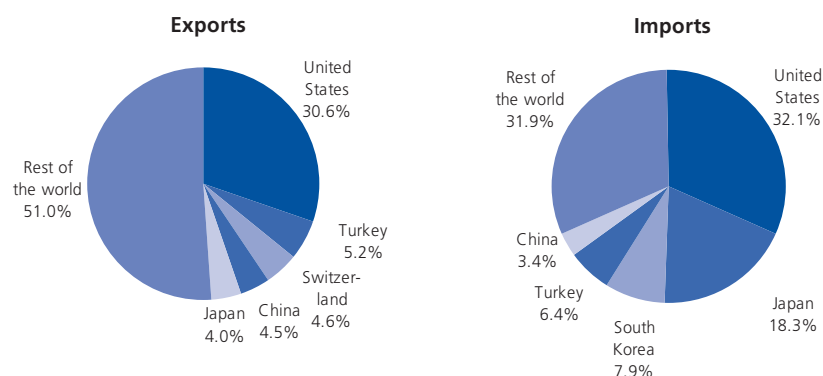
Source: Eurostat (Comext)

EXTERNAL TRADE

The EU-25 ran a significant trade surplus with non-member countries for transport equipment (CPA Subsection DM) which was valued at EUR 71.0 billion in 2005; the second highest surplus among manufacturing NACE subsections. Exports from the EU-25 were valued at EUR 175.9 billion, of which almost two thirds (64.1 %) were accounted for by motor vehicles, trailers and semi-trailers (CPA Division 34). In contrast, more than half (56.1 %) of the EU-25's transport equipment imports were accounted for by other transport equipment (CPA Division 35). These differences in the respective shares of transport equipment exports and imports were reflected in the EU-25's trade surpluses for motor vehicles, trailers and semi-trailers (EUR 66.8 billion) and other transport equipment (EUR 4.2 billion).

Germany was by far the most important exporter of transport equipment in 2005, with exports to the rest of the world valued at EUR 168.8 billion, some 32.6 % of the total for all Member States. France (17.7 %) was the only other Member State to report a double-digit share of exports among the EU-25 Member States. Germany and France were also the largest importers of transport equipment, although Germany's share of imports (18.8 %) was considerably less than its exports share. Figure 10.4 clearly shows the importance of Asian countries for EU-25 imports of transport equipment, with Japan, South Korea and China all in the top five, although their aggregated share was still less than that of the United States alone.

Figure 10.4

Transport equipment (CPA Subsection DM)
Share in extra-EU trade, 2005 (%)


Source: Eurostat (Comext)

10.1: MOTOR VEHICLES INCLUDING BODIES

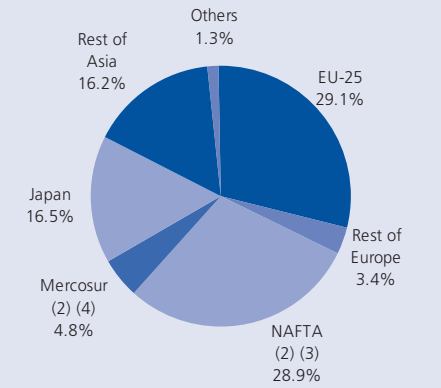
NACE Division 34 covers the manufacture of motor vehicles, trailers and semi-trailers. It contains three NACE groups, the first two of which are covered by this subchapter, namely, the manufacture of motor vehicles (NACE Group 34.1) and the manufacture of bodies for motor vehicles, trailers and semi-trailers (NACE Group 34.2). The data for these two NACE groups are presented (where possible) in the form of an aggregate covering both activities, referred to as manufacturing of motor vehicles and bodies.

According to VDA ⁽¹³⁾, the EU-25 produced 29.1 % of the world's passenger cars in 2005 a similar share to that of the three NAFTA ⁽¹⁴⁾ countries (28.9 %), but less than the Asian total of 32.7 % split evenly between Japan and the rest of Asia – see Figure 10.5. For more information on the retail sale of motor vehicles please refer to Chapter 16.

The motor vehicles and bodies manufacturing sector is characterised by a structure that is dominated by enterprises belonging to a few, very large enterprise groups. These are supported by partners and contractors who deliver systems, parts and accessories. The sector has for a number of years been characterised by mergers, acquisitions and other forms of co-operation agreements. Motor vehicle manufacturers active within the EU currently include BMW, DaimlerChrysler, Fiat, Ford Europe, General Motors Europe, PSA (Peugeot-Citroën), Renault, and Volkswagen Group, as well as several Japanese and Korean groups with production facilities in the EU. Smaller volume producers often specialise in niche markets (such as sports or luxury cars). The major brands of goods vehicles manufactured in the EU include Mercedes-Benz trucks (part of DaimlerChrysler), MAN, Iveco (part of Fiat), DAF and Leyland trucks (both part of PACCAR), Volvo trucks and Scania.

⁽¹³⁾ VDA (Verband der Automobilindustrie), more information at: <http://www.vda.de>.
⁽¹⁴⁾ NAFTA (North American Free Trade Agreement) is a free trade agreement between Canada, the United States and Mexico.

Figure 10.5
Largest passenger car producing countries/regions, 2005
(% share of world production) (1)



(1) Including interim or estimated figures.
(2) Including light trucks.
(3) North American Free Trade Agreement covering Canada, the United States and Mexico.
(4) South American Common Market covering Argentina, Brazil, Paraguay and Uruguay.
Source: VDA, <http://www.vda.de>.

In December 2005 the European Commission published a ten year strategy for the EU's car sector ⁽¹⁵⁾ put forward by the 'CARS 21 High Level Group', made up of EU commissioners, national ministers, representatives of motor vehicle equipment manufacturers and fuel suppliers, NGOs and trade unions. It recommended replacing many of the existing directives concerning the sector with an aim of simplifying and improving legislation and reiterated the need to reduce CO₂ emissions and develop the use of biofuels (see the overview of this chapter). It addressed a number of other issues including taxation linked to emissions (see Chapter 16), road safety, research and development, and access to markets in non-member countries.

The European Parliament and Council adopted a Directive ⁽¹⁶⁾ concerning passenger safety (the fitting of safety belts and prohibiting the installation of side-facing seats in certain categories of new vehicles) in September 2005 and a Directive ⁽¹⁷⁾ concerning pedestrian safety (related to frontal protection systems on motor vehicles) in October 2005. In October 2005 the European Parliament and the Council adopted a Directive ⁽¹⁸⁾ on the reusability, recyclability and recoverability of motor vehicles.

⁽¹⁵⁾ Available from http://europa.eu.int/comm/enterprise/automotive/index_en.htm.
⁽¹⁶⁾ Directive 2005/39/EC.
⁽¹⁷⁾ Directive 2005/66/EC.
⁽¹⁸⁾ Directive 2005/64/EC.

STRUCTURAL PROFILE

The EU-25's motor vehicles and bodies (NACE Groups 34.1 and 34.2) sector created EUR 85.1 billion of value added in 2003, which equated to 49.7 % of the transport equipment manufacturing (NACE Subsection DM) total. Its share of the transport equipment manufacturing workforce was lower at 43.5 %, suggesting that apparent labour productivity was above the transport equipment average. Within this sector, the motor vehicles manufacturing subsector (NACE Group 34.1) generated 91.5 % of sectoral value added, and the manufacture of bodies, trailers and semi-trailers (NACE Group 34.2) the remaining 8.5 %; in employment terms the share of bodies, trailers and semi-trailers manufacturing reached 13.8 %.

As already noted, Germany dominated transport equipment manufacturing in general, and this was particularly true for the manufacture of motor vehicles and bodies (NACE Groups 34.1 and 34.2) where it generated more than half (50.9 %) of the EU-25's value added in 2003. Within the subsector of the manufacture of motor vehicles (NACE Group 34.1) Germany's share rose to 53.3 % of EU-25 value added, Germany's second highest share among the industrial (NACE Sections C to E) NACE groups, and one of only three groups where Germany contributed more than half the EU-25's value added. Unsurprisingly Germany was the most specialised Member State regarding the manufacture of motor vehicles and bodies, as this sector contributed 9.5 % of German industrial value added - see Table 10.7.

The evolution of output for the manufacture of motor vehicles (NACE Group 34.1) generally followed an upward path between 1995 and 2005, as year on year changes in the production index were negative just once, in 2003 (-0.4 %). In relation to transport equipment manufacturing as a whole, the index of production for motor vehicles (NACE Group 34.1) rose at a slightly slower pace, gaining an average of 3.6 % per annum over the period considered (compared with 4.0 % for the whole of transport equipment). However, the most rapid period of growth for the manufacture of motor vehicles (NACE Group 34.1) was during the early part of this period, and since 2001 annual growth has not exceeded 1.5 %. The evolution of the production index for bodies, trailers and semi-trailers (NACE Group 34.2) followed a more modest pattern of growth, with average gains of 2.4 % per annum between 1995 and 2005 during which there were twice (1996 and 2003) contractions in output.

Table 10.6
Production value of selected motor vehicles (CPA Group 34.1), EU-25, 2004
(EUR million)

	Prodcom code	
Other motor vehicles (incl. motor caravans) with spark-ignition engine of a cylinder capacity > 1000 cc but ≤ 1500 cc	34.10.21.36	30 365
Motor vehicles with (petrol) engine greater than 1500 cc excl. motor caravans, snowmobiles and similar and those for ≥10 people	34.10.22.30	118 270
Motor vehicles with (diesel or semi-diesel) engine ≤ 1500 cc excl. snowmobiles and similar and those for ≥10 people	34.10.23.10	13 060
Motor vehicles with (diesel or semi-diesel) engine >1500 cc but ≤ 2500 cc excl. motor caravans, snowmobiles and similar and those for ≥10 people	34.10.23.30	85 936
Motor vehicles with (diesel or semi-diesel) engine greater than 2500 cc excl. motor caravans, snowmobiles and similar and those for ≥10 people	34.10.23.40	10 723
Public transport type vehicles for 10 or more persons, with a compression-ignition internal combustion piston engine (diesel or semi-diesel) > 2500 cc	34.10.30.35	4 369
Goods vehicles with a diesel or semi-diesel engine, of a gross vehicle weight ≤ 5 tonnes excl. dumpers	34.10.41.10	13 637
Goods vehicles with a diesel or semi-diesel engine, of a gross vehicle weight greater than 5 tonnes and < or equal to 20 tonnes incl. vans excl. dumpers, tractors	34.10.41.30	6 815
Goods vehicles with compression-ignition internal combustion piston engine (diesel or semi-diesel), of a gross vehicle weight > 20 tonnes excl. dumpers	34.10.41.40	6 113
Road tractors for semi-trailers	34.10.44.00	8 319

Source: Eurostat (PRODCOM)

Table 10.7
Manufacture of motor vehicles including bodies (NACE Groups 34.1 and 34.2)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (43 354.5)	50.9	Germany (566.6)	43.6	Germany (9.5)	Germany (7.4)
2	France (13 164.9)	15.5	France (201.2)	15.5	Sweden (6.4)	Sweden (6.8)
3	United Kingdom (6 997.9)	8.2	United Kingdom (122.3)	9.4	France (5.6)	Belgium (5.9)
4	Spain (5 321.0)	6.3	Spain (91.7)	7.1	Hungary (5.3)	France (4.8)
5	Sweden (3 159.6)	4.1	Italy (75.8)	5.8	Belgium (5.2)	Spain (3.4)

(1) Denmark, Malta and Sweden, 2002; the Czech Republic, Greece, Latvia, Luxembourg and Slovakia, not available.

(2) Sweden, provisional; Denmark and Malta, 2002; the Czech Republic, Greece, Luxembourg and Slovakia, not available.

(3) Denmark, Malta and Sweden, 2002; the Czech Republic, Greece, Ireland, Latvia, Luxembourg and Slovakia, not available.

(4) Sweden, provisional; Denmark and Malta, 2002; the Czech Republic, Greece, Ireland, Luxembourg and Slovakia, not available.

Source: Eurostat (SBS)

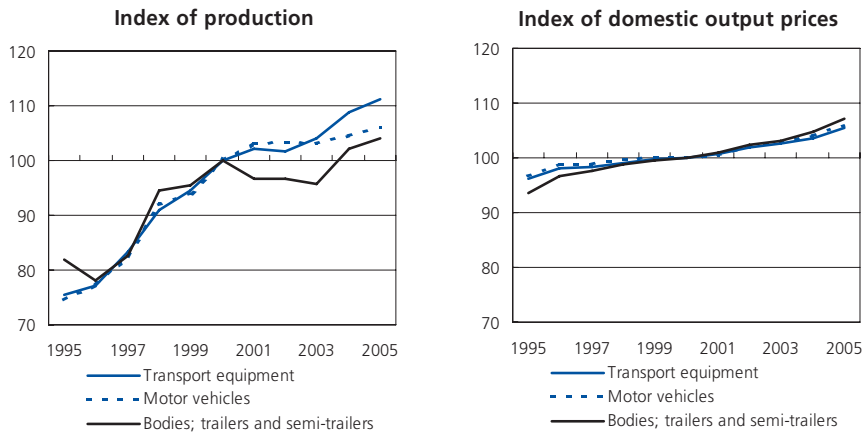
COSTS, PRODUCTIVITY AND PROFITABILITY

Persons employed within the motor vehicles and bodies manufacturing sector (NACE Groups 34.1 and 34.2) generated an average of EUR 66 000 of value added in 2003, well above the transport equipment manufacturing average (EUR 57 400). For this indicator there was a stark contrast between the motor vehicles manufacturing (NACE Group 34.1) subsector and that for bodies, trailers and semi-trailers manufacturing (NACE Group 34.2), as this measure of labour productivity stood at EUR 69 400 per person employed for the former, while for the latter it

was EUR 40 000 per person employed. This disparity was also reflected in average personnel costs, as each employee cost an average of EUR 51 600 within the motor vehicles manufacturing subsector compared with EUR 30 000 for bodies, trailers and semi-trailers manufacturing; this latter figure was below the industrial (NACE Sections C to E) average of EUR 32 600 per employee. These different productivity and average personnel costs balanced to a large extent, as the EU-25's wage adjusted labour productivity ratio for motor vehicles manufacturing (134.4 %) was only slightly above the ratio for bodies, trailers and semi-trailers manufacturing (130 %); while both ratios were close to the transport

equipment manufacturing average. While the gross operating rate for the EU-25's motor vehicles manufacturing subsector (NACE Group 34.1) was low, at just 3.6 % in 2003, it was notably higher for bodies, trailers and semi-trailers manufacturing at 6.1 % (higher than the transport equipment manufacturing average of 5.1 %).

Figure 10.6
Manufacture of motor vehicles including bodies (NACE Groups 34.1 and 34.2)
Evolution of main indicators, EU-25 (2000=100)



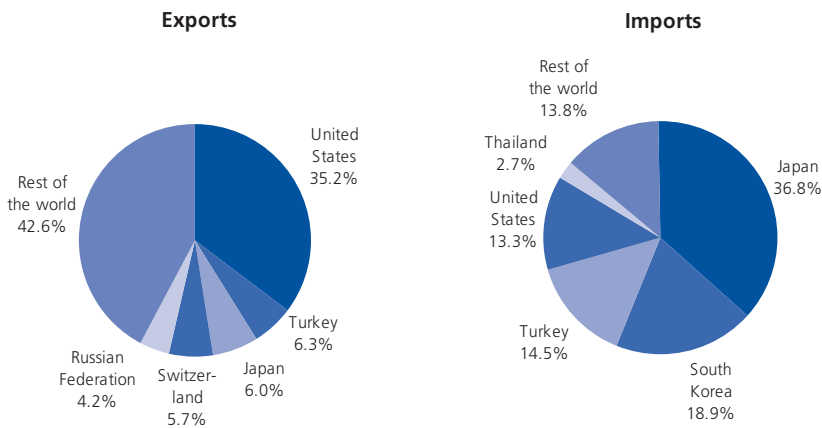
Source: Eurostat (STS)

EXTERNAL TRADE

The EU-25 benefited from a trade surplus of EUR 53.1 billion for motor vehicles, bodies, trailers and semi-trailers (CPA Groups 34.1 and 34.2) in 2005, which was mainly fuelled by exports to the United States and other European countries - see Figure 10.7. Germany accounted for more than one third (36.5 %) of the exports made by EU-25 Member States to the rest of the world in 2005, followed by France (12.4 %) and Belgium (9.0 %). Spain, Slovakia and Germany were the most specialised Member States in terms of exporting motor vehicles, relative to their exports of all industrial (CPA Sections C to E) goods.

Germany also recorded by far the highest trade surplus (intra and extra-EU trade) for motor vehicles, trailers and semi-trailers (CPA Groups 34.1 and 34.2) in 2005 at EUR 68.1 billion, which was more than nine times the next highest balance which was registered in France (EUR 7.4 billion). The largest deficits were recorded in Italy and the United Kingdom (EUR 17.4 billion and EUR 12.5 billion respectively).

Figure 10.7
Motor vehicles; bodies, trailers and semi-trailers (CPA Groups 34.1 and 34.2)
Share in extra-EU trade, 2005 (%)



Source: Eurostat (Comext)

10.2: MOTOR VEHICLE PARTS AND ACCESSORIES

This subchapter covers the manufacture of parts and accessories for motor vehicles and their engines (NACE Group 34.3). The data presented in this subchapter does not cover the manufacture of tyres (see Chapter 5), nor that of batteries or other electrical equipment used in motor vehicles (see Chapter 9).

Demand for vehicle parts and accessories is divided between that for original equipment (OE) which is supplied directly to motor vehicle manufacturers, and that for the after-market (AM) as used for the upkeep, repair and modification of vehicles. In keeping with the trend for consolidation among vehicle manufacturers, there has also been a similar evolution within the parts and accessories market. This has, in part, been driven by vehicle manufacturers trying to reduce the number of suppliers they use and contracting for the development of complete systems instead of individual parts and accessories. Therefore, those enterprises trying to compete for such business may need to have a minimum efficient scale of production, a broad geographical reach, and also the capability to engage in significant research and development. Larger vehicle parts suppliers tend to follow the motor vehicle manufacturers and to set-up their production facilities near to their major customers; this is particularly evident in eastern Europe and in China. By locating near to vehicle assembly plants, suppliers of parts and accessories are able to deliver products more rapidly, while drawing on lower local labour costs and maximising their share of added value as they increasingly deliver complete systems.

STRUCTURAL PROFILE

The motor vehicle parts and accessories sector (NACE Group 34.3) was the second largest of the activities covered within Subchapters 10.1 to 10.4, as value added in the EU-25 was EUR 42.0 billion in 2003, equivalent to 24.5 % of the transport equipment manufacturing (NACE Subsection DM) total. There were 870 000 persons employed in the EU-25's motor vehicle parts and accessories sector, which equated to 29.1 % of the transport equipment manufacturing workforce. Germany accounted for 43.6 % of the value added generated within the EU-25's motor vehicle parts and accessories sector in 2003 - see Table 10.8. In terms of relative specialisation (the share of national industrial value added), the manufacture of motor vehicle parts and accessories was found to be located in or near the main motor vehicle producing Member States, notably the Czech Republic, Germany and Hungary, and to a lesser extent Spain and France.

The EU-25 index of production for motor vehicle parts and accessories manufacturing grew at a rapid pace between 1995 and 2005, in fact the fastest of any of the NACE groups within transport equipment manufacturing (NACE Subsection DM). Annual growth averaged 6.0 % per annum over this period, two percentage points higher than the transport equipment manufacturing average. At no point during the ten year period analysed did output in this activity contract. However, the rate of growth did slow dramatically in 2001, down to 2.1 % compared with 10.1 % growth the previous year. Growth accelerated after 2001 to reach 8.3 % in 2004, however, in 2005 it slowed considerably again, to 1.5 %.

Table 10.8

Motor vehicle parts and accessories (NACE Group 34.3)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (18 300.5)	43.6	Germany (301.0)	34.6	Czech Republic (5.4)	Germany (3.9)
2	France (4 792.9)	11.4	United Kingdom (95.0)	10.9	Germany (4.0)	Czech Republic (3.8)
3	United Kingdom (4 372.6)	10.4	Italy (87.9)	10.1	Hungary (3.6)	Hungary (3.0)
4	Italy (4 292.3)	10.2	France (86.6)	10.0	Spain (2.8)	Spain (2.7)
5	Spain (3 546.7)	8.4	Spain (72.6)	8.3	France (2.0)	United Kingdom (2.6)

(1) Denmark, Malta and Sweden, 2002; Greece, Latvia and Luxembourg, not available.

(2) Sweden, provisional; Denmark and Malta, 2002; Greece and Luxembourg, not available.

(3) Denmark, Malta and Sweden, 2002; Greece, Ireland, Latvia and Luxembourg, not available.

(4) Sweden, provisional; Denmark and Malta, 2002; Greece, Ireland and Luxembourg, not available.

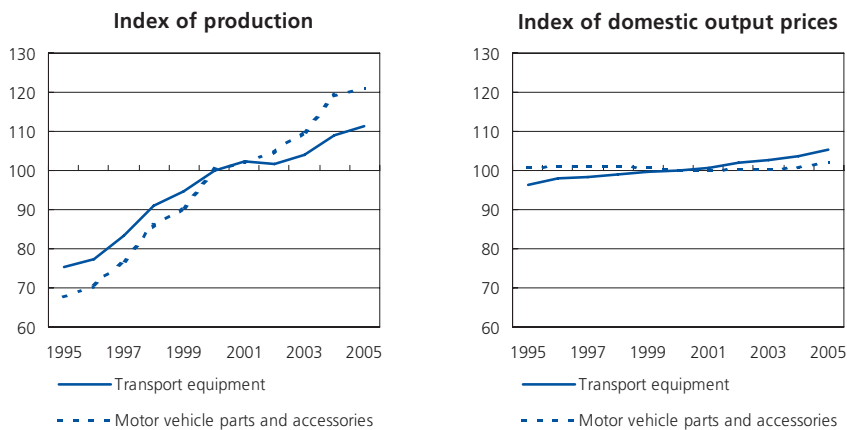
Source: Eurostat (SBS)

Table 10.9
Production value of selected parts and accessories for motor vehicles and their engines (CPA Group 34.3), EU-25, 2004 (EUR million)

	Prodcom code	
Bumpers and parts thereof (incl. plastic bumpers)	34.30.20.10	2 499
Mounted brake linings	34.30.20.23	1 676
Brakes and servo-brakes and their parts (excl. mounted brake linings)	34.30.20.25	9 014
Gear boxes	34.30.20.33	9 532
Drive-axles with differential	34.30.20.35	3 780
Non-driving axles and their parts	34.30.20.37	3 114
Road wheels and parts and accessories thereof	34.30.20.40	3 800
Suspension shock absorbers	34.30.20.50	2 440
Radiators	34.30.20.61	2 586
Silencers and exhaust pipes	34.30.20.63	5 961
Clutches and parts thereof	34.30.20.65	3 316
Steering wheels, steering columns and steering boxes	34.30.20.67	5 764
Airbags with inflator system	34.30.20.80	3 389
Safety seat belts	34.30.30.30	1 962

Source: Eurostat (PRODCOM)

Figure 10.8
Motor vehicle parts and accessories (NACE Group 34.3)
Evolution of main indicators, EU-25 (2000=100)



Source: Eurostat (STS)

COSTS, PRODUCTIVITY AND PROFITABILITY

The apparent labour productivity of the EU-25's motor vehicle parts and accessories sector was EUR 48 700 per person employed in 2003, which was below not only the transport equipment manufacturing average but also the industrial (NACE Sections C to E) average (EUR 49 600). Average personnel costs per employee were EUR 36 300, which resulted in a wage adjusted labour productivity ratio of 134 %, the same as the transport equipment manufacturing average. The gross operating rate, which is one measure of profitability, stood at 7.1 % for the EU-25's motor vehicle parts and accessories sector in 2003, above the transport equipment manufacturing average (5.1 %).

EXTERNAL TRADE

EU-25 exports of parts and accessories for motor vehicles and their engines (CPA Group 34.3) to non-member countries in 2005 were valued at EUR 26.9 billion, just over double the value of imports, EUR 13.2 billion. The Czech Republic, Spain, Poland, Portugal and Germany all recorded 5 % or more of their industrial exports (CPA Sections C to E) from parts and accessories for motor vehicles and their engines.

10.3: AEROSPACE EQUIPMENT

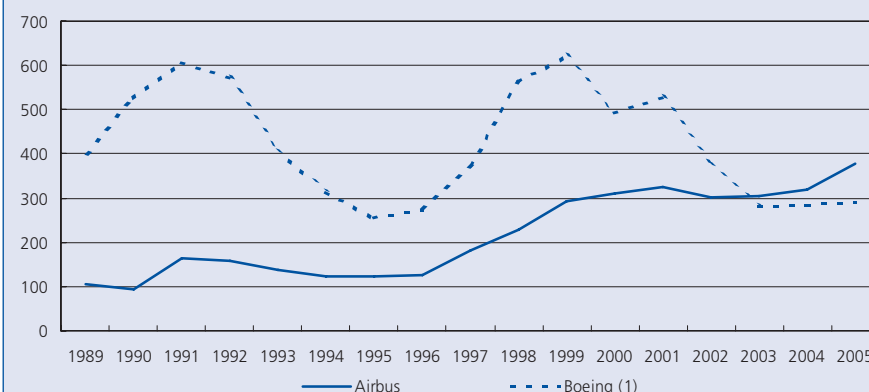
This subchapter includes information on the production of aircraft that are used for the transport of passengers or freight, as well as military applications. The data presented also cover other means of air transport, for example gliders, balloons and spacecraft, as well as the manufacture of parts and accessories which are used in the construction of aerospace equipment; all of these activities are classified under NACE Group 35.3.

The European Aviation Safety Agency (EASA) became operational in 2003 and since September 2003 is responsible for type-certification, the certification of specific models of aircraft, engines or parts approved for operation in the European Union.

The aerospace equipment manufacturing sector is highly concentrated within the EU-25 and the United States, and within a few, large manufacturers with a pyramidal supply chain: manufacturers of aircraft, missiles, space equipment and engines at the top of the pyramid, followed by a second-tier of suppliers making systems, medium-sized enterprises producing structural elements and components, and a final tier of SMEs producing materials, software and services (note that these may be excluded from data on this sector, as their principal activity may not be the manufacture of aerospace equipment). There are two main market segments for the aerospace sector, military and civilian, with the former dependent on government defence spending plans and the latter highly cyclical.

Within the EU the production of large civil aircraft is a substantial part of the aerospace sector. Figure 10.9 shows the cyclical nature of this part of the sector - globally the main producers of these aircraft are Boeing and Airbus. The planned product range developments of Boeing and Airbus are in some ways different. Airbus developed the Airbus

Figure 10.9
Deliveries of commercial aircraft (number)



(1) Including McDonnell Douglas for all years.

Source: Boeing (<http://www.boeing.com>) and Airbus (<http://www.airbus.com>)

A380 family which seems suited for transferring large numbers of passengers (in excess of 500) between airport hubs, particularly for long-haul flights: although delivery figures for 2007 and 2008 have been downgraded due to delays, at the time of writing the first delivery is still expected by the end of 2006. Boeing developed the smaller 787 Dreamliner range of aircraft, targeted more at economical point-to-point (or direct) long-haul flights to a wider range of air terminals: at the time of writing this aircraft is due for its first flight in 2007 and it is planned to enter service in 2008. In turn, Airbus has started development of the A350 family which is seen as a competitor to the 787 Dreamliner.

Aerospace equipment manufacturing is one of the most important industrial sectors in terms of research and development (R&D). Table 10.10 shows the level of intra-mural R&D expenditure by this sector in four of the Member States (that collectively accounted for more than four fifths of EU value added in this sector). In these four Member States alone intra-mural R&D expenditure exceeded EUR 5 billion in this sector. This sector's contribution to manufacturing (NACE

Section D) R&D was particularly significant in France and the United Kingdom, the two EU-25 Member States most specialised in this sector.

Table 10.10
Manufacture of aircraft and spacecraft (NACE Group 35.3)
Intra-mural research and development expenditure: selected Member States, 2003

	R&D expenditure (EUR million)	Share of total manufacturing R&D expenditure (%)
DE	992.1	2.4
FR	2 230.2	14.9
SE (1)	188.2	2.7
UK	1 920.1	19.1

(1) 2002.

Source: Eurostat (SBS)

Table 10.11
Manufacture of aircraft and spacecraft (NACE Group 35.3)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	United Kingdom (9 259.0)	35.6	United Kingdom (101.0)	28.8	United Kingdom (3.7)	United Kingdom (2.7)
2	France (6 623.9)	25.5	France (81.8)	23.4	France (2.8)	France (2.0)
3	Germany (5 710.7)	22.0	Germany (75.0)	21.4	Sweden (1.3)	Sweden (1.3)
4	Italy (1 486.4)	5.7	Italy (25.7)	7.3	Germany (1.3)	Germany (1.0)
5	Spain (977.5)	3.8	Poland (13.7)	3.9	Belgium (0.8)	Belgium (1.0)

(1) Sweden, 2002; Estonia, Greece, Latvia, Luxembourg and Malta, not available.

(2) Sweden, provisional; Estonia, Greece, Luxembourg, Malta, not available.

(3) Sweden, 2002; Estonia, Greece, Ireland, Latvia, Luxembourg and Malta, not available.

(4) Sweden, provisional; Estonia, Greece, Ireland, Luxembourg, Malta, not available.

Source: Eurostat (SBS)

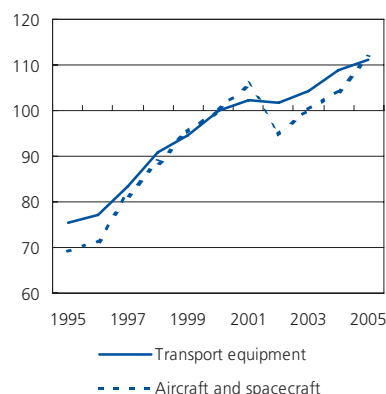
STRUCTURAL PROFILE

The EU-25's aerospace equipment manufacturing sector (NACE Group 35.3) created EUR 26 billion of value added in 2003, which was 15.2 % of the transport equipment manufacturing (NACE Subsection DM) total. This share of value added was considerably higher than the 11.7 % contribution to the EU-25's transport equipment manufacturing workforce. Unlike the motor vehicle activities presented in Subchapters 10.1 and 10.2, Germany did not dominate this sector, nevertheless there was a high concentration of activity observed in the United Kingdom, France and Germany, as their combined share of EU-25 value added reached 83.1 % in 2003 - see Table 10.11. The dominance of these three larger Member States was reflected in the share of this sector in their respective national, industrial (NACE Sections C to E) economies in terms of value added, where the United Kingdom (3.7 %), France (2.8 %), and to a lesser extent Sweden (1.3 %, 2002) and Germany (1.3 %) stood ahead of the other Member States ⁽¹⁹⁾.

The evolution of the index of production for the EU-25's aerospace equipment manufacturing sector followed a rather similar pattern to that for transport equipment manufacturing as a whole, although with a much greater contraction in activity after 2001, and a more rapid recovery after 2002. The effects of the general economic slowdown, coupled with a downturn in air transport after the terrorist attacks in the United States in September 2001, resulted in a 10.2 % contraction in output in 2002. Subsequently growth returned, and the output of the aerospace equipment manufacturing sector rose by an average of 5.5 % per annum between 2002 and 2005.

⁽¹⁹⁾ Sweden, 2002; Estonia, Greece, Ireland, Latvia, Luxembourg and Malta, not available.

Figure 10.10
Manufacture of aircraft and spacecraft
(NACE Group 35.3)
Index of production, EU-25 (2000=100)



Source: Eurostat (STS)

COSTS, PRODUCTIVITY AND PROFITABILITY

The EU-25's aerospace equipment manufacturing sector was particularly productive, as in 2003 an average of EUR 74 000 of value added was generated per person employed, some EUR 16 600 above the average for the whole of transport equipment manufacturing and the highest ratio among the NACE groups that make up the transport equipment manufacturing sector. Average personnel costs per employee were EUR 52 000, which was EUR 9 100 above the transport equipment manufacturing average. Combining the ratios of apparent labour productivity and average personnel costs, the EU-25's wage adjusted productivity ratio for aerospace equipment manufacturing showed that value added covered personnel costs (adjusted for the share of employees in persons employed) by 142 % in 2003. This was the highest level among the NACE groups that make up the transport equipment manufacturing sector, but still below the industrial average of 152 %. In all Member States ⁽²⁰⁾ value added per person employed exceeded personnel costs per employee, except in Portugal where the wage adjusted labour productivity ratio was 96.5 %. The profitability of the EU-25's aerospace equipment manufacturing sector in 2003, as measured by the gross operating rate (9.3 %), stood well above the transport equipment manufacturing average (5.1 %), but below the industrial average (10.3 %).

EXTERNAL TRADE

Some 27.1 % of the EU-25's exports of transport equipment to non-member countries in 2005 were accounted for by aerospace equipment (CPA Group 35.3). Exports were valued at EUR 47.7 billion, which was EUR 6.5 billion higher than the corresponding level of imports. France dominated exports of aerospace equipment, with exports (intra and extra-EU trade) valued at EUR 36.1 billion, or 46.7 % of total exports made by EU-25 Member States. Germany and the United Kingdom followed with 24.5 % and 11.8 % shares respectively; making a cumulative share of 83.0 % of the total for these three Member States. The same three Member States had a cumulative share of 75.6 % of imports (from all partners), with France again accounting for the largest proportion (39.4 %).

⁽²⁰⁾ Sweden, 2002; Estonia, Greece, Ireland, Latvia, Luxembourg and Malta, not available.

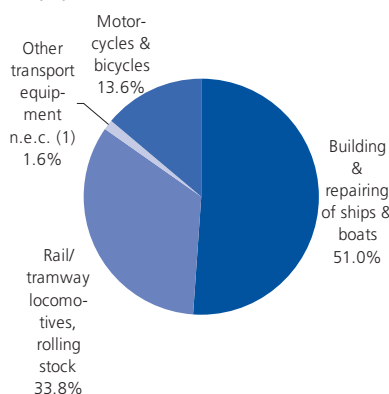
10.4: MISCELLANEOUS TRANSPORT EQUIPMENT

This grouping of the remaining transport equipment manufacturing activities brings together information on the building of ships and boats (NACE Group 35.1), the manufacture of railway and tramway locomotives and rolling stock (NACE Group 35.2), the manufacture of motorcycles and bicycles (NACE Group 35.4), and the manufacture of other transport equipment (NACE Group 35.5), such as industry trolleys, barrows, luggage trucks and hand-pulled golf trolleys.

The miscellaneous transport equipment manufacturing sector (NACE Groups 35.1, 35.2, 35.4 and 35.5) generated EUR 18 billion of value added in 2003 in the EU-25 and employed 460 000 persons. As such, the combined weight of these activities in the whole of the EU-25's transport equipment (NACE Subsection DM) manufacturing sector was 10.6 % in terms of value added, a proportion that rose to 15.7 % of the workforce. More than half (51.0 %) of the EU-25's value added generated within miscellaneous transport equipment manufacturing sector was derived from the building and repairing of ships and boats (NACE Group 35.1) in 2003 - see Figure 10.11.

Within the EU-25 the developments of these activities over the period from 1995 to 2005 was quite varied - see Figure 10.12. Output from the building and repairing of ships and boats (NACE Group 35.1) declined most years between 1995 and 2005, with an average contraction of 2.1 % per annum. Railway and tramway locomotives and rolling stock manufacturing (NACE Group 35.2) saw output fall between 1997 and 1998 to a level at which it remained for four years before recording growth again in 2002, since when it experienced another period of relative stability, not far below its level of the mid-1990s. Over the ten year period studied, the output of motorcycles and bicycles manufacturing (NACE Group 35.4) expanded continuously between 1995 and 1998, contracted in 1999 and bounced back in 2000, before contracting sharply between 2000 and 2002, falling by 16 % overall in these two years; with a stabilisation of output since 2002. The small activity of other transport equipment manufacturing n.e.c. (NACE Group 35.5) grew steadily from 1996 to 2002, averaging 5.3 % growth per annum. However, since 2002 output contracted, on average, by 9.2 % per annum.

Figure 10.11
Manufacture of miscellaneous transport equipment
(NACE Groups 35.1, 35.2, 35.4 and 35.5)
Breakdown of sectoral value added, EU-25, 2003 (%)



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

BUILDING AND REPAIRING OF SHIPS AND BOATS

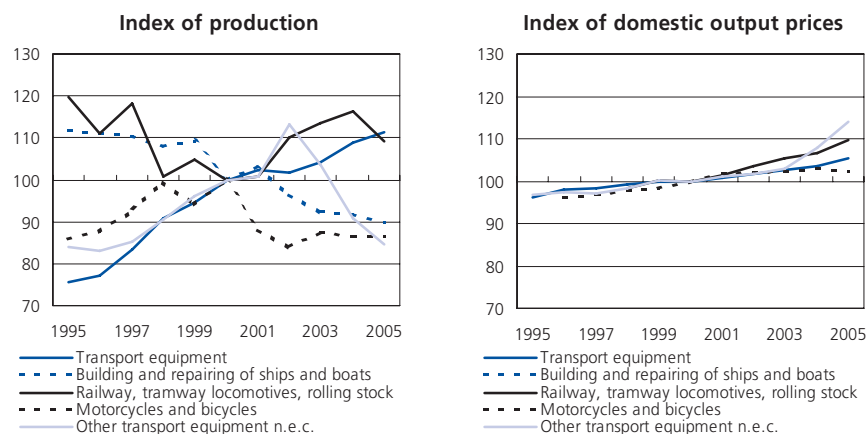
In 2003 the European Commission published the Leadership 2015 programme for developing the competitiveness of this sector. It focused on fair trade, research and development, finance, safety and the environment, development of a European market for naval shipbuilding, protection of intellectual property rights, labour force skills and restructuring of the sector. In 2005, the 'Waterborne Technology Platform' was created as part of the Sixth Framework Programme for Research and Technological Development (FP6), which aims to show the way to more effective waterborne transport research.

EU-25 value added for the building and repairing of ships and boats (NACE Group 35.1) stood at EUR 9.3 billion in 2003, with 259 000 persons employed. Production was spread over a relatively large number of Member States, with the 16.1 % share of EU-25 value added in France the highest share among the Member States, just ahead of the other large Member States. Those Member States with a coastline tended to report relatively high shares of industrial value added within this activity and this was particularly the case in Malta (2002, 4.2 %), and to a lesser extent Finland and the Baltic States ⁽²¹⁾. The apparent labour productivity of the EU-25's building and repairing of ships and boats subsector was relatively low at EUR 35 900 per person employed in 2003, while average personnel costs were EUR 30 900 per employee, resulting in a wage adjusted labour productivity ratio of 116.1 %, the lowest among the NACE groups that constitute transport equipment manufacturing.

The EU-25 ran a trade surplus of EUR 583 million for ships and boats (CPA Group 35.1) in 2005, based on exports of EUR 11.5 billion. Italy, Spain, France and Poland were the leading exporters of ships and boats, each with around 15 % or more of all exports made by EU-25 Member States.

⁽²¹⁾ Czech Republic, Latvia, Malta and Sweden, 2002; Greece and Ireland, not available.

Figure 10.12
Building and repairing of ships and boats (NACE Group 35.1) and Manufacture of railway, tramway locomotives, rolling stock (NACE Group 35.2) and Manufacture of motorcycles and bicycles (NACE Group 35.4) and Manufacture of other transport equipment n.e.c.
Evolution of main indicators, EU-25 (2000=100)



Source: Eurostat (STS)

Table 10.12

Production value of selected transport equipment (CPA Groups 35.1, 35.2 and 35.4), EU-25, 2004 (EUR million)

	Prodcom code	
Sea-going: cruise ships, excursion boats for people, ferry boats	35.11.21.Z1	3 513
Sea-going: bulk and combined carriers, general cargo ships, container ships, ro-ro vessels, car and gas carriers	35.11.24.Z1	3 151
Rail locomotives powered from an external source of electricity	35.20.11.00	930
Diesel-electric locomotives	35.20.12.00	409
Self-propelled rail/tramway coaches, vans & trucks powered from an external source of electricity, excl. maintenance/service vehicles	35.20.20.30	3 297
Rail/tramway passenger coaches; luggage vans & other special purpose rail/tramway coaches excl. maintenance/service vehicles	35.20.32.00	1 866
Scooters with an engine capacity > 50 cm ³ but <= 250 cm ³	35.41.12.13	725
Motorcycles with an engine capacity > 500 cm ³ but <= 800 cm ³	35.41.12.50	794
Motorcycles with an engine capacity > 800 cm ³	35.41.12.70	1 145
Non-motorized bicycles and other cycles, without ball bearings	35.42.10.30	158
Non-motorized bicycles and other cycles with ball bearings (1)	35.42.10.50	1 698

(1) Estimated.

Source: Eurostat (PRODCOM)

MANUFACTURE OF RAIL/TRAMWAY LOCOMOTIVES AND ROLLING STOCK

Value added generated by the EU-25's railway and tramway locomotives and rolling stock manufacturing subsector (NACE Group 35.2) was EUR 6.2 billion in 2003, equivalent to a 3.6 % share of the transport equipment manufacturing total. Slightly more than one quarter of the EU-25's value added was accounted for by Germany (26.8 %), followed by the United Kingdom (19.7 %). In relative terms, Latvia and Austria were the only Member States where this subsector generated 1 % or more of industrial value added in 2003 ⁽²²⁾.

The apparent labour productivity of the EU-25's railway and tramway locomotives and rolling stock manufacturing subsector was EUR 44 000 per person employed in 2003, lower than the transport equipment manufacturing average, but the highest ratio among the four activities presented within this subchapter. Average personnel costs per employee, at EUR 31 700, were also well below the transport equipment manufacturing average, resulting in a wage adjusted labour productivity ratio of 139.1 %, some 5.2 percentage points above the transport equipment manufacturing average.

The EU-25 exported EUR 2.1 billion of railway and tramway locomotives and rolling-stock (CPA Group 35.2) in 2005, and recorded a trade surplus of EUR 1.4 billion. The largest proportion of exports (intra and extra-EU trade) by EU-25 Member States was accounted for by Germany (39.1 %), followed by Austria (14.5 %).

MANUFACTURE OF MOTORCYCLES AND BICYCLES

The EU-25's motorcycles and bicycles manufacturing subsector (NACE Group 35.4) created EUR 2.5 billion of value added in 2003, which was equivalent to a 1.5 % share of the transport equipment manufacturing total, while employing 60 000 persons (2.0 % of the transport equipment manufacturing total). Italy was the largest producer of motorcycles and bicycles in the EU-25, with a 36.9 % share of EU-25 value added, as well as being the most specialised producer of motorcycles and bicycles within the EU-25.

The EU-25's motorcycles and bicycles manufacturing subsector combined an apparent labour productivity of EUR 40 000 per person employed in 2003 with low average personnel costs (EUR 30 000 per employee) to leave a wage adjusted labour productivity ratio of 140 %, the second highest among the transport equipment manufacturing NACE groups (behind aerospace equipment manufacturing - see Subchapter 10.3).

The EU-25 ran a trade deficit for motorcycles and bicycles (CPA Group 35.4) that was valued at almost EUR 4.2 billion in 2005, with exports valued at just EUR 1.6 billion. Italy, Austria and Lithuania were the only Member States that recorded a trade surplus (intra- and extra-EU combined) for these products in 2005.

MANUFACTURE OF OTHER TRANSPORT EQUIPMENT N.E.C.

The EU-25's other transport equipment manufacturing n.e.c. subsector (NACE Group 35.5) created just EUR 0.3 billion of value added in 2003 and employed around 9 000 persons, 0.2 % and 0.3 % respectively of transport equipment manufacturing value added and employment. Germany (46.4 % of EU-25 value added) and the United Kingdom (20.4 %) together dominated this subsector.

The other transport equipment n.e.c. subsector recorded the lowest apparent labour productivity (EUR 34 000) and average personnel costs (EUR 27 400) of the transport equipment manufacturing NACE groups, but the second highest gross operating rate (9.0 %) behind aerospace equipment manufacturing.

The EU-25's exports and imports of other transport equipment n.e.c. (CPA Group 35.5) were valued at around EUR 140 million in 2005. The largest proportion of exports (intra and extra-EU trade) by EU-25 Member States was accounted for by Germany (37.8 %), followed by France (11.6 %).

⁽²²⁾ Malta and Sweden, 2002; Belgium, Denmark, Estonia, Greece and Ireland, not available.

Table 10.13

Manufacture of motor vehicles, trailers and semi-trailers (NACE Division 34)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million) (2)	739 000	16 891	10 147	1 173	280 604	101	: 53 246	194 823	589 46 687	23	18	24	:	7 586	3		
Production (EUR million)	:	16 027	10 068	991	236 155	100	:	47 890	190 897	582 41 249	22	19	24	:	7 476	3	
Value added at factor cost (EUR million) (2)	128 000	3 399	2 110	322	61 655	30	:	8 868	17 958	197 6 907	7	6	4	:	1 445	1	
Gross operating surplus (EUR million) (2)	33 000	1 059	1 228	72	10 942	15	:	3 339	5 341	86 1 422	2	3	3	:	977		
Purchases of goods and services (EUR million)	:	13 575	8 238	875	220 138	70	:	45 480	176 629	405 40 190	16	14	21	:	6 198	1	
Gross investment in tangible goods (EUR million) (3)	:	589	746	39	13 125	8	:	2 381	4 681	29 1 865	1	2	2	:	460	0	
Number of persons employed (thousands) (2)	2 170	49	89	6	868	2	:	164	288	3 164	0	1	1	:	40	0	
Personnel costs (EUR million) (2)	94 700	2 341	882	250	50 713	15	:	5 528	12 617	111 5 485	5	3	2	:	468	1	
App. labour productivity (EUR thous./pers. emp.) (2)	58.7	69.0	23.7	53.6	71.1	16.2	:	54.0	62.4	56.7	42.2	17.6	7.5	5.7	:	36.6	17.5
Average personnel costs (EUR thous./employee) (2)	43.9	47.8	10.0	41.8	58.6	8.0	:	33.8	43.9	32.4	34.1	13.4	3.9	2.4	:	11.9	10.6
Wage adjusted labour productivity (%) (2)	134.0	144.1	237.4	128.4	121.4	201.4	:	159.5	142.2	175.1	123.8	131.3	195.5	237.6	:	307.9	165.1
Gross operating rate (%) (2)	4.4	6.3	12.1	6.1	3.9	15.1	:	6.3	2.7	14.6	3.0	8.9	15.4	10.8	:	12.9	21.9
Investment per person employed (EUR thousand) (3)	:	11.9	8.4	6.4	15.1	4.2	:	14.5	16.3	8.3	11.4	1.2	2.4	2.4	:	11.6	0.3
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million) (4)	7 615	9 999	9 234	4 484	1 331	5 424	1 048	24 502	62 319	29	:	1 273	:	:	:	848	:
Production (EUR million) (4)	7 007	9 837	8 716	4 035	1 265	5 395	954	23 697	53 531	25	:	1 336	:	:	:	834	:
Value added at factor cost (EUR million) (5)	1 866	2 318	1 785	750	184	575	328	4 122	11 371	7	:	301	:	:	:	318	:
Gross operating surplus (EUR million) (6)	831	964	1 125	320	70	386	79	844	2 786	6	:	112	:	:	:	72	:
Purchases of goods and services (EUR million) (4)	5 760	7 805	7 862	3 715	1 161	4 874	736	19 035	50 577	22	:	1 131	:	:	:	547	:
Gross investment in tangible goods (EUR million) (4)	125	723	887	143	52	76	27	946	1 869	2	:	308	:	:	:	27	:
Number of persons employed (thousands) (4)	25	30	85	23	7	23	7	75	217	3	:	61	:	:	:	5	:
Personnel costs (EUR million) (5)	1 035	1 354	660	430	114	190	250	3 277	8 584	6	:	189	:	:	:	247	:
App. labour productivity (EUR thous./pers. emp.) (5)	74.1	78.3	21.0	32.6	26.1	25.2	43.9	56.1	52.3	2.4	:	4.9	:	:	:	61.3	:
Average personnel costs (EUR thous./employee) (6)	41.5	46.0	8.3	18.8	16.2	8.3	33.8	44.7	40.0	2.0	:	3.1	:	:	:	47.6	:
Wage adjusted labour productivity (%) (6)	178.7	170.3	252.8	173.7	161.4	303.0	129.7	125.3	130.9	189.9	:	158.6	:	:	:	128.9	:
Gross operating rate (%) (6)	10.9	9.6	12.2	7.1	5.3	7.1	7.6	4.1	4.5	19.0	:	8.8	:	:	:	8.4	:
Investment per person employed (EUR thousand) (4)	5.0	24.4	10.4	6.2	7.4	3.3	3.6	12.6	8.6	0.8	:	5.0	:	:	:	5.1	:

(1) Malta, 2002. (2) EU-25, rounded estimate based on non-confidential data. (3) Belgium and Latvia, 2002. (4) Sweden, provisional. (5) Sweden, 2002.

(6) Sweden and Bulgaria, 2002.

Source: Eurostat (SBS)

Table 10.14

Manufacture of other transport equipment (NACE Division 35)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million) (2)	150 000	1 460	946	1 343	28 203	107	:	8 827	46 087	456	15 415	9	105	137	:	418	72
Production (EUR million)	:	1 523	946	1 300	28 689	99	:	8 772	44 858	447	15 462	8	108	150	:	395	69
Value added at factor cost (EUR million) (2)	44 500	585	285	400	9 228	32	:	2 794	9 115	222	4 329	4	36	51	:	136	42
Gross operating surplus (EUR million) (2)	12 100	109	93	67	1 536	13	:	754	2 257	37	1 247	2	11	8	:	35	-28
Purchases of goods and services (EUR million)	:	936	700	929	19 977	74	:	6 350	36 861	222	11 403	5	76	101	:	295	29
Gross investment in tangible goods (EUR million) (3)	:	77	77	31	1 053	3	:	454	1 290	10	512	1	4	18	:	18	1
Number of persons employed (thousands) (2)	820	10	22	7	135	3	:	57	139	4	93	0	6	7	:	10	4
Personnel costs (EUR million) (2)	32 400	476	193	333	7 691	20	:	2 040	6 858	185	3 083	3	25	43	:	101	70
App. labour productivity (EUR thous./pers. emp.) (2)	54.1	60.0	12.9	55.4	68.3	12.4	:	48.9	65.3	49.7	46.7	26.1	5.8	7.1	:	13.9	11.1
Average personnel costs (EUR thous./employee) (2)	40.1	50.0	8.9	47.3	57.2	7.6	:	36.6	49.4	41.6	35.7	16.1	4.0	6.0	:	10.6	18.8
Wage adjusted labour productivity (%) (2)	135.0	119.9	144.5	117.1	119.3	163.3	:	133.7	132.2	119.5	130.8	161.9	143.0	117.1	:	131.3	58.9
Gross operating rate (%) (2)	8.1	7.4	9.8	5.0	5.4	11.9	:	8.5	4.9	8.1	8.1	18.9	10.2	5.5	:	8.3	-38.9
Investment per person employed (EUR thousand) (3)	:	7.2	3.5	4.3	7.8	1.3	:	7.9	9.2	2.3	5.5	2.9	0.6	2.6	:	1.9	0.1
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million) (4)	4 637	2 353	2 073	879	147	271	2 109	3 691	29 547	155	:	876	:	:	:	6 402	:
Production (EUR million) (4)	4 570	2 394	2 167	779	144	267	2 079	3 620	27 580	147	:	912	:	:	:	6 422	:
Value added at factor cost (EUR million) (5)	1 120	533	635	234	51	51	659	1 251	12 243	38	:	339	:	:	:	2 179	:
Gross operating surplus (EUR million) (5)	176	159	110	13	7	-2	225	221	4 961	11	:	90	:	:	:	377	:
Purchases of goods and services (EUR million) (4)	3 701	1 916	1 528	586	99	215	1 458	2 332	16 797	126	:	602	:	:	:	4 391	:
Gross investment in tangible goods (EUR million) (4)	119	64	76	20	11	7	26	142	912	9	:	58	:	:	:	150	:
Number of persons employed (thousands) (4)	30	7	67	11	3	8	12	24	153	9	:	68	:	:	:	32	:
Personnel costs (EUR million) (5)	943	374	525	221	44	53	435	1 031	7 282	27	:	249	:	:	:	1 802	:
App. labour productivity (EUR thous./pers. emp.) (5)	37.3	76.4	9.5	21.0	17.1	6.1	53.5	54.0	80.0	4.0	:	5.0	:	:	:	68.6	:
Average personnel costs (EUR thous./employee) (5)	33.1	54.2	8.0	20.0	15.0	6.2	35.8	46.3	48.0	2.9	:	3.7	:	:	:	56.8	:
Wage adjusted labour productivity (%) (5)	112.7	141.0	118.8	105.0	113.7	97.2	149.7	116.7	166.6	137.1	:	135.6	:	:	:	120.7	:
Gross operating rate (%) (5)	3.8	6.8	5.3	1.5	4.7	-0.5	10.7	6.1	16.8	7.2	:	10.3	:	:	:	5.9	:
Investment per person employed (EUR thousand) (4)	4.0	9.2	1.1	1.8	3.7	0.8	2.1	5.9	6.0	0.9	:	0.8	:	:	:	4.7	:

(1) Malta, 2002. (2) EU-25, rounded estimate based on non-confidential data. (3) Belgium, 2002. (4) Sweden, provisional. (5) Sweden, 2002.

Source: Eurostat (SBS)

Furniture and other manufacturing activities



STRUCTURAL PROFILE

The furniture and other manufacturing sector (NACE Division 36) is among the smallest industrial sectors (NACE Sections C to E) within the EU-25, accounting for EUR 49.0 billion of added value and employing some 1.8 million persons in 2003. These figures equate to a 2.9 % share of industrial value added (NACE Sections C to E) and a 5.0 % share of the total number of persons employed in the EU-25's industrial economy. The furniture subsector (NACE Group 36.1; see Subchapter 11.1) accounted for over two thirds (69.2 %) of the value added generated and contributed 71.4 % of employment. Among the other activities (see Subchapter 11.2) the largest in employment terms were miscellaneous manufacturing (NACE Group 36.6) with 250 000 persons employed and jewellery manufacture (NACE Group 36.2) with 123 800 persons employed.

Some 7.6 % of Maltese industrial value added was generated by the furniture and other manufacturing sector in 2002, the highest share of the countries with data available for 2002 or 2003, and this was due to a high specialisation in furniture and in toys and games manufacturing. The Baltic States, Denmark (2002), Cyprus, Italy, Slovenia and

Austria were also relatively specialised in these activities, again mainly due to a specialisation in one or two particular subsectors. The specialisation in some regions within these countries (in some cases the whole country is treated as one region) can clearly be seen from the map on page 212 which is based on the non-financial business economy employment share of this sector: several regions of Italy were relatively highly specialised in these activities in employment terms, as were a large number of Portuguese, Swedish and Czech regions.

The EU-25's index of production for furniture and other manufacturing activities rose on average by 0.2 % per annum during the period 1995 to 2005, compared with an industrial average of 1.8 %. The differences in rates were largely due to diverging trends from 2001, as the output of furniture and other manufacturing activities contracted strongly in 2002 and 2003, while it remained unchanged in 2005, while the production index for industry as a whole registered only one year of contraction (2002) during the same period. Against a background of falling employment in industry since 1995, employment in furniture and other manufacturing activities did not decline particularly strongly between 1995 and 2005, and in fact the employment index grew

This chapter covers a number of unrelated manufacturing activities that are classified within NACE Division 36. The largest of these is furniture manufacturing (NACE Group 36.1), which is the subject of the first subchapter. The remaining activities include the manufacture of jewellery and related articles (NACE Group 36.2), musical instruments (NACE Group 36.3), sports goods (NACE Group 36.4), games and toys (NACE Group 36.5) and miscellaneous manufacturing (NACE Group 36.6) which includes for example the manufacture of brushes, pens, umbrellas and candles: these are all treated in the second subchapter. Note that NACE Division 36 does not cover the manufacture of sports clothes or footwear (which are classified within NACE Divisions 18 and 19).

NACE

- 36: manufacture of furniture;
manufacturing n.e.c.;
- 36.1: manufacture of furniture;
- 36.2: manufacture of jewellery and related
articles;
- 36.3: manufacture of musical instruments;
- 36.4: manufacture of sports goods;
- 36.5: manufacture of games and toys;
- 36.6: miscellaneous manufacturing n.e.c.

Table 11.1

Manufacture of furniture; manufacturing n.e.c. (NACE Division 36) Structural profile, EU-25, 2003

	Value added (EUR million)	Share of industrial value added (%)	Number of persons employed (thousands)	Share of industrial employment (%)
Furniture and other manufacturing activities (1)	48 984	2.9	1 760	5.0
Furniture	33 913	2.0	1 250	3.6
Musical instruments, sports goods, toys and games, jewellery (1)	15 071	0.9	500	1.4

(1) Number of persons employed and related share, rounded estimates based on non-confidential data.
Source: Eurostat (SBS)

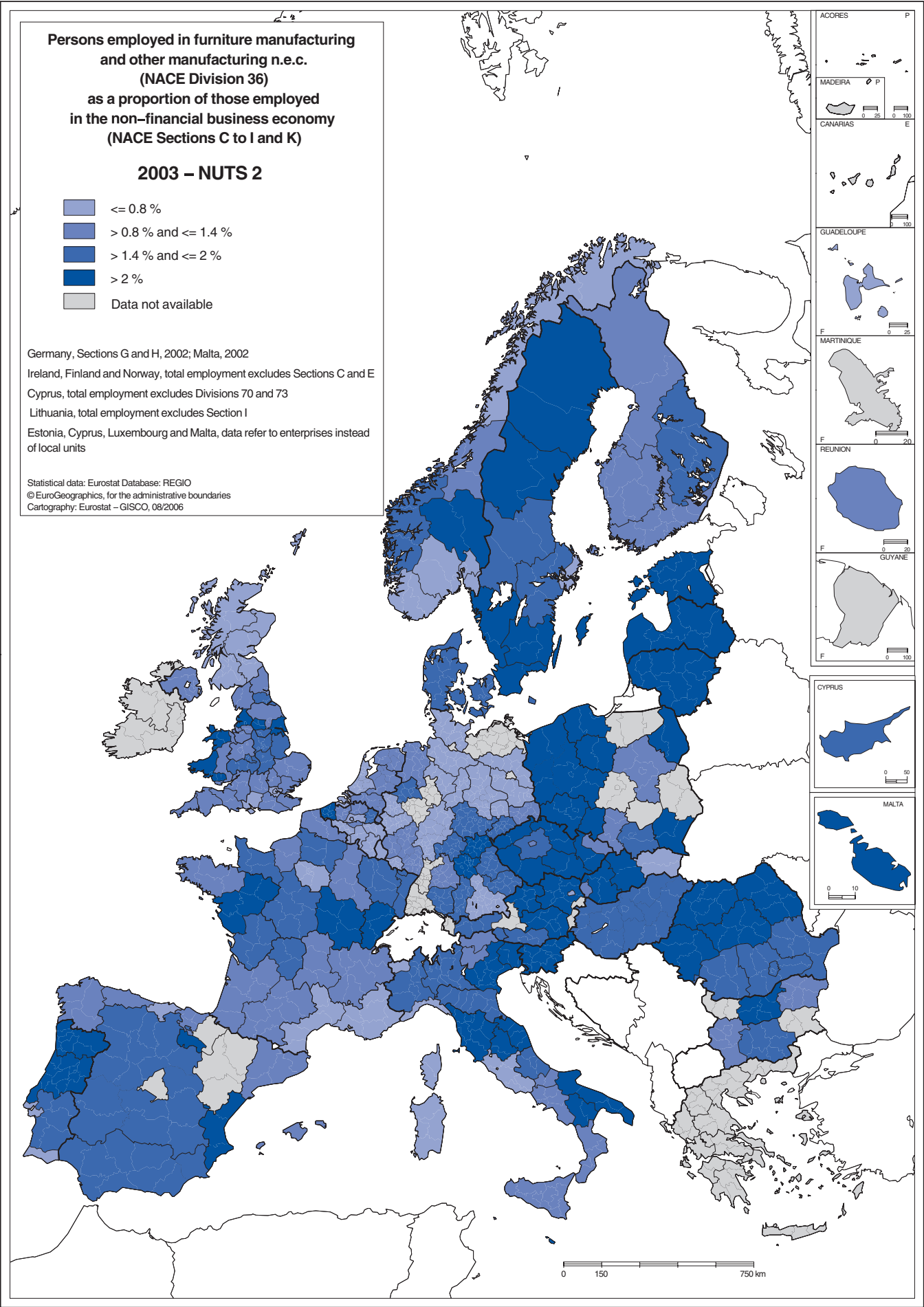


Table 11.2

Manufacture of furniture; manufacturing n.e.c. (NACE Division 36)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (1)	Highest share of national industrial employment (%) (2)
1	Germany (9 815.0)	20.0	Italy (303.6)	17.2	Malta (7.6)	Malta (10.6)
2	Italy (9 231.1)	18.8	Germany (245.9)	14.0	Estonia (6.3)	Estonia (9.5)
3	United Kingdom (7 780.8)	15.9	United Kingdom (201.5)	11.5	Lithuania (5.0)	Cyprus (7.7)
4	France (5 785.0)	11.8	Poland (186.0)	10.6	Denmark (4.8)	Austria (7.0)
5	Spain (4 402.9)	9.0	Spain (174.9)	9.9	Cyprus (4.7)	Lithuania (7.0)

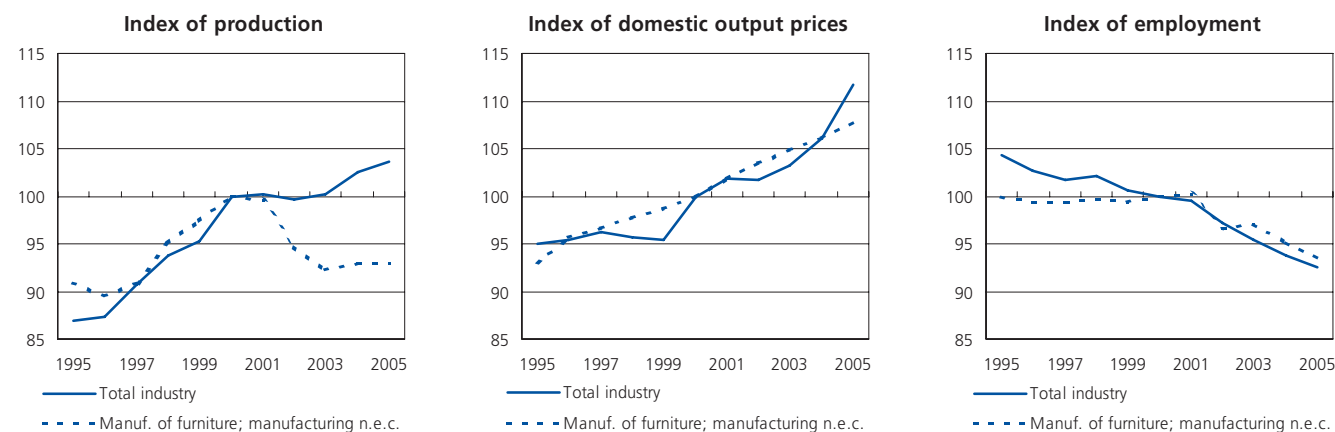
(1) Denmark, Malta and Sweden, 2002; Greece and Ireland, not available.

(2) Denmark and Malta, 2002; Greece and Ireland, not available.

Source: Eurostat (SBS)

Figure 11.1

Manufacture of furniture; manufacturing n.e.c. (NACE Division 36)
Evolution of main indicators, EU-25 (2000=100)



Source: Eurostat (STS)

in several years. Nevertheless, the last two years have been marked by relatively strong reductions in employment in these activities, exceeding the industrial average. Meanwhile, the growth in output prices for furniture and other manufacturing activities was relatively modest, below 2 % every year since 1997.

SMEs (with between 1 and 249 persons employed) accounted for 72.9 % of the value added generated in the EU-25's furniture and other manufacturing activities in 2003, 1.7 times their share in industry (42.3 %). Micro enterprises (with less than 10 persons employed) were particularly important in this sector, as they contributed 17.5 % of value added, compared with an industrial average of 7.1 %.

LABOUR FORCE CHARACTERISTICS

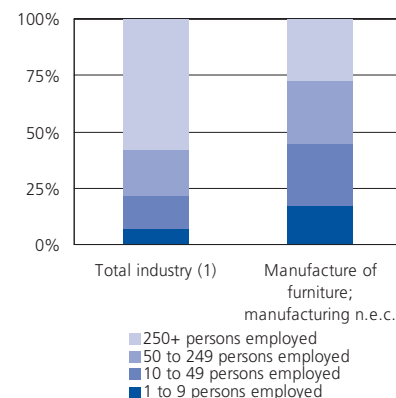
The furniture and other manufacturing activities (NACE Division 36) employed a relatively low proportion of women (26.9 %) compared with the EU-25 industrial average of 28.7 % in 2005.

This was particularly true in Latvia and Hungary where the share of the workforce made up of women was only just above half the average for industry as a whole in those countries. Nevertheless, several Member States recorded a higher share of women in furniture and other manufacturing activities than their industrial average, in particular Sweden and France.

The age profile of the workforce in this sector was younger than the industrial average, according to the age classes presented in Table 11.3. The youngest age class, for persons aged 15 to 29, accounted for 24.4 % of the workforce, 13.9 % above the EU-25 industrial average in 2005. This larger proportion of younger workers was apparent in most of the Member States.

Figure 11.2

Manufacture of furniture; manufacturing n.e.c. (NACE Division 36)
Share of value added by enterprise size class, EU-25, 2003 (%)



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

Table 11.3

Manufacture of furniture; manufacturing n.e.c. (NACE Division 36)
Labour force characteristics, 2005

	Male		Full-time		Breakdown by age (% share of total)		
	Proportion of those employed (%)	Index (industry=100)	Proportion of those employed (%)	Index (industry=100)	< 30 years	30-49 years	50+ years
EU-25	73.1	102.5	90.2	97.7	24.4	54.8	20.8
BE	74.3	98.2	88.3	99.2	15.3	57.0	27.7
CZ	63.1	97.9	95.7	98.1	24.7	51.4	23.9
DK	70.8	101.7	89.1	99.1	14.9	55.5	29.6
DE	71.4	98.5	87.3	98.7	20.8	55.8	23.5
EE	67.9	121.8	97.2	99.6	23.5	49.5	27.1
EL	82.9	111.9	97.7	99.5	20.0	57.1	22.9
ES	80.9	107.6	94.3	99.0	28.5	51.8	19.7
FR	64.3	90.0	94.6	100.7	23.9	53.8	22.3
IE	74.3	105.4	92.0	97.2	32.7	48.4	18.8
IT	69.5	97.2	91.7	98.2	22.6	59.4	18.0
CY	79.7	115.3	93.0	99.2	20.7	53.2	26.1
LV	79.1	134.9	97.7	101.4	29.5	50.6	19.9
LT	64.4	121.0	99.8	102.1	32.1	56.3	:
LU	:	:	:	:	:	:	:
HU	77.6	124.5	93.6	96.2	28.5	49.9	21.7
MT	90.2	116.9	95.5	99.9	:	46.5	:
NL	75.6	97.7	71.3	97.6	17.0	56.1	26.9
AT	79.9	106.9	87.8	97.6	31.9	52.2	15.9
PL	73.6	106.6	95.2	98.9	35.7	53.7	10.7
PT	74.8	126.2	98.2	101.1	24.9	56.6	18.5
SI	70.0	109.4	95.0	98.9	30.5	53.9	15.6
SK	71.1	111.5	97.2	98.3	36.6	47.2	16.3
FI	68.1	95.3	94.3	99.3	18.3	53.6	28.1
SE	66.8	88.9	81.0	89.8	13.7	54.7	31.6
UK	77.6	103.5	89.5	97.9	21.1	53.3	25.6

Source: Eurostat (LFS)

COSTS, PRODUCTIVITY AND PROFITABILITY

The furniture and other manufacturing sector recorded relatively low tangible investment in 2003: equal to around 3.6 % of operating costs on average in the EU ⁽¹⁾, just under three quarters of the industrial average. Based on an average for available Member States ⁽²⁾, total operating costs in this sector were split into 75.4 % for purchases of goods and services and 24.6 % for personnel costs: the share for personnel costs was 5.7 percentage points higher than the industrial average of 18.9 %.

⁽¹⁾ EU average, 2003; Denmark, Malta and Sweden, 2002; excluding Belgium, Greece and Ireland.

⁽²⁾ EU average, 2003; Denmark, Malta and Sweden, 2002.

Apparent labour productivity of the EU-25's furniture and other manufacturing activities was around EUR 27 000 per person employed in 2003 and average personnel costs equated to EUR 23 000 per employee. Both of these ratios were well below the industrial average, in particular the apparent labour productivity. As a result the wage adjusted labour productivity was also considerably below the industrial average, 120 % for furniture and other manufacturing activities compared with the industrial average of 152 %.

EXTERNAL TRADE

The EU-25 exported EUR 27.4 billion of furniture and other manufactured goods (CPA Division 36) in 2005, equivalent to a 2.8 % share of total industrial exports. There was a negative trade balance for furniture and other manufactured goods, as imports were valued at EUR 38.2 billion (or 3.5 % of all industrial imports).

In 2005 the EU-25 recorded exports of EUR 9.7 billion for furniture (CPA Group 36.1) and EUR 17.8 billion for other manufactured goods, with jewellery and related goods (CPA Group 36.2) the largest part of this. A trade deficit was recorded for furniture of EUR 0.8 billion, and of EUR 10.0 billion for other manufactured goods. At the CPA group level the only trade surplus was recorded for jewellery and related articles (EUR 1.9 billion), while the largest deficit (EUR 7.2 billion) was recorded for games and toys (CPA Group 36.5). Compared with five years earlier (2000) the trade surplus in furniture (EUR 2.9 billion) had turned into a deficit, and that for jewellery and related articles had nearly halved from EUR 3.2 billion, while the deficits for the other CPA groups had all increased.

Table 11.4

Manufacture of furniture; manufacturing n.e.c. (NACE Division 36)**Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003 (1)**

Rank	Investment in tangible goods relative to total operating costs (%) (2)	Purchases of goods and services as a share of total operating costs (%) (3)	Personnel costs as a share of total operating costs (%) (3)	Apparent labour productivity (EUR thousand) (4)	Average personnel costs (EUR thousand) (4)	Wage adjusted labour productivity (%) (4)	Gross operating rate (%)
EU-25	3.6	75.4	24.6	27.0	23.0	120.0	8.8
1	Malta (18.8)	Slovakia (89.5)	Luxembourg (33.9)	Denmark (50.5)	Denmark (36.0)	Latvia (172.0)	Malta (22.6)
2	Latvia (13.7)	Poland (84.6)	Sweden (33.9)	Germany (39.9)	Germany (34.2)	Poland (154.2)	Latvia (17.1)
3	Lithuania (7.3)	Italy (81.7)	Austria (31.1)	Netherlands (39.3)	Netherlands (33.6)	Lithuania (147.7)	Poland (13.3)
4	Denmark (6.6)	Belgium (81.2)	Cyprus (30.5)	Finland (38.8)	France (32.0)	Malta (146.0)	United Kingdom (13.3)
5	Netherlands (6.3)	Czech Republic (80.9)	Germany (29.7)	United Kingdom (38.6)	Belgium (31.2)	United Kingdom (144.4)	Luxembourg (13.2)

(1) Denmark, Malta and Sweden, 2002; Greece and Ireland, not available.

(2) Also excluding Belgium; EU-25 is an EU average based on available data for 2002 and 2003.

(3) EU-25 is an EU average based on available data for 2002 and 2003.

(4) EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

Table 11.5

Furniture; other manufactured goods n.e.c. (CPA Division 36)**External trade, EU-25, 2005**

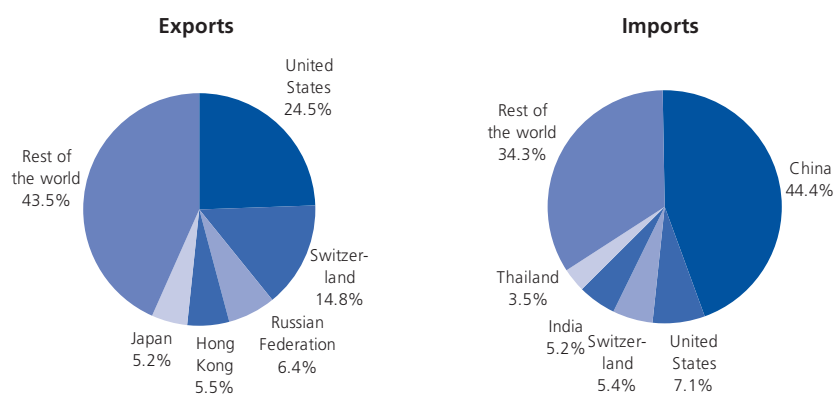
	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Furniture; other manufactured goods n.e.c.	27 429	2.8	38 229	3.5	-10 800	71.7
Furniture	9 667	1.0	10 431	1.0	-764	92.7
Jewellery, musical instr., sports goods, games & toys, misc. goods	17 760	1.8	27 779	2.6	-10 019	63.9
Jewellery and related articles	11 241	1.1	9 379	0.9	1 863	119.9
Musical instruments	440	0.0	825	0.1	-384	53.4
Sports goods	1 202	0.1	2 919	0.3	-1 717	41.2
Games and toys	1 428	0.1	8 638	0.8	-7 210	16.5
Miscellaneous manufactured goods n.e.c.	3 448	0.3	6 018	0.6	-2 570	57.3

Source: Eurostat (Comext)

Furniture and other manufactured goods accounted for 5 % or more of industrial exports in Slovenia (7.9 %), Poland (7.2 %), Lithuania and Italy (both 5.4 %). In terms of imports, these products accounted for 4.0 % of industrial imports into the United Kingdom and 3.9 % into Cyprus, the largest shares among the EU Member States.

China was the dominant partner for EU-25 imports, supplying 43.6 % of furniture and other manufactured goods imported in 2005, far ahead of the United States (7.0%). This share was more than three times the Chinese share of all industrial imports. For sports goods (CPA Group 36.4) China accounted for more than half (53.3 %) of EU imports, for miscellaneous manufactured goods (CPA Group 36.6) more than three fifths (62.6 %), and for games and toys its share was more than three quarters (78.3 %).

Figure 11.3

Furniture; other manufactured goods n.e.c. (CPA Division 36)
Share in extra-EU trade, 2005 (%)

Source: Eurostat (Comext)

11.1: FURNITURE

Furniture manufacturing (NACE Group 36.1) concerns the manufacture of chairs and seats, office, shop, kitchen and other furniture, and mattresses.

Although traditionally associated with wooden products, the EU's furniture industry draws on a variety of materials to manufacture its products, including metal, leather, glass and synthetic materials. Increasingly the EU furniture industry has to rely on its design skills and high added value products in the face of competition from countries that are characterised by low labour costs.

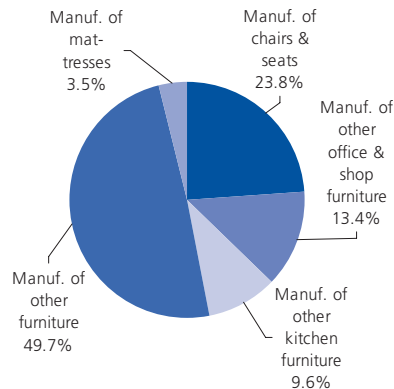
STRUCTURAL PROFILE

In 2003, furniture manufacturing (NACE Group 36.1) generated EUR 33.9 billion of value added in the EU-25, equivalent to 2.0 % of the industrial (NACE Sections C to E) total and 69.2 % of the total for furniture and other manufacturing activities (NACE Division 36). There were 1.25 million persons employed in the EU-25's furniture manufacturing sector, which was a considerably higher share of the industrial workforce at 3.6 %. Half (49.7 %) of the employment was in other furniture manufacturing (NACE Class 36.14), and nearly one quarter (23.8 %) in the manufacture of chairs and seats (NACE Class 36.11), see Figure 11.4.

Germany made the largest contribution to EU-25 value added in the furniture manufacturing sector in 2003 with a 19.9 % share, followed by Italy (18.6 %), the United Kingdom (14.2 %), France (11.0 %) and Spain (10.1 %). An analysis of employment shows a different structure, as Italy had the largest share (16.9 % of the EU-25 total) among the Member States, while Poland also accounted for more than one tenth of the EU-25's workforce (11.7 %).

The relative importance of the furniture manufacturing sector within the national industrial economies of the Member States was

Figure 11.4
Manufacture of furniture (NACE Group 36.1)
Breakdown of sectoral employment, EU-25, 2003 (%)



Source: Eurostat (SBS)

highest in Estonia in 2003, as furniture accounted for 5.5 % of industrial value added. Lithuania, Malta (2002), Cyprus, Denmark, Latvia and Slovenia were also relatively specialised within this activity, as furniture accounted for more than 3.0 % of industrial value added in each of these Member States.

Annual short-term statistics show that the EU-25 production index for furniture manufacturing grew on average by 2.4 % per year between 1995 and 2000, and then this activity's output contracted in each of the following three years, most strongly in 2002 by 4.3 %. Output recovered slightly in 2004 (0.8 %), but was unchanged in 2005. EU-25 domestic output prices for furniture manufacturing rose on an uninterrupted basis from 1995 to 2005, unlike the industrial average which recorded falls in 1998, 1999 and 2002. Prices rose on average by 1.6 % per annum over the period considered, the same as for industry as a whole. In the last two years for which data are available, output price increases

were relatively modest, 1.3 % in 2004 and 1.7 % in 2005 for furniture manufacturing compared with an industrial average of 2.8 % and 5.2 % respectively.

COSTS, PRODUCTIVITY AND PROFITABILITY

Gross tangible investment in furniture manufacturing was equivalent to just 3.4 % of gross operating expenditure in the EU ⁽³⁾, lower than the average for the other manufacturing activities in Subchapter 11.2 and well below the industrial average. Three quarters of gross operating expenditure was for the purchase of goods and services and the remaining quarter for personnel costs.

In 2003, apparent labour productivity was EUR 27 100 per person employed in the EU-25's furniture manufacturing sector, well below the industrial average (EUR 49 600). Average personnel costs per employee in the EU-25's furniture manufacturing sector were also relatively low for an industrial activity, at EUR 22 700. Among the Member States for which data are available ⁽⁴⁾, average personnel costs per employee were systematically lower for the manufacture of furniture than national industrial averages. Once adjusted for the share of employees in persons employed, the ratio of value added to personnel costs was 119.6 % for the EU-25's furniture manufacturing sector, more than one fifth below the industrial average.

The gross operating rate provides information on the ratio of the gross operating surplus to turnover, and this was 7.9 % for the manufacture of furniture in 2003 in the EU-25. This was 2.4 percentage points (or 23.2 %) below the EU-25's industrial average.

⁽³⁾ EU average, 2003; Malta and Sweden, 2002; excluding Belgium and Greece.

⁽⁴⁾ Malta and Sweden, 2002; Greece and Ireland, not available.

Table 11.6

Manufacture of furniture (NACE Group 36.1)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (6 733.7)	19.9	Italy (211.1)	16.9	Estonia (5.5)	Estonia (8.5)
2	Italy (6 308.4)	18.6	Germany (169.0)	13.5	Lithuania (4.5)	Malta (7.4)
3	United Kingdom (4 803.5)	14.2	Poland (145.9)	11.7	Malta (3.6)	Lithuania (6.2)
4	France (3 737.5)	11.0	Spain (141.0)	11.3	Cyprus (3.4)	Cyprus (5.7)
5	Spain (3 411.0)	10.1	United Kingdom (128.1)	10.2	Denmark (3.3)	Portugal (5.4)

(1) Malta and Sweden, 2002; Greece, not available.

(2) Sweden, provisional; Malta, 2002; Greece, not available.

(3) Malta and Sweden, 2002; Greece and Ireland, not available.

(4) Sweden, provisional; Malta, 2002; Greece and Ireland, not available.

Source: Eurostat (SBS)

Table 11.7

Production value of selected furniture (CPA Group 36.1), EU-25, 2004 (EUR million)

	Prodcom code(s)	
Upholstered swivel seats with variable height adjustment, with backrest and fitted with castors or glides excl. medical, surgical, dental or veterinary seats - barbers' or similar chairs	36.11.11.55	1 377
Seats convertible into beds (excl. garden seats or camping equipment)	36.11.12.10	1 564
Upholstered seats with wooden frames (incl. three piece suites) (excl. swivel seats)	36.11.12.50	10 051
Non-upholstered seats with wooden frames (excl. swivel seats)	36.11.12.90	851
Wooden furniture of a kind used in offices, nes, height <= 80 cm	36.12.12.50	1 093
Wooden units for fitted kitchens	36.13.10.50	9 469
Wooden kitchen furniture (excl. units for fitted kitchens)	36.13.10.90	1 076
Wooden furniture for the dining-room and living-room (excl. floor standing mirrors, seats)	36.14.12.50	6 123
Furniture of plastics excl. medical,surgical,dental or veterinary furniture - cases and cabinets specially designed for hi-fi systems, videos and televisions	36.14.14.30	744
Mattress supports (incl. wooden or metal frames fitted with springs or steel wire mesh, upholstered mattress bases, with wooden slats, divans)	36.15.11.00	1 398
Mattresses of cellular rubber and cellular plastics (incl. with a metal frame) (excl. water-mattresses, pneumatic mattresses)	36.15.12.30 and 36.15.12.50	1 296

Source: Eurostat (PRODCOM)

11.2: MUSICAL INSTRUMENTS, SPORTS GOODS, TOYS AND GAMES, JEWELLERY

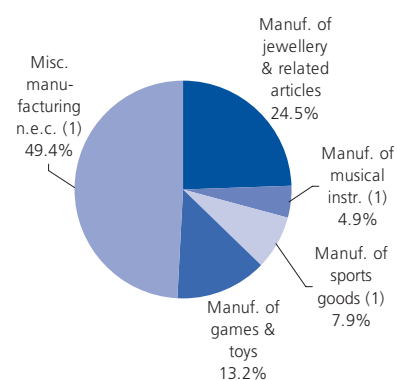
This subchapter covers the manufacture of jewellery, musical instruments, sports goods (note that sportswear and sports vehicles are excluded), games and toys (including electronic games) and miscellaneous goods such as imitation jewellery, brooms and brushes, umbrellas and lighters. These activities, which cover NACE Groups 36.2 to 36.6, are hereafter referred to collectively as the other manufacturing sector.

STRUCTURAL PROFILE

In 2003, the other manufacturing sector (NACE Groups 36.2 to 36.6) generated EUR 15.1 billion of value added in the EU-25, equivalent to 0.9 % of industrial (NACE Sections C to E) value added. With approximately half a million persons employed in the EU-25 in 2003, this sector accounted for 1.4 % of the industrial workforce. In more detail, the activity of miscellaneous manufacturing (NACE Group 36.6) was the largest of the five NACE groups covered within this subchapter, as it generated 45.4 % of sectoral value added in 2003, followed by the manufacture of jewellery and related articles (NACE Group 36.2) that accounted for one quarter (24.5 %) of the EU-25's value added.

Figure 11.5
Jewellery, musical instruments, sports goods, games and toys, miscellaneous manufacturing (NACE Groups 36.2 to 36.6)

Breakdown of sectoral employment, EU-25, 2003 (%)



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

Cyprus recorded the highest relative specialisation in jewellery manufacturing among the Member States ⁽⁵⁾, as this activity represented 0.9 % of Cypriot industrial value added in 2003 (the EU-25 average was 0.2 %, 2002). The Czech Republic was the most specialised Member State in the very small activity of the manufacture of musical instruments ⁽⁶⁾, while Austria recorded the highest specialisation ratio for the manufacture of sport goods ⁽⁷⁾, and Malta (2002) for the manufacture of games and toys ⁽⁸⁾. For the largest activity, namely that of miscellaneous manufacturing, the United Kingdom was the most specialised Member State in 2003 ⁽⁹⁾.

Annual short-term statistics for the EU-25's index of production are available for all but one of the NACE groups that compose this subchapter (no data for the manufacture of sport goods). There was a relatively large contraction in the output of jewellery and related articles (NACE Group 36.2), and musical instruments (NACE Group 36.3), which fell on average by 6.2 % and 6.1 % per annum respectively between 2000 and 2005. For jewellery and related articles this was mainly due to a very strong contraction in both 2002 and 2003. Miscellaneous manufacturing (NACE Group 36.6) reported a large reduction in output in 2002 (-7.9 %) followed by strong growth in 2003 (5.1 %) and then more modest growth and contraction in 2004 and 2005. The index of production for games and toys manufacturing (NACE Group 36.5) recorded several volatile years with output expanding or contracting by 7 % or more in 1999, 2000 and 2001 before stabilising to more modest rates of change for the next three years, with a 2.8 % fall in output recorded for 2005. With the exception of a slight fall (-0.3 %) in 2004 for the manufacture of games and toys, domestic output prices rose each year since at least 2000 for the NACE groups that are covered by this subchapter ⁽¹⁰⁾.

COSTS, PRODUCTIVITY AND PROFITABILITY

The ratio of gross tangible investment to gross operating costs was 4.2 % in the other manufacturing sector in 2003 ⁽¹¹⁾, below the industrial average, but well above the ratio recorded for furniture manufacturing (see Subchapter 11.1).

Apparent labour productivity for the other manufacturing sector was EUR 30 000 per person employed in the EU-25 in 2003, which was EUR 19 600 per person employed less than for industry as a whole. Average personnel costs were also low, just EUR 24 000 per employee, but despite this the wage adjusted labour productivity was 126 %, well below the industrial average of 152 %. However, the EU-25's gross operating rate for other manufacturing was 10.7 % in 2003 and as such was slightly higher than that recorded for industry as a whole (10.3 %).

⁽¹¹⁾ EU average, 2003; Denmark, Malta and Sweden, 2002; excluding Belgium, Greece and Ireland.

⁽⁵⁾ Malta and Sweden, 2002; Estonia, Greece and Ireland, not available.

⁽⁶⁾ Malta, 2002; Estonia, Greece, Ireland, and Sweden, not available.

⁽⁷⁾ Malta and Sweden, 2002; Greece, Ireland and Luxembourg, not available.

⁽⁸⁾ Malta, 2002; Denmark, Estonia, Greece, Ireland, Cyprus, Luxembourg and Sweden, not available.

⁽⁹⁾ Malta and Sweden, 2002; Greece, Ireland, Cyprus and Luxembourg, not available.

⁽¹⁰⁾ Musical instruments (NACE Group 36.3), not available.

Table 11.8

Manufacture of furniture; manufacturing n.e.c. (NACE Division 36)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million)	155 991	4 022	2 345	3 985	28 748	349	: 13 317	20 050	: 34 597	155	162	383	25	825	158		
Production (EUR million)	: 3 694	2 291	3 893	27 277	332	: 13 093	18 477	: 33 655	133	160	377	26	689	159			
Value added at factor cost (EUR million)	48 984	965	698	1 520	9 815	100	: 4 403	5 785	: 9 231	59	63	120	12	219	68		
Gross operating surplus (EUR million)	13 646	262	290	475	1 888	24	: 1 149	1 145	: 3 474	16	28	40	3	58	36		
Purchases of goods and services (EUR million)	: 3 037	1 733	2 547	18 752	249	: 9 214	14 102	: 25 720	99	107	272	16	612	85			
Gross investment in tangible goods (EUR million) (2)	: 159	105	239	698	20	: 501	532	: 1 131	8	20	26	0	45	22			
Number of persons employed (thousands) (3)	1 760	27	78	30	246	14	: 175	158	: 304	3	12	21	0	36	4		
Personnel costs (EUR million)	35 339	703	408	1 044	7 927	75	: 3 254	4 640	: 5 757	44	36	80	8	161	32		
App. labour productivity (EUR thous./pers. emp.) (3)	27.0	36.1	8.9	50.5	39.9	7.3	: 25.2	36.6	: 30.4	18.1	5.3	5.6	37.0	6.0	18.3		
Average personnel costs (EUR thous./employee) (3)	23.0	31.2	6.5	36.0	34.2	5.6	: 20.7	32.0	: 24.5	15.6	3.1	3.8	31.2	5.0	12.5		
Wage adjusted labour productivity (%) (3)	120.0	115.9	138.1	140.4	116.8	131.0	: 121.6	114.4	: 123.9	116.1	172.0	147.7	118.6	119.9	146.0		
Gross operating rate (%)	8.8	6.5	12.4	11.9	6.6	7.0	: 8.6	5.7	: 10.0	10.1	17.1	10.5	13.2	7.0	22.6		
Investment per person employed (EUR thousand) (2)	: 6.1	1.3	7.9	2.8	1.4	: 2.9	3.4	: 3.7	2.5	1.6	1.2	1.3	1.2	1.3	5.9		
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million) (4)	4 603	4 375	5 448	2 623	732	804	1 654	3 978	21 171	:	:	1 075	:	:	:	1 430	:
Production (EUR million) (4)	4 270	4 032	5 117	2 487	679	780	1 497	3 846	19 392	:	:	1 076	:	:	:	1 357	:
Value added at factor cost (EUR million) (5)	1 545	1 679	1 485	783	245	110	571	1 222	7 781	63	:	335	:	:	:	532	:
Gross operating surplus (EUR million) (5)	469	428	724	219	66	29	156	-265	2 815	:	:	126	:	:	:	127	:
Purchases of goods and services (EUR million) (4)	3 054	2 769	4 179	1 877	503	690	1 113	2 619	13 300	:	:	868	:	:	:	928	:
Gross investment in tangible goods (EUR million) (4)	259	166	237	122	34	22	48	143	654	:	:	202	:	:	:	49	:
Number of persons employed (thousands) (4)	39	47	186	60	16	15	15	53	202	:	:	115	:	:	:	11	:
Personnel costs (EUR million) (5)	1 077	1 252	761	564	178	81	424	1 487	4 966	:	:	209	:	:	:	405	:
App. labour productivity (EUR thous./pers. emp.) (5)	39.3	36.0	8.0	13.0	15.5	7.1	38.8	21.7	38.6	:	:	2.9	:	:	:	50.3	:
Average personnel costs (EUR thous./employee) (5)	33.6	29.7	5.2	10.0	12.3	5.2	30.6	28.5	26.7	:	:	1.8	:	:	:	38.7	:
Wage adjusted labour productivity (%) (5)	117.1	121.1	154.2	129.3	126.1	135.5	126.9	76.2	144.4	:	:	158.3	:	:	:	130.1	:
Gross operating rate (%) (5)	10.2	9.8	13.3	8.3	9.1	3.6	9.4	-6.5	13.3	:	:	11.7	:	:	:	8.9	:
Investment per person employed (EUR thousand) (4)	6.6	3.6	1.3	2.0	2.2	1.4	3.2	2.7	3.2	:	:	1.8	:	:	:	4.6	:

(1) Denmark and Malta, 2002.

(2) Belgium, 2002.

(3) EU-25, rounded estimate based on non-confidential data.

(4) Sweden, provisional.

(5) Sweden, 2002.

Source: Eurostat (SBS)

Non-energy mining and quarrying



Industrial and construction minerals are often further processed in downstream industrial sectors, for example, in the manufacture of glass, concrete, and basic or agricultural chemicals, as well as being used directly in the construction sector. Minerals are also used in industrial processes as absorbents, filters, lubricating agents and for polishing. Precious and semi-precious stones and metals are used in jewellery and for some industrial processes.

In March 2006 Directive 2006/21/EC of the European Parliament and of the Council on the management of waste from extractive industries was adopted. The directive concerns waste from mines in operation, and from the most polluting of closed-down sites.

STRUCTURAL PROFILE

The non-energy mining and quarrying sector (NACE Subsection CB) employed 247 900 persons in the EU-25 in 2003. This sector accounted for 0.7 % of industrial (NACE Sections C to E) employment. There were 29 300 persons employed in the mining of metal ores (NACE Division 13) in the EU-25 in 2003, equivalent to 11.8 % of the sector's workforce, while there were 218 600 persons employed in the other mining and quarrying (NACE Division 14) subsector. Non-energy mining and quarrying generated EUR 13 billion of value added in the EU-25 in 2003, 0.8 % of industrial value added in the EU-25. A detailed breakdown of value added by activity is shown in Figure 12.1. In only six of the Member States ⁽¹⁾ with data available did this sector contribute 1.0 % or more to industrial value added, and only in Cyprus did this contribution exceed 2.0 %.

The regional specialisation in these activities is shown on the map on page 222 which is based on the non-financial business economy employment share of this sector. The two most specialised regions (at the level of detail shown in the map) were Övre Norrland (Sweden) and Alentejo (Portugal), and there were several regions in Portugal, Italy and Romania specialised in non-energy mining and quarrying activities.

⁽¹⁾ Malta, the Netherlands and Sweden, 2002; Greece, Ireland and Portugal, not available.

This chapter covers both underground and open-cast mining of ferrous and non-ferrous metal ores (NACE Division 13), as well as other mining and quarrying of non-energy producing materials (NACE Division 14), which includes the extraction of a variety of basic materials (such as salt and other minerals) and materials traditionally used for construction (such as sand and stone). Together these NACE divisions make up NACE Subsection CB.

NACE

- 13: mining of metal ores;
- 13.1: mining of iron ores;
- 13.2: mining of non-ferrous metal ores, except uranium and thorium ores;
- 14: other mining and quarrying;
- 14.1: quarrying of stone;
- 14.2: quarrying of sand and clay;
- 14.3: mining of chemical and fertilizer minerals;
- 14.4: production of salt;
- 14.5: other mining and quarrying n.e.c.

Table 12.1
Mining and quarrying, except of energy producing materials (NACE Subsection CB)
Structural profile, EU-25, 2003

	Value added (EUR million)	Share of industrial value added (%)	Number of persons employed (thousands)	Share of industrial employment (%)
Mining and quarrying, except of energy producing materials (1)	13 000	0.8	247.9	0.7
Mining of metal ores (1)	1 300	0.1	29.3	0.1
Other mining and quarrying	11 692	0.7	218.6	0.6

(1) Value added and related share, rounded estimates based on non-confidential data.
Source: Eurostat (SBS)

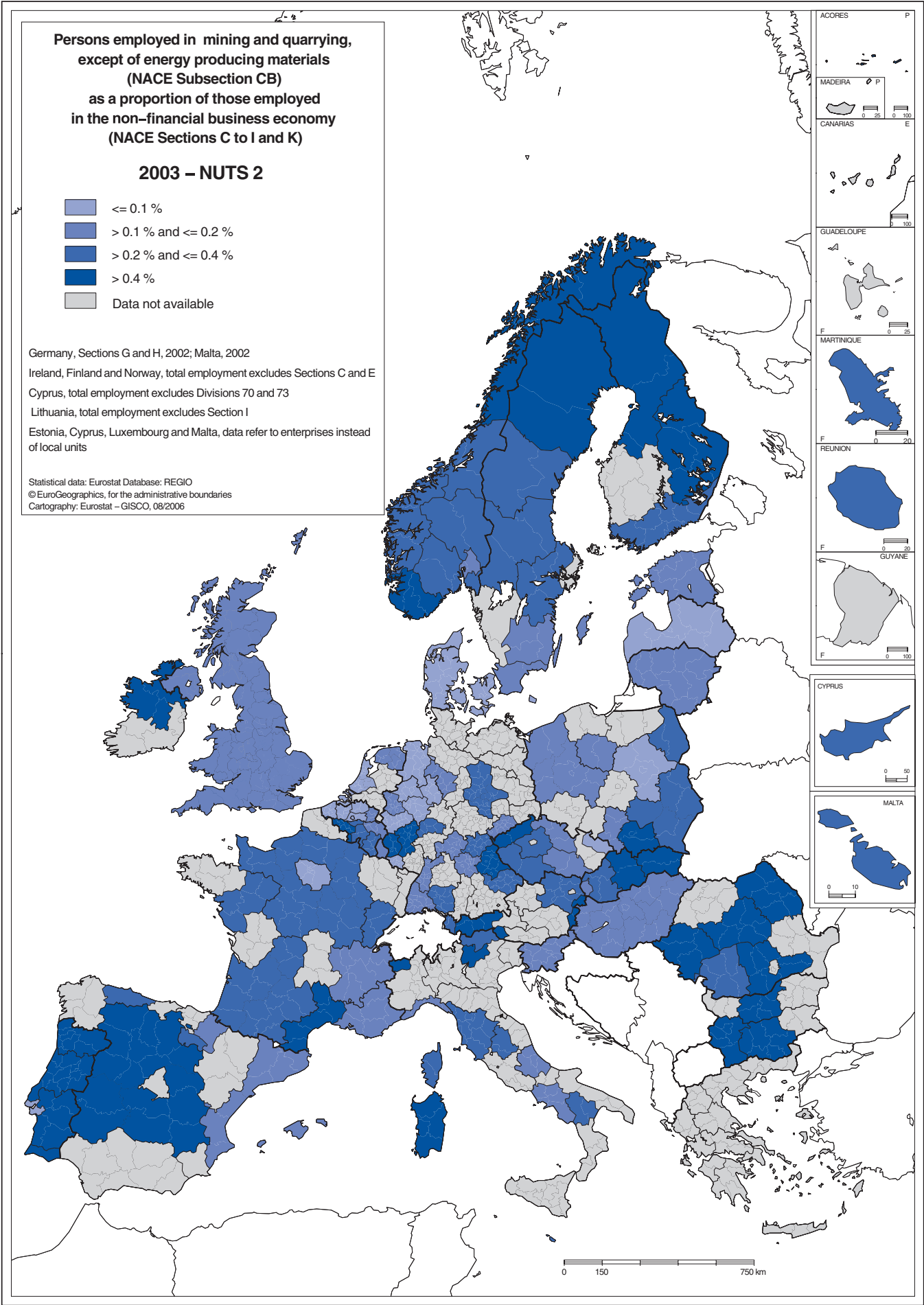


Table 12.2

Mining and quarrying, except of energy producing materials (NACE Subsection CB)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	United Kingdom (2 115.6)	16.3	Poland (36.6)	14.8	Cyprus (2.6)	Cyprus (1.5)
2	Germany (2 013.4)	15.5	Germany (31.5)	12.7	Poland (1.8)	Poland (1.3)
3	France (1 759.3)	13.5	United Kingdom (30.8)	12.4	Sweden (1.3)	Sweden (1.0)
4	Italy (1 561.5)	12.0	France (30.2)	12.2	Spain (1.2)	Spain (1.0)
5	Spain (1 515.1)	11.7	Italy (29.8)	12.0	Luxembourg (1.1)	Malta (0.9)

(1) Ireland, Malta, the Netherlands and Sweden, 2002; Greece and Portugal, not available.

(2) Sweden, provisional; Ireland and Malta, 2002; Greece and Portugal, not available.

(3) Malta, the Netherlands and Sweden, 2002; Greece, Ireland and Portugal, not available.

(4) Sweden, provisional; Malta, 2002; Greece, Ireland and Portugal, not available.

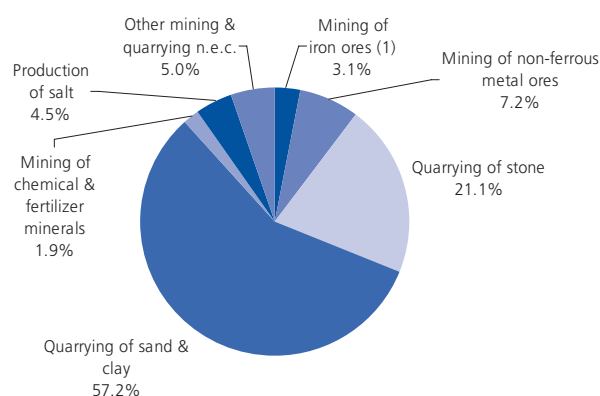
Source: Eurostat (SBS)

The size of enterprises within the non-energy mining and quarrying sector varies enormously between activities. Metal ore mining is concentrated in only a few locations and this activity was characterised by a high dominance of large enterprises (with 250 or more persons employed) that collectively generated 90.5 % of this subsector's value added in the EU-25 in 2003; as such the size structure of this subsector resembled quite closely that seen for the mining of coal and lignite (NACE Division 10). The local sourcing of many construction materials, resulting from widespread availability, relatively high transport costs and low barriers to entry, is reflected in the importance of smaller enterprises in related quarrying activities. SMEs (with less than 250 persons employed) accounted for 79.0 % of value added in other mining and quarrying of non-energy producing materials, compared with an industrial average of 42.3 %.

The EU-25 index of production for non-energy mining and quarrying indicates that output recovered during the second half of the 1990s from a low point in 1996. For four consecutive years output grew, averaging 2.6 % per annum, in contrast to the mining and quarrying of energy producing materials (NACE Subsection CA – see Chapter 13), which declined over the same period. In 2001 this period of growth was reversed with a 2.6 % fall in the output of non-energy mining and quarrying, followed in 2002 by a slightly stronger expansion of 2.9 %. Two years of stable output followed before strong growth (2.4 %) again in 2005 – see Figure 12.2. The small activity of the mining of metal ores did not experience the same period of output growth during the second half of the 1990s. Instead, this activity recorded large falls in output in 1996, 1998 and 1999, all greater than 5 % per year. A further fall of 3.4 % in 2001 was more than offset by expanding output in the next four years, reaching 4.7 % in 2004; by 2005 output had reached the same level as in 1998.

Figure 12.1

Mining and quarrying, except of energy producing materials (NACE Subsection CB)
Breakdown of sectoral value added, EU-25, 2003 (%)



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

Since 1996 (start of the series), the EU-25 employment index for non-energy mining and quarrying fell each and every year, the fall averaging 1.9 % per annum, considerably more than the industrial average (-1.1 %).

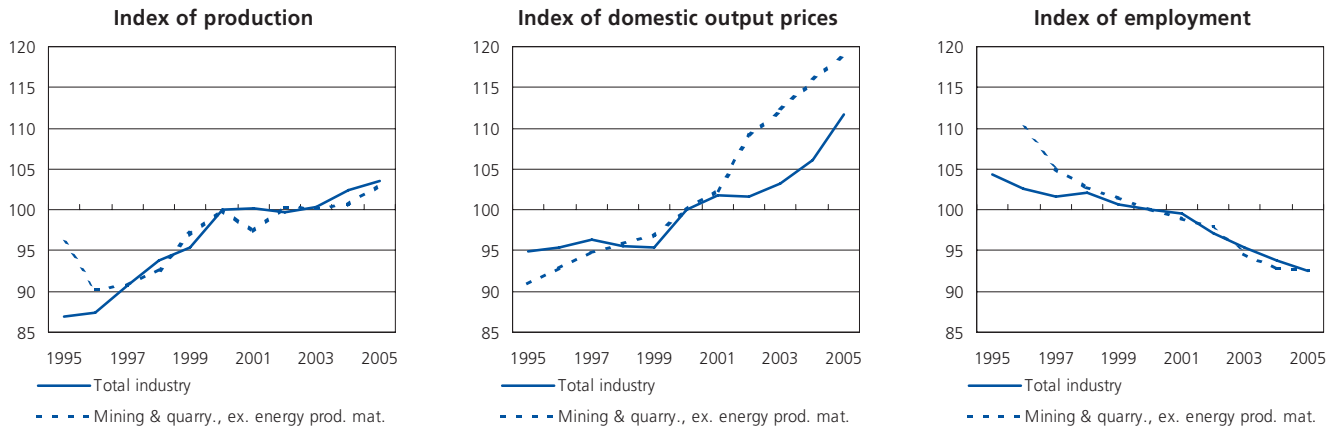
Output prices are available for the EU-25 for both main parts of non-energy mining and quarrying. The activity of other mining and quarrying experienced uninterrupted year-on-year output price growth averaging 2.5 % per annum during the ten years to 2005. For the mining of metal ores a shorter time series is available: prices fell 6.8 % in 2001, stabilised in 2002 (-0.2 %), rose moderately (3.7 %) in 2003 and jumped 35.0 % in 2004 and a further 22.1 % in 2005, reflecting increased demand. For non-energy mining and quarrying activities as a whole, there was steady annual output price growth between 1995 and 2005 (at an average rate of 2.7 % per annum).

LABOUR FORCE CHARACTERISTICS

Like the energy mining and quarrying activities, the non-energy mining and quarrying workforce in the EU-25 was characterised by a relatively high reliance on full-time, male employment – see Table 12.3. According to the Labour Force Survey, 96.8 % of persons in this sector worked on a full-time basis in 2005, just below the mining and quarrying average (97.5 %), but 4.8 % above the industrial average (92.4 %). The EU-25's non-energy mining and quarrying workforce was 90.0 % male in 2005, some 1.5 percentage points higher than the mining and quarrying average and 18.7 points higher than the industrial average.

Figure 12.2

Mining and quarrying, except of energy producing materials (NACE Subsection CB)
Evolution of main indicators, EU-25 (2000=100)



Source: Eurostat (STS)

Table 12.3

Mining and quarrying, except of energy producing materials (NACE Subsection CB)
Labour force characteristics, 2005

	Male		Full-time		Breakdown by age (% share of total)		
	Proportion of those employed (%)	Index (industry=100)	Proportion of those employed (%)	Index (industry=100)	< 30 years	30-49 years	50+ years
EU-25	90.0	126.3	96.8	104.8	:	56.4	:
BE	82.8	109.4	92.8	104.2	:	53.0	:
CZ	83.4	129.4	98.1	100.6	11.3	53.8	34.9
DK	:	:	:	:	:	:	:
DE	89.3	123.2	94.2	106.5	12.7	60.3	26.9
EE	:	:	:	:	:	:	:
EL	93.5	126.1	99.7	101.5	:	63.9	23.3
ES	93.6	124.4	99.4	104.3	24.9	52.3	22.8
FR	85.3	119.4	98.4	104.8	15.6	63.4	20.9
IE	92.2	130.6	97.6	103.1	:	48.1	:
IT	88.1	123.2	96.9	103.8	17.5	60.2	22.3
CY	88.6	128.2	96.3	102.8	:	:	:
LV	:	:	:	:	:	:	:
LT	:	:	:	:	:	:	:
LU	:	:	:	:	:	:	:
HU	89.1	142.9	100.0	102.8	:	58.5	:
MT	:	:	:	:	:	:	:
NL	:	:	:	:	:	:	:
AT	85.5	114.4	87.7	97.5	:	70.4	:
PL	89.0	129.1	96.3	100.0	18.3	53.7	27.9
PT	93.6	158.1	97.0	99.9	:	57.3	:
SI	90.8	142.0	100.0	104.1	:	75.5	:
SK	93.8	147.1	100.0	101.1	:	46.2	35.7
FI	90.0	125.9	94.1	99.1	:	:	:
SE	86.3	115.0	97.9	108.6	:	58.4	:
UK	95.5	127.4	96.8	106.0	:	49.9	34.2

Source: Eurostat (LFS)

Table 12.4

Mining and quarrying, except of energy producing materials (NACE Subsection CB)**Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003**

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (4)	Gross operating rate (%) (4)
EU-25	10.6	76.3	23.7	52.4	30.0	170.0	16.0
1	Cyprus (27.9)	Netherlands (84.8)	Poland (36.2)	Netherlands (105.3)	Netherlands (50.1)	Czech Republic (245.7)	Malta (33.4)
2	Denmark (25.2)	Czech Republic (79.9)	Cyprus (35.8)	Luxembourg (94.1)	Belgium (44.6)	Latvia (240.3)	Latvia (31.3)
3	Hungary (18.8)	United Kingdom (79.4)	Malta (32.4)	Belgium (91.5)	Austria (43.2)	Luxembourg (230.8)	Cyprus (29.5)
4	Austria (15.3)	Ireland (79.4)	Latvia (31.5)	Denmark (84.9)	Denmark (43.0)	Hungary (230.1)	Luxembourg (27.8)
5	Latvia (15.1)	Finland (78.7)	Austria (28.9)	Austria (84.4)	Ireland (42.9)	Malta (220.4)	Czech Republic (24.2)

(1) Ireland, Malta and Sweden, 2002; Belgium, Greece, the Netherlands, Portugal and Slovenia, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Ireland, Malta, the Netherlands and Sweden, 2002; Greece and Portugal, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Ireland, Malta, the Netherlands and Sweden, 2002; Greece and Portugal, not available.

(4) Ireland, Malta, the Netherlands and Sweden, 2002; Greece and Portugal, not available; EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

COSTS, PRODUCTIVITY AND PROFITABILITY

The non-energy mining and quarrying sector recorded relatively high tangible investment in 2003 - the EU (2) average indicates that this investment was equivalent to around 10.6 % of operating costs, more than double the industrial average. Again based on an EU average for available Member States, gross operating costs were split 76.3 % for purchases of goods and services, 23.7 % for personnel costs, a higher share for personnel costs than the industrial average. This high share for personnel costs was despite this sector reporting average personnel costs in 2003 of EUR 30 000 per employee in the EU-25, lower than the industrial average (EUR 32 600). The mining of metal ores recorded lower average personnel costs than other mining and quarrying, at EUR 27 500 per employee compared with EUR 30 400.

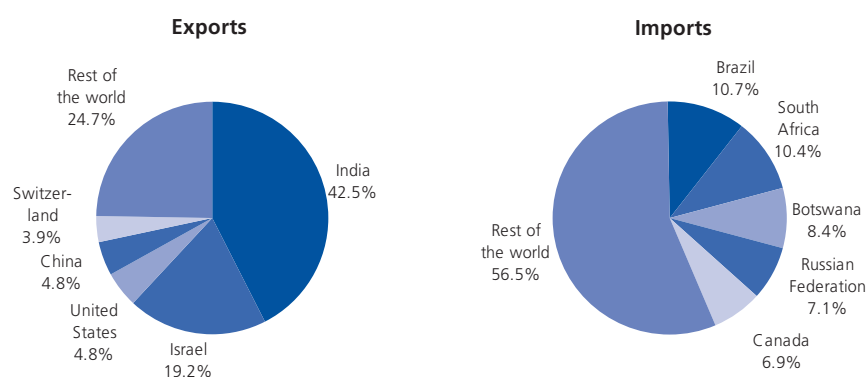
The wage adjusted labour productivity ratio shows the relationship between value added and average personnel costs, and indicates that value added in the EU-25's non-energy mining and quarrying sector was equivalent to 170 % of the average personnel costs in 2003, higher than the industrial average (152 %). An analysis of the gross operating rate (the ratio of the gross operating surplus to turnover) in 2003 shows a very similar situation, with the non-energy mining and quarrying sector recording a ratio of 16 %, above the industrial average of 10.3 %.

EXTERNAL TRADE

The EU-25's exports of metal ores and other mining and quarrying products (CPA Subsection CB) were valued at EUR 14.0 billion in 2005, equivalent to 1.4 % of all industrial (CPA

(2) EU average, 2003; Ireland, Malta and Sweden, 2002; excluding, Belgium, Greece, the Netherlands, Portugal and Slovenia.

Figure 12.3

Metal ores and other mining and quarrying products (CPA Subsection CB)
Share in extra-EU trade, 2005 (%)

Source: Eurostat (STS)

Sections C to E) exports. These were exceeded by imports valued at EUR 28.1 billion, or 2.6 % of industrial imports. The resulting trade deficit of EUR 14.1 billion was split into EUR 12.7 billion for metal ores (CPA Division 13) and EUR 1.4 billion for other mining and quarrying products (CPA Division 14). More than four fifths (84.9 %) of EU-25 exports of metal ores and other mining and quarrying products were among other mining and quarrying products not elsewhere classified (CPA Group 14.5), which includes precious and semi-precious stones, as well as bitumen, asphalt and natural abrasives. Equally this was the largest CPA group for imports, but to a much lesser degree, as iron ores (CPA Group 13.1) and non-ferrous ores (CPA Group 13.2) accounted for significant shares of imports. Comparing 2005 with 2000 the EU-25's trading of metal ores and other mining and quarrying products registered increases in the value of exports, imports and the trade deficit.

The Member States most specialised in the export of metal ores and other mining and quarrying products in 2005 in terms of the share of all industrial exports accounted for by these goods were Belgium (3.8 %) and the United Kingdom (2.5 %). These goods accounted for the largest share of imports of industrial goods in Belgium (4.6 %) and in Finland (3.0 %).

These industrial products are unusual in that the United States is only the third largest export market (4.8 %) for the EU-25, well behind India and Israel which have 42.5 % and 19.2 % shares respectively. Imports were from a wide range of countries traditionally associated with mining, notably Brazil, South Africa, Russia, Canada, Chile and Australia who all provided 5 % or more of EU-25 imports in 2005.

Table 12.5

Mining of metal ores (NACE Division 13)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million)	:	:	0	0	0	0	:	111	114	:	:	0	0	0	0	25	0
Production (EUR million)	:	:	0	0	0	0	:	119	115	:	:	0	0	0	0	26	0
Value added at factor cost (EUR million) (2)	1 300	:	0	0	0	0	:	47	49	:	:	0	0	0	0	13	0
Gross operating surplus (EUR million)	:	:	0	0	0	0	:	24	5	:	:	0	0	0	0	3	0
Purchases of goods and services (EUR million)	:	:	0	0	0	0	:	73	66	:	:	0	0	0	0	14	0
Gross investment in tangible goods (EUR million)	:	:	0	0	0	0	:	8	4	:	:	0	0	0	0	3	0
Number of persons employed (thousands)	29	:	0	0	0	0	:	1	1	:	:	0	0	0	0	1	0
Personnel costs (EUR million)	805	:	0	0	0	0	:	23	44	:	:	0	0	0	0	10	0
App. labour productivity (EUR thous./pers. emp.)	:	:	9.3	:	:	:	:	61.4	53.3	:	:	:	:	:	:	15.1	:
Average personnel costs (EUR thous./employee)	27.5	:	4.5	:	:	:	:	30.6	48.7	:	:	:	:	:	:	12.1	:
Wage adjusted labour productivity (%)	:	:	205.1	:	:	:	:	200.6	109.4	:	:	:	:	:	:	124.0	:
Gross operating rate (%)	:	:	48.8	:	:	:	:	21.5	4.4	:	:	:	:	:	:	10.5	:
Investment per person employed (EUR thousand)	:	:	1.2	:	:	:	:	10.0	4.6	:	:	:	:	:	:	3.9	:
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million)	0	:	:	:	:	16	79	1 360	0	195	:	68	:	:	:	69	:
Production (EUR million)	0	:	:	:	:	15	83	1 348	0	186	:	90	:	:	:	72	:
Value added at factor cost (EUR million)	0	:	:	:	:	3	24	:	0	47	:	125	:	:	:	36	:
Gross operating surplus (EUR million)	0	:	:	:	:	-2	29	:	0	13	:	25	:	:	:	16	:
Purchases of goods and services (EUR million)	0	:	:	:	:	11	60	876	0	154	:	107	:	:	:	36	:
Gross investment in tangible goods (EUR million)	0	:	:	:	:	0	3	134	0	18	:	67	:	:	:	2	:
Number of persons employed (thousands)	0	:	:	:	:	1	0	6	:	7	:	22	:	:	:	0	:
Personnel costs (EUR million)	0	:	:	:	:	5	23	:	0	30	:	101	:	:	:	20	:
App. labour productivity (EUR thous./pers. emp.)	:	:	:	:	:	2.9	56.6	:	:	5.8	:	5.7	:	:	:	100.7	:
Average personnel costs (EUR thous./employee)	:	:	:	:	:	5.3	52.9	:	:	4.1	:	4.6	:	:	:	56.8	:
Wage adjusted labour productivity (%)	:	:	:	:	:	54.9	106.9	:	:	143.3	:	124.3	:	:	:	177.3	:
Gross operating rate (%)	:	:	:	:	:	-14.5	36.8	:	:	6.8	:	36.3	:	:	:	22.6	:
Investment per person employed (EUR thousand)	:	:	:	:	:	0.4	6.2	22.4	:	2.4	:	3.0	:	:	:	6.2	:

(1) Sweden, provisional; Hungary, Malta and Slovakia, 2002; Bulgaria, 2002, except for value added.

(2) EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

Table 12.6

Other mining and quarrying (NACE Division 14)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million)	32 993	:	397	250	5 315	26	:	3 502	5 765	816	:	61	11	43	63	204	13
Production (EUR million)	:	:	400	255	4 964	26	:	3 478	5 523	749	:	62	11	44	61	170	12
Value added at factor cost (EUR million)	11 692	:	159	105	2 013	11	:	1 469	1 710	252	:	33	6	18	30	75	7
Gross operating surplus (EUR million)	5 357	:	96	54	763	5	:	800	596	111	:	18	3	10	17	45	4
Purchases of goods and services (EUR million)	:	:	250	139	3 231	15	:	2 129	3 915	561	:	26	5	25	33	129	5
Gross investment in tangible goods (EUR million)	:	:	39	48	420	2	:	350	460	56	:	11	1	4	4	31	1
Number of persons employed (thousands)	219	:	7	1	32	1	:	27	29	3	:	1	0	1	0	4	0
Personnel costs (EUR million)	6 335	:	63	52	1 251	5	:	669	1 114	141	:	15	2	8	13	30	2
App. labour productivity (EUR thous./pers. emp.)	53.5	:	23.2	84.9	63.9	15.1	:	55.4	58.4	79.6	:	51.2	11.8	13.0	94.1	19.4	22.4
Average personnel costs (EUR thous./employee)	30.4	:	9.5	43.0	41.0	7.7	:	26.5	38.4	44.8	:	24.3	4.9	6.0	40.8	8.3	10.2
Wage adjusted labour productivity (%)	176.1	:	245.8	197.6	155.9	197.6	:	208.8	152.2	177.8	:	211.1	240.3	216.8	230.8	232.9	220.4
Gross operating rate (%)	16.2	:	24.2	21.5	14.3	20.2	:	22.8	10.3	13.6	:	29.5	31.3	23.1	27.8	22.1	33.4
Investment per person employed (EUR thousand)	:	:	5.7	38.9	13.3	3.2	:	13.2	15.7	17.8	:	17.9	2.3	3.0	12.7	8.1	2.5
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million)	973	:	:	823	:	61	374	436	6 987	107	:	154	:	:	:	640	:
Production (EUR million)	832	:	:	825	:	58	279	426	6 776	103	:	160	:	:	:	645	:
Value added at factor cost (EUR million)	274	:	:	356	:	23	126	:	2 116	37	:	59	:	:	:	248	:
Gross operating surplus (EUR million)	148	:	:	174	:	10	67	:	926	13	:	25	:	:	:	109	:
Purchases of goods and services (EUR million)	707	:	:	498	:	39	251	277	4 573	75	:	101	:	:	:	405	:
Gross investment in tangible goods (EUR million)	:	:	:	143	:	7	51	51	542	11	:	28	:	:	:	40	:
Number of persons employed (thousands)	3	:	:	13	:	2	2	2	:	7	:	11	:	:	:	3	:
Personnel costs (EUR million)	126	:	:	183	:	14	62	:	1 190	20	:	34	:	:	:	139	:
App. labour productivity (EUR thous./pers. emp.)	105.3	:	:	27.2	:	9.8	69.2	:	:	4.8	:	5.5	:	:	:	82.3	:
Average personnel costs (EUR thous./employee)	50.1	:	:	14.4	:	5.7	35.7	:	:	3.0	:	3.2	:	:	:	46.5	:
Wage adjusted labour productivity (%)	210.2	:	:	188.5	:	171.9	193.9	:	:	162.6	:	170.3	:	:	:	176.8	:
Gross operating rate (%)	15.2	:	:	21.1	:	15.9	18.0	:	13.3	12.1	:	16.2	:	:	:	17.1	:
Investment per person employed (EUR thousand)	:	:	:	10.9	:	2.8	28.0	22.6	:	1.6	:	2.5	:	:	:	13.3	:

(1) Sweden, provisional; Hungary, Malta and Slovakia, 2002; Bulgaria, 2002, except for value added; the Netherlands, 2002, except for persons employed.

Source: Eurostat (SBS)

Energy



At the Hampton Court meeting in 2005 the European Heads of State and Government proposed the development of a European Energy Policy. In March 2006 the European Commission adopted a Green paper for sustainable, competitive and secure energy. Among the issues raised are to complete the internal energy market for gas and electricity, to ensure support between Member States in case of supply disruptions, to diversify the EU's energy mix in terms of sustainability and efficiency, to address global warming through an energy efficiency Action Plan and a new Road map for renewable energy sources, to develop a strategic energy technology plan, and to develop a common external energy policy with suppliers from non-member countries.

A competitive, reliable and sustainable energy sector is essential for an economy, and this has been put under the spotlight in recent years by a number of issues, notably the volatility in oil prices (see Subchapter 13.1), interruptions to energy supply from non-member countries, blackouts aggravated by inefficient connections between national electricity networks (see

Subchapter 13.3), and the difficulties of market access for suppliers in relation to the gas and electricity markets (see Subchapter 13.3).

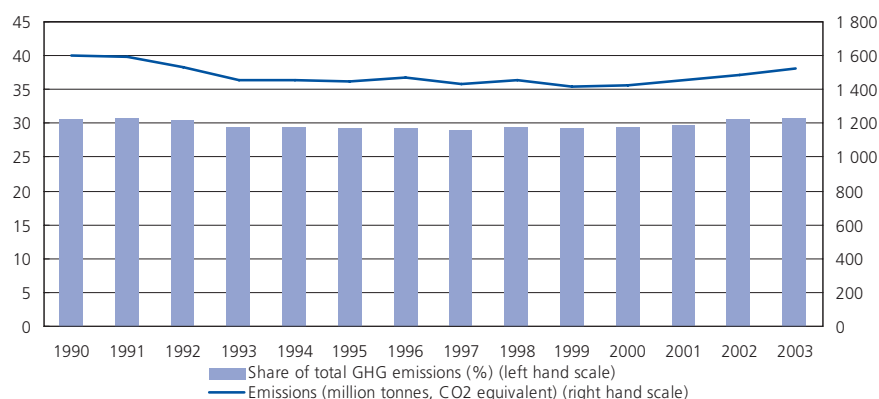
One of the other major problems faced by the energy sector is its own impact on the environment and that from the use of its products. The main concern with the use of fossil fuels is air emissions. The Kyoto Protocol is the basis for the commitments by many countries to reduce their emissions of six specified greenhouse gases (GHG). Under this Protocol, the EU agreed to an 8 % reduction in its greenhouse gas emissions relative to the base year 1990. The reductions for each of the EU-15 Member States were agreed under the so-called EU burden sharing agreement. The Member States that joined the EU in 2004 have chosen other reduction targets and other base years, as allowed under the Protocol. Figure 13.1 shows the development of the level of GHG emissions from energy industries within the EU since 1990, and the share of all GHG emissions that originate from energy industries. Table 13.1 shows a selection of air emissions for the energy industries including acidifying

This chapter describes the activities involved in the supply of energy, which include the mining and quarrying of energy producing materials (NACE Subsection CA), the manufacture of coke, refined petroleum products and nuclear fuel (NACE Subsection DF) and the supply of electricity, gas, hot water and steam (NACE Division 40). These are presented in turn in three subchapters. In previous editions of this publication transport via pipelines (NACE Group 60.3) was also covered in this chapter, but is now included with the other transport services (see Chapter 20).

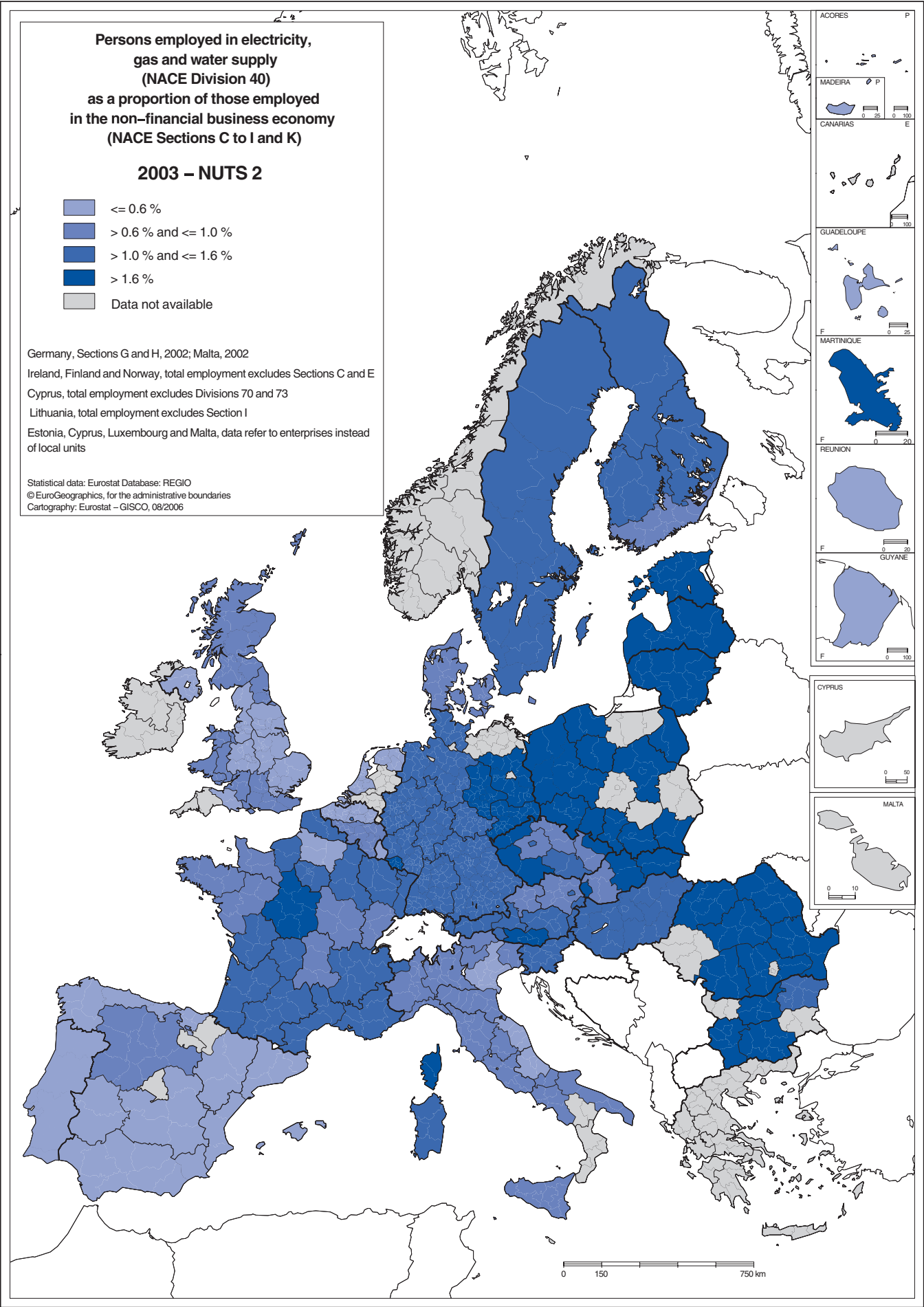
NACE

- 10: mining of coal and lignite; extraction of peat;
- 10.1: mining and agglomeration of hard coal;
- 10.2: mining and agglomeration of lignite;
- 10.3: extraction and agglomeration of peat;
- 11: extraction of crude petroleum and natural gas; service activities incidental to oil and gas extraction, excluding surveying;
- 11.1: extraction of crude petroleum and natural gas;
- 11.2: service activities incidental to oil and gas; extraction, excluding surveying;
- 12: mining of uranium and thorium ores;
- 23: manufacture of coke, refined petroleum products and nuclear fuel;
- 23.1: manufacture of coke oven products;
- 23.2: manufacture of refined petroleum products;
- 23.3: processing of nuclear fuel;
- 40: electricity, gas, steam and hot water supply;
- 40.1: production and distribution of electricity;
- 40.2: manufacture of gas; distribution of gaseous fuels through mains;
- 40.3: steam and hot water supply.

Figure 13.1
Greenhouse gas (GHG) emissions by energy industries, EU-25 (1)



(1) Energy industries include: public electricity and heat production; petroleum refining; manufacture of solid fuels and other energy industries (IPCC common reporting format sector classification).
Source: Eurostat (Air emissions)



compounds such as sulphur and nitrogen oxides, as well as the main GHG produced by these industries. It should be noted that trade can affect where emissions are recorded - for example, the substitution of production by imports (for electricity or for products that require a lot of energy in their production) can reduce emissions in a given country (see Figure 13.18 in Subchapter 13.3 for details of trade in electricity), while in fact having little global impact on the level of emissions.

The main substitutes to fossil fuels are renewable energy sources and nuclear heat. The 1997 European Commission White Paper on energy for the future targeted the share of renewable sources in gross inland energy consumption at 12 % by 2010. Figure 13.6 shows the overall contribution of renewable energy sources and nuclear energy to gross inland energy consumption. Whilst nuclear heat also provides an alternative source to fossil fuels, reducing the reliance on imported fuels and also reducing the problems of GHG emissions, the issues of the safety of nuclear installations and the management of radioactive waste remain.

Table 13.1
Emissions by energy industries, EU-25 (1 000 tonnes) (1)

	1990	2003
Sulphur oxides	14 158	4 894
Nitrogen oxides	3 902	2 274
Ammonium	6	5
Carbon monoxide	664	612
Non-methane volatile organic compounds	84	87
Carbon dioxide	1 583 799	1 500 727
Methane	80	115
Nitrous oxide	52	58

(1) Energy industries include: public electricity and heat production; petroleum refining; manufacture of solid fuels and other energy industries (IPCC common reporting format sector classification).
Source: Eurostat (Air emissions)

STRUCTURAL PROFILE

In 2003 the energy sector (NACE Subsections CA and DF and Division 41), generated EUR 215.1 billion of gross value added, equivalent to around 12.7 % of the wealth created by the EU-25's industrial economy (NACE Sections C to E) – see Table 13.2. By comparison, at 1.6 million persons, employment in the EU-25 energy sector accounted for just 4.6 % of industrial employment, indicating a particularly high apparent labour productivity.

The mining and extraction of energy products (NACE Subsection CA) generated just over one fifth (21.4 %) of EU-25 value added in the energy sector in 2003, fuel processing (NACE Subsection DF) accounted for 13.9 %, and the network supply of electricity, gas, steam and hot water (NACE Division 40) was the largest subsector generating close to two thirds (64.7 %) of the sector's value added.

In employment terms, the dominance of the network supply part of the energy sector was even clearer, as it accounted for 67.5 % of employment in the EU-25's energy sector in 2003. The processing of energy products accounted for 9.9 % of the workforce, less than half the 22.6 % share of mining and extraction of energy products.

The United Kingdom generated over one fifth (20.4 %) of the EU-25's value added in 2003 in the energy sector, just ahead of Germany (19.0 %), while France (12.5 %) was the only other Member State to record a double-digit share of the EU-25 total (see . In employment terms the contribution of the Member States was very different, with Poland's workforce of 355 225 persons equivalent to 22.2 % of the EU-25 total. The next largest workforces were in Germany (19.8 % of the EU-25 total), France (12.4 %) and the United Kingdom (10.0 %). Several Member States recorded a high value added specialisation in the energy sector, relative to the EU as a whole. Notably in Poland and Lithuania the energy sector accounted for 27.7 % and 27.3 % respectively of industrial value added in 2003, more than double the share for the EU-25 as a whole. The United Kingdom, the Netherlands (2002) and Estonia were also relatively specialised in the energy sector which contributed between 16 % and 18 % of industrial value added in these Member States (see Table 13.3).

Table 13.2
Energy (NACE Subsections CA and DF and Division 40)
Structural profile, EU-25, 2003

	Value added (EUR million)	Share of industrial value added (%)	Number of persons employed (thousands)	Share of industrial employment (%)
Energy	215 067	12.7	1 600	4.6
Mining and quarrying of energy producing materials	46 059	2.7	380	1.1
Manufacture of coke, refined petroleum products and nuclear fuel	29 963	1.8	167	0.5
Electricity, gas, steam and hot water supply	139 045	8.2	1 136	3.2

Source: Eurostat (SBS)

Table 13.3

Energy (NACE Subsections CA and DF and Division 40)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (1)	Highest share of national industrial employment (%) (2)
1	United Kingdom (43 828.2)	20.4	Poland (355.2)	22.2	Poland (27.7)	Poland (12.7)
2	Germany (40 837.7)	19.0	Germany (316.4)	19.8	Lithuania (27.3)	Estonia (9.7)
3	France (26 867.3)	12.5	France (198.4)	12.4	United Kingdom (17.6)	Latvia (9.4)
4	Italy (19 960.4)	9.3	United Kingdom (159.5)	10.0	Estonia (17.5)	Lithuania (9.2)
5	Spain (15 574.6)	7.2	Italy (131.3)	8.2	Netherlands (16.3)	Czech Republic (2.9)

(1) The Netherlands and Sweden, 2002; Denmark, Greece, Ireland, Cyprus, Latvia, Malta, Austria, Portugal and Slovakia, not available.

(2) Sweden, provisional; Denmark, Greece, Ireland, Cyprus, Malta, Austria, Portugal and Slovakia, not available.

Source: Eurostat (SBS)

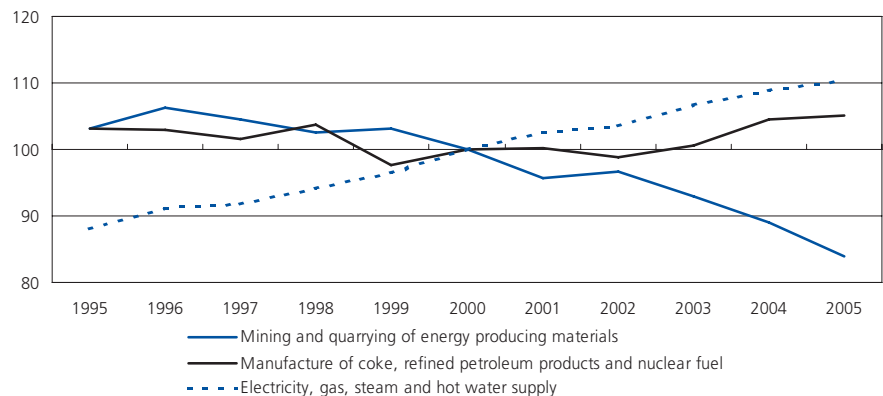
The map on page 228 shows the regional specialisation in the largest part of the energy sector, the electricity, gas and water supply (NACE Division 40) subsector, based on the sector's share of the non-financial business economy employment. This subsector was particularly important in several regions of Poland, Slovakia, the Czech Republic, and in the Baltic Member States (which are each considered as a single region at the level of detail shown in the map), as well as in several regions of Romania and Bulgaria.

There were contrasting developments in the production indices of the three activities involved in the supply of energy. There was steady and successive annual growth for the supply of electricity, gas, hot water and steam over the ten years through until 2005 (at an average rate of 2.3 % per annum). In contrast, there was a downward trend in the production index for the mining and quarrying of energy producing materials (on average by -2.0 % per annum) from a relative peak in 1996, albeit with some temporary upturns in output in 1999 and 2002. The production index for the manufacture of coke, refined petroleum products and nuclear fuel was, by comparison, more stable (rising on average by 0.2 % per annum during the last decade), with strong growth in 2004 (3.9 %) confirming the rebound in output since a relative low point was registered in 1999.

The energy sector is dominated by large enterprises, according to size class data. SMEs (enterprises with less than 250 persons employed) contributed just 14.9 % of this sector's workforce in 2003, whereas in industry as a whole their contribution was more than half, at 57.1 %. Large enterprises dominated all three parts of the energy sector, most notably in the mining and quarrying of energy producing materials (Subsection CA).

Figure 13.2

Energy (NACE Subsections CA and DF and Division 40)
Production index, EU-25 (2000=100)



Source: Eurostat (STS)

LABOUR FORCE CHARACTERISTICS

The energy sector's (NACE Subsections CA and DF and Division 40) workforce in the EU-25 can be characterised as male and full-time with a relatively high importance of older workers - see Table 13.4. In 2005, according to Labour Force Survey data, 81.5 % of the persons employed in this sector were male, some 4.3 percentage points higher than the industrial economy (NACE Sections C to E) average. The proportion of full-time workers was 95.6 %, 3.2 percentage points higher than the average for the industrial economy. The proportion of young persons (aged less than 30) in this sector's workforce was just 13.9 %, just under two thirds the average share for the industrial economy (21.4 %). As a result older workers made up a large part of the workforce, particularly persons aged 50 or over who accounted for more than one quarter (25.8 %) of the workforce. A more detailed analysis of the different characteristics of the workforce is presented in each of the subchapters.

COSTS, PRODUCTIVITY AND PROFITABILITY

The first three columns of Table 13.5 provide information on the capital and operating expenditure within the EU's energy sector. The ratio of gross tangible investment to gross operating expenditure was 8.4 % in the EU ⁽¹⁾, considerably higher than the 5 % industrial average. Investment was relatively high compared with operating expenditure for the mining and quarrying of energy products (Subsection CA) and to a lesser extent for electricity, gas, steam and hot water supply (NACE Division 40), but only about half the industrial average for fuel processing (NACE Subsection DF).

⁽¹⁾ EU average, 2003; France and Sweden, 2002; excluding Belgium, Denmark, Greece, Ireland, Cyprus, Latvia, Malta, the Netherlands, Austria, Portugal, Slovenia and Slovakia.

Table 13.4

Energy (NACE Subsections CA and DF and Division 40)
Labour force characteristics, 2005

	Male		Full-time		Breakdown by age (% share of total)		
	Proportion of those employed (%)	Index (industry=100)	Proportion of those employed (%)	Index (industry=100)	< 30 years	30-49 years	50+ years (1)
EU-25	81.5	114.3	95.6	103.5	13.9	60.4	25.8
BE	81.7	107.9	93.6	105.2	17.8	57.5	24.6
CZ	83.0	128.8	99.4	101.9	11.0	57.5	31.5
DK	78.3	112.5	97.7	108.7	:	51.0	41.1
DE	80.6	111.2	93.8	106.0	15.5	59.6	24.9
EE	80.5	144.4	98.1	100.5	7.5	54.2	38.3
EL	85.4	115.2	99.5	101.4	9.2	67.3	23.5
ES	81.0	107.7	97.8	102.7	21.6	56.2	22.2
FR	80.7	113.0	91.6	97.5	14.2	62.3	23.4
IE	80.6	114.2	95.9	101.3	18.5	48.9	32.6
IT	87.6	122.6	97.5	104.4	9.2	63.2	27.6
CY	78.6	113.7	100.0	106.7	19.4	63.7	22.5
LV	71.5	122.0	98.4	102.0	15.3	41.4	43.3
LT	75.3	141.3	99.2	101.4	:	65.6	28.4
LU	88.7	108.7	98.5	105.0	:	58.4	:
HU	75.7	121.3	98.4	101.2	10.5	59.3	30.2
MT	95.0	123.1	100.0	104.6	:	:	:
NL	75.5	97.6	75.9	103.8	17.7	53.4	28.9
AT	78.6	105.2	91.2	101.4	19.3	55.6	25.1
PL	84.7	122.9	98.4	102.3	9.1	67.8	23.1
PT	83.3	140.6	99.2	102.1	:	59.1	27.3
SI	83.2	130.0	99.3	103.3	10.8	67.6	21.6
SK	83.4	130.9	98.7	99.8	16.5	62.5	21.1
FI	75.9	106.2	95.9	101.0	15.1	41.6	43.3
SE	72.2	96.2	92.0	102.0	13.5	50.9	35.6
UK	78.0	104.2	94.7	103.7	20.4	55.5	24.1

(1) Cyprus, 2004.

Source: Eurostat (LFS)

In the energy sector personnel costs represented just 9 % of gross operating expenditure in the EU ⁽²⁾, approximately half the industrial average. This was mainly due to the very low share of personnel costs in fuel processing ⁽³⁾, around 4 %.

Within the EU's energy sector there was a range in levels of apparent labour productivity between the subsectors in 2003, but they were all very high. The energy sector's apparent labour productivity was around EUR 134 000 per person employed in the EU ⁽⁴⁾, more than two and a half times as high as the industrial average. The EU ⁽⁵⁾ average for mining and quarrying of energy products was similar to the

EU-25 level for electricity, gas, steam and hot water supply, both around EUR 120 000 per person employed, whereas for fuel processing apparent labour productivity for the EU-25 was EUR 179 100. Average personnel costs in the EU-25's energy sector were also higher than the industrial average reaching EUR 42 000 per employee compared with EUR 32 600. Again fuel processing recorded the highest ratio within the energy sector, at EUR 59 600 per employee, while the lowest average personnel costs were in mining and quarrying of energy products (EUR 30 000), below the industrial average. These very high apparent labour productivity ratios and comparatively moderate average personnel costs resulted in particularly high wage adjusted labour productivity ratios, ranging from around 400 % in mining and quarrying of energy products to 283.3 % in electricity, gas, steam and hot water supply, all far above the EU-25 industrial average for 2003 of 152 %. The difference was smaller for the gross operating rate (the gross operating surplus relative to turnover): 14.6 % in the

energy sector compared with the industrial average of 10.3 %. In particular the very low share of personnel costs in gross operating expenditure combined with a high level of turnover in fuel processing resulted in a gross operating rate for this subsector of just 6.0 %, less than half the energy sector's average and below the overall industrial average. The highest gross operating rate among the three energy subsectors was the 27.4 % recorded for mining and quarrying of energy products.

⁽²⁾ EU average, 2003; the Netherlands and Sweden, 2002; excluding Denmark, Greece, Ireland, Cyprus, Latvia, Malta, Austria, Portugal and Slovakia.

⁽³⁾ EU average, 2003; Sweden, 2002; excluding Denmark, Greece, Ireland, Cyprus, Latvia, Malta, Austria and Slovakia.

⁽⁴⁾ EU average, 2003; the Netherlands and Sweden, 2002; excluding Denmark, Greece, Ireland, Cyprus, Latvia, Malta, Austria, Portugal and Slovakia.

⁽⁵⁾ EU average, 2003; Ireland, Malta, the Netherlands and Sweden, 2002; excluding Greece and Portugal.

Table 13.5

Energy (NACE Subsections CA and DF and Division 40**Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003**

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	8.4	91.0	9.0	134.4	42.0	300.0	14.6
1	Estonia (31.1)	Netherlands (95.4)	Slovenia (20.0)	Belgium (308.4)	Belgium (98.5)	Spain (496.1)	United Kingdom (25.2)
2	Luxembourg (22.5)	Belgium (94.3)	France (15.5)	Netherlands (296.4)	Luxembourg (69.2)	United Kingdom (479.1)	Poland (24.5)
3	United Kingdom (16.0)	Italy (94.0)	Poland (15.1)	United Kingdom (274.8)	Netherlands (68.7)	Netherlands (431.4)	Spain (22.1)
4	Lithuania (12.7)	Spain (93.3)	Estonia (13.4)	Spain (261.2)	France (66.3)	Finland (391.5)	Finland (20.3)
5	Spain (12.6)	Hungary (92.9)	Czech Republic (10.3)	Luxembourg (229.3)	Germany (63.0)	Sweden (381.3)	Luxembourg (19.6)

(1) France and Sweden, 2002; Belgium, Denmark, Greece, Ireland, Cyprus, Latvia, Malta, the Netherlands, Austria, Portugal, Slovenia and Slovakia, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) The Netherlands and Sweden, 2002; Denmark, Greece, Ireland, Cyprus, Latvia, Malta, Austria, Portugal and Slovakia, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) The Netherlands and Sweden, 2002; Denmark, Greece, Ireland, Cyprus, Latvia, Malta, Austria, Portugal and Slovakia, not available.

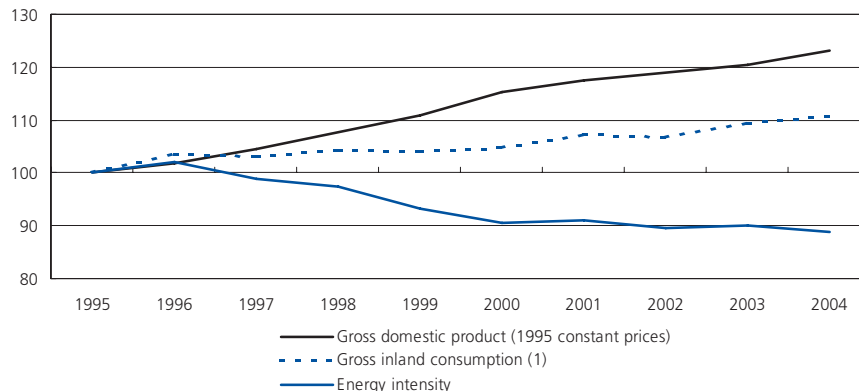
Source: Eurostat (SBS)

PRODUCTION, EXTERNAL TRADE AND CONSUMPTION OF ENERGY PRODUCTS**Box 13.1: definitions**

Primary production is the sum of energy extraction, heat produced in reactors as a result of nuclear fission, and the use of renewable energy sources. Primary production, net imports (imports-exports) and stock changes combine to show gross inland consumption. This indicator corresponds to the amount of energy available for final consumption plus the sum of distribution and transformation losses and consumption by the energy branch itself. Energy available for final consumption is the energy placed at the disposal of consumers including non-energy consumption, for example, the use of some energy products as raw materials by the chemical industry.

Primary energy production in the EU-25 increased on average by 0.03 % per annum between 1994 and 2004 to reach 882 million toe (tonnes of oil equivalent). This rate of increase was slower than that recorded for gross inland consumption over the same period, namely an average of 1.2 % per annum to 1.7 billion toe. Consequently the EU-25's dependency on energy imports grew, net imports increasing on average by 2.9 % per annum to 907 million toe in 2004: as such in 2004 net imports were 2.8 % higher than the level of primary production.

Despite the increase in gross inland energy consumption, the energy intensity (measured as gross inland energy consumption divided by GDP) of the EU-25 economy fell on average by 1.3 % per year between 1995 and 2004, meaning that less energy was required to produce the same amount of GDP - see Figure 13.3.

Figure 13.3
Energy intensity, EU-25 (1995=100)

(1) Excluding Slovenia.

Source: Eurostat (Energy statistics (ES) - structural indicators; national accounts)

Figures 13.4 to 13.6 show the change in the ten years between 1994 and 2004 in the energy product mix of the EU-25 in terms of primary production, net imports and gross inland consumption. In terms of primary production the share of solid fuels (for example, coal and coke) fell significantly from nearly three tenths (29.8 %) in 1994 to just over one fifth (21.6 %) in 2004 - see Figure 13.4. The share of crude oil and petroleum products also fell considerably, from 18.1 % to 15.5 % between the same years. These two large falls were compensated by an increase in each of the other sources, with renewables, in particular, but also nuclear heat and gas, increasing their shares. In absolute terms (in quantity), solid fuels and crude oil and petroleum products saw a decrease in primary production over the ten years analysed: with the output of solid fuels falling on average by 3.1 % per annum and that of crude oil and petroleum products by 1.5 % per annum.

Box 13.2: note on external trade

Note that unlike the rest of this publication the EU-25's imports and exports of energy products (from Eurostat's energy domain) are generally measured as the sum of the external trade of the Member States. This means that internal trade between EU Member States is counted in the EU's total, rather than considering the EU as a whole and only counting extra-EU trade flows.

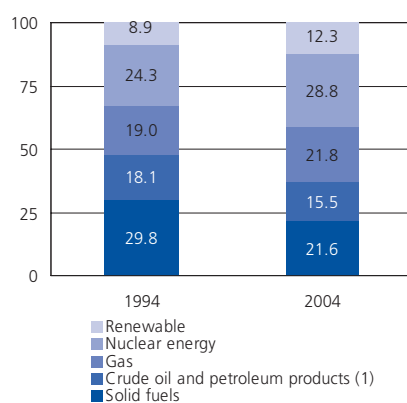
As noted above, the EU-25's net imports of fuels grew significantly between 1994 and 2004: on average (in quantity) net imports of gas grew by 6.5 % per annum, solid fuels by 5.7 % per annum and oil and petroleum products by 1.4 % per annum. These different growth rates, in particular the relatively low growth in net imports of oil and petroleum products, has led to a major change in the product mix in net imports over the period considered (see Figure 13.5), with a 10.1 percentage point drop in the share of oil and petroleum products.

An analysis of the product mix of gross inland consumption in 1994 and in 2004 is shown in Figure 13.6. The product mix in 2004 compared with ten years earlier showed a lower dependence on fossil fuels in relative terms, and a higher use of other sources. The increase in primary production of gas, and the very strong increase in net imports of gas increased this product's share of gross inland consumption from 18.5 % in 1994 to 23.9 % in 2004. Solid fuels mirrored this development, their share falling from 22.7 % to 17.9 % over the same period, with the decline in primary production considerably greater than increased net imports. This change has, to a large extent, been the result of changes in inputs for conventional thermal power stations. Nevertheless, the share of coal and lignite in energy consumption remains high, and reflects the importance of these products in the face of concerns about security of supply and price volatility witnessed for oil and gas. The overall declining share of fossil fuels in gross inland consumption was balanced by an increased use of nuclear energy and renewable energy sources⁽⁶⁾. The share of nuclear energy rose from 13.9 % in 1994 to 14.6 % of gross inland consumption in 2004. Renewable energy sources increased their share from 5.2 % of gross inland consumption in 1994 to 6.4 % in 2004 - see Subchapter 13.3 for more information on the use of various renewable energy sources for electricity generation.

Figure 13.7 provides an overview of the change in the destination of final energy use in the ten years between 1994 and 2004. Most notably the share of energy used for transport (including all transport, not just transport by the transport services sector) in the EU-25 increased by 1.8 percentage points, while the share consumed by industry and by other sectors fell.

⁽⁶⁾ Hydroelectric, wind, solar, geothermal energy and biomass/waste.

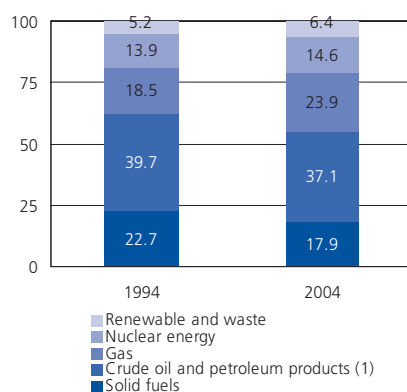
Figure 13.4
Primary production by fuel type, EU-25 (%)



(1) Excluding Slovenia.

Source: Eurostat (Energy statistics (ES) - quantities)

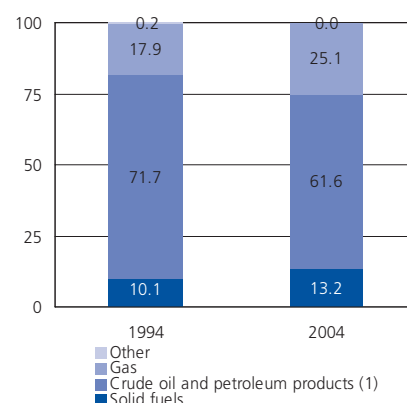
Figure 13.6
Gross inland consumption by fuel type, EU-25 (%)



(1) Excluding Slovenia.

Source: Eurostat (Energy statistics (ES) - quantities)

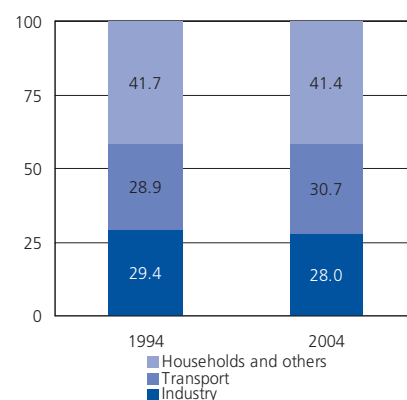
Figure 13.5
Net imports by fuel type, EU-25 (%)



(1) Excluding Slovenia.

Source: Eurostat (Energy statistics (ES) - quantities)

Figure 13.7
Final energy consumption by end-use, EU-25 (%) (1)



(1) Provisional.

Source: Eurostat (Energy statistics (ES) - quantities)

13.1: MINING AND QUARRYING OF ENERGY PRODUCING MATERIALS

This subchapter looks at the extraction of crude oil and natural gas (NACE Division 11), solid fuels such as coal and lignite (NACE Division 10), as well as mining of uranium and thorium ores (NACE Division 12). The related activities of exploration and surveying are covered in Chapter 22.

In March 2006 Directive 2006/21/EC of the European Parliament and of the Council on the management of waste from extractive industries was adopted. The directive concerns waste from mines in operation, and from the most polluting of closed-down sites, and should be implemented into national law within two years of its entry into force.

STRUCTURAL PROFILE

The mining and quarrying of energy products (Subsection CA) generated EUR 46.1 billion of value added in 2003 in the EU-25. The United Kingdom generated nearly half (46.9 %) of the

EU-25's total, ahead of Italy (9.4 %) and Germany (7.6 %), although it should be noted that data is not available for the Netherlands whose value added in the mining and quarrying of energy products sector in 2002 was slightly higher than in Italy. In employment terms, Poland dominated the sector, with 165 600 persons employed in 2003, 43.6 % of the EU-25 workforce. The second largest workforce was in Germany which represented 17.0 % of the EU-25 total, and the third largest in the Czech Republic with 11.3 %. Despite its dominance in value added terms, the United Kingdom's share of the EU-25 workforce was just 10.2 %. These large differences between the two variables can be explained by the different specialisations within the sector, as the United Kingdom was active almost exclusively (97.2 %) in the extraction of crude petroleum and natural gas (NACE Division 11), whereas the Czech Republic (95.8 %) and Poland (98.1 %) were almost exclusively active in the mining of coal and lignite (NACE Division 10),

and the productivity indicators of these subsectors was quite different.

The EU-25's index of production for mining and quarrying of energy producing materials fell most years since a high in 1996, averaging a loss of 2.6 % each year. During this period only in 1999 and 2002 was any growth recorded, modest in both cases. Both the mining of coal and lignite and the extraction of crude petroleum and natural gas contributed to this decline in output, although their developments were quite different. The mining of coal and lignite recorded a decline in output each and every year since the beginning of the series (1995), averaging a contraction of 4.9 % per year in the ten years to 2005. In contrast, the extraction of crude petroleum and natural gas has recorded periods of growth, notably in 1998 and 1999, and more recently in 2002. However, the decline in output in other years has resulted in an average annual decline of 2.2 % since the high of 1996.

Table 13.6

Mining and quarrying of energy producing materials (NACE Subsection CA) Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	United Kingdom (21 579.3)	46.9	Poland (165.6)	43.6	Denmark (11.1)	Poland (5.9)
2	Netherlands (4 976.8)	:	Germany (64.7)	17.0	United Kingdom (8.6)	Estonia (3.7)
3	Italy (4 526.3)	9.4	Czech Republic (42.8)	11.3	Netherlands (7.7)	Czech Republic (2.9)
4	Germany (4 351.4)	7.6	United Kingdom (38.9)	10.2	Poland (5.6)	Slovakia (1.7)
5	Denmark (3 521.6)	5.8	Spain (14.5)	3.8	Estonia (3.9)	Slovenia (1.4)

(1) Ireland, Malta, the Netherlands and Sweden, 2002; Greece and Portugal, not available.

(2) Sweden, provisional; Ireland and Malta, 2002; Greece and Portugal, not available.

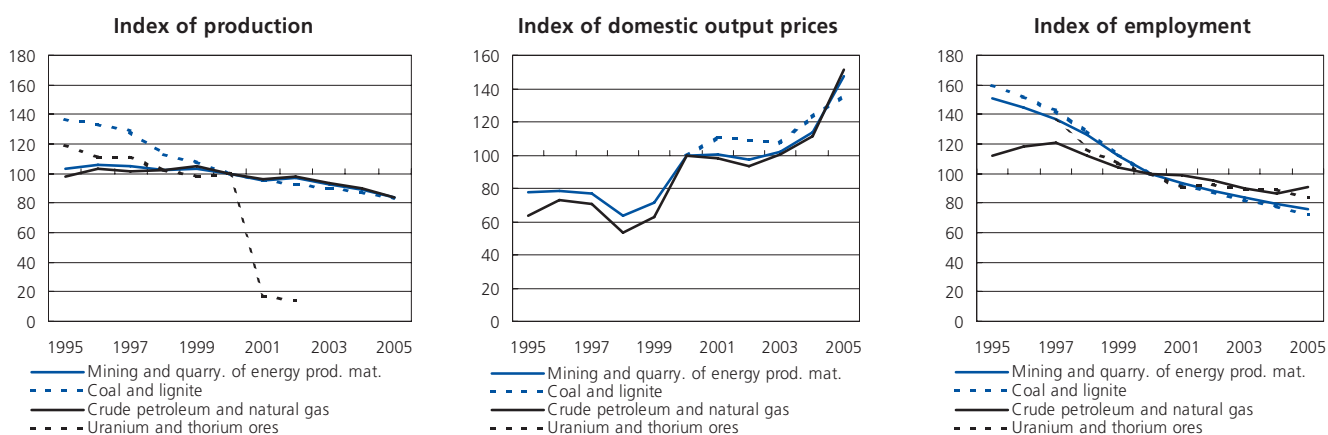
(3) Malta, the Netherlands and Sweden, 2002; Greece, Ireland and Portugal, not available.

(4) Sweden, provisional; Malta, 2002; Greece, Ireland and Portugal, not available.

Source: Eurostat (SBS)

Figure 13.8

Mining and quarrying of energy producing materials (NACE Subsection CA) Evolution of main indicators, EU-25 (2000=100)



Source: Eurostat (STS)

In 2005 the extraction of crude petroleum and natural gas recorded growth in EU-25 employment of 4.8 %, reversing an uninterrupted downward trend established in 1998, and as such recording the highest employment growth in 2005 of any industrial NACE division in the EU-25. The mining of coal and lignite recorded an average decline of 7.6 % per year through to 2005: as such this activity recorded the largest fall in employment of all industrial NACE divisions over this ten year period.

The mining of coal and lignite recorded a strong increase in domestic output prices in the EU-25 in 2001, followed by modest falls in 2002 and 2003. This was followed by a renewed period of large increases, with prices rising 14.6 % in 2004 and 10.0 % in 2005. The extraction of crude petroleum and natural gas also recorded large fluctuations in domestic output prices in the EU-25.

As noted in the overview, mining and quarrying of energy producing materials was dominated by large enterprises (with 250 or more persons employed), and these enterprises contributed 91.7 % of employment in this sector in the EU-25 in 2003. All three NACE divisions that make up this sector were dominated by large enterprises, with such enterprises contributing the following shares to their workforce: 100 % in mining of uranium and thorium ores, 94.1 % in mining of coal and lignite and the extraction of peat, and 80.2 % in the extraction of crude petroleum and natural gas. These were the first, second and eighth highest shares for large enterprises among the industrial NACE divisions for which data are available.

LABOUR FORCE CHARACTERISTICS

As already noted the energy sector's workforce in the EU-25 is essentially male and full-time, and this is particularly due to the energy mining and quarrying sector - see Table 13.7. In 2005, 87.5 % of the persons employed in energy mining and quarrying (NACE Subsection CA) were male, some 6 percentage points higher than the energy sector average. The proportion of full-time workers was 98.0 %, 2.4 percentage points higher than the energy sector average. Both in terms of the share of male and full-time workers, the energy mining and quarrying sector recorded higher proportions than in either of the two other parts of the energy sector presented in Subchapters 13.2 and 13.3.

Table 13.7
Mining and quarrying of energy producing (NACE Subsection CA)
Labour force characteristics, 2005

	Male		Full-time	
	Proportion of those employed (%) (1)	Index (industry=100) (1)	Proportion of those employed (%)	Index (industry=100)
EU-25	87.5	122.7	98.0	106.1
BE	:	:	:	:
CZ	89.9	139.5	100.0	102.6
DK	100.0	143.7	100.0	111.2
DE	90.6	124.9	98.5	111.4
EE	89.7	160.8	97.7	100.1
EL	96.2	129.8	100.0	101.9
ES	79.1	105.1	98.8	103.7
FR	85.0	119.0	100.0	106.5
IE	88.7	125.7	99.6	105.2
IT	91.2	127.6	95.9	102.7
CY	:	:	:	:
LV	72.7	125.7	100.0	103.7
LT	:	:	:	:
LU	:	:	:	:
HU	82.1	131.7	100.0	102.8
MT	:	:	:	:
NL	76.6	99.0	81.8	111.9
AT	:	:	:	:
PL	89.1	129.2	98.8	102.7
PT	:	:	:	:
SI	85.8	134.1	98.7	102.8
SK	88.4	138.6	98.0	99.1
FI	:	:	:	:
SE (2)	92.8	124.3	95.5	104.5
UK	82.8	110.6	95.3	104.4

(1) Latvia, 2004.

(2) 2004.

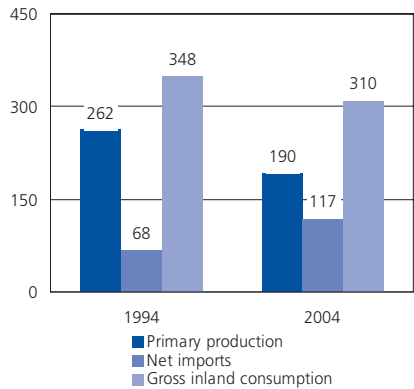
Source: Eurostat (LFS)

COSTS, PRODUCTIVITY AND PROFITABILITY

Average personnel costs in the energy mining and quarrying sector were EUR 30 000 in 2003 and wage adjusted labour productivity was 400 %. For the mining of coal, lignite and peat (NACE Division 10) these ratios were much lower, just EUR 23 000 per employee for average personnel costs and 110 % for wage adjusted labour productivity, both below industrial averages. For the extraction of crude petroleum and natural gas subsector (NACE Division 11) which makes up most of the rest of the energy mining and quarrying sector, these ratios were much higher, for example, average personnel costs reached EUR 70 000 per employee in 2003.

Equally the gross operating rate in the energy mining and quarrying sector was high (27.4 %), despite a low rate in the mining of coal, lignite and peat subsector (6 %), again indicating a very high rate for the extraction of crude petroleum and natural gas subsector, among the highest gross operating rates within the EU-25's non-financial business economy NACE divisions in 2003.

Figure 13.9
Main indicators for hard coal and lignite, EU-25 (million toe)



Source: Eurostat (Energy statistics (ES) - quantities)

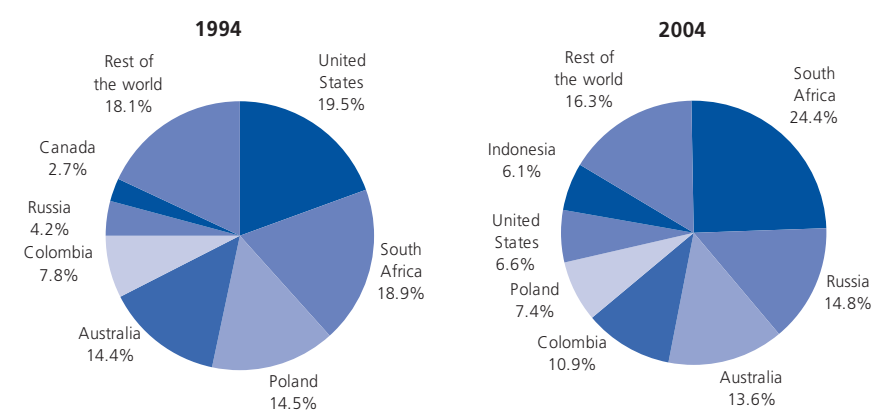
FOCUS ON HARD COAL AND LIGNITE PRODUCTS

Over several decades the EU's coal mining activity has been in decline due to competition from coal imports and the substitution of other fuels to produce electricity, the latter stimulated recently in part by efforts to reduce emissions. Figure 13.9 shows the shift in the supply of gross inland consumption of hard coal and lignite between 1994 and 2004, with primary production in the EU-25 falling by more than one quarter (-27.3 %) over the period. This was accompanied by a relatively large increase (72.0 %) in net imports. Overall gross inland consumption of hard coal and lignite fell by 10.9 % to reach 310.1 million toe (tonnes of oil equivalents) in 2004.

The vast majority of hard coal and lignite was consumed as a transformation input in 2004, 87.2 % of hard coal and 97.7 % of lignite. Most of this was used in conventional thermal power stations (see Subchapter 13.3), although over one fifth (22.0 %) of the hard coal that was transformed was used as input in coke oven plants (see Subchapter 13.2).

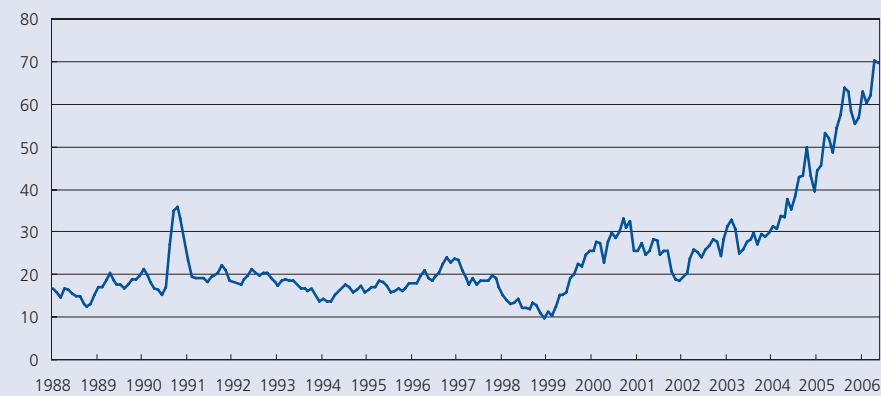
Figure 13.10 shows the shift in the origin of the EU-25's imports of hard coal in the ten years between 1994 and 2004. Most notable was the considerable fall in the share of imports from the United States which had been the largest provider in 1994 (from 19.5 % to 6.6 %). Both South Africa and Russia increased their shares of the EU-25's imports between 1994 and 2004 to become the two most important sources.

Figure 13.10
Hard coal
Sum of EU-25 Member States: origin of imports (%)



Source: Eurostat (Energy statistics (ES) - quantities)

Figure 13.11
Brent spot price FOB (USD/barrel), monthly average



Source: Energy Information Administration (United States), <http://tonto.eia.doe.gov/dnav/pet/hist/rbrteM.htm>

FOCUS ON CRUDE OIL AND NATURAL GAS PRODUCTS

One of the most visible characteristics of the energy sector and its products is the volatility in the price of oil, which has risen since 2002 to its high level at the time of writing - see Figure 13.11. High oil prices have an impact on prices of substitutes, notably natural gas, and also feed into the prices of products from other sectors that are heavy users of energy or of energy products as raw materials.

Table 13.8 shows world production and proved reserves of crude oil. The BP Statistical Review of World Energy notes that 'proved reserves are generally taken to be those quantities that geological and engineering information indicates with reasonable certainty can be recovered in the future from known reservoirs under existing economic and operating conditions'.

EU-25 primary production of crude oil and natural gas was 326.5 million toe in 2004, of which natural gas accounted for more than half. Among the Member States, the United Kingdom was by far the largest producer of hydrocarbons in the EU, contributing 72.1 % of the EU-25's primary production of crude oil and 44.9 % of its natural gas in 2004. Denmark was the EU's second largest primary producer of crude oil with a 14.6 % share, while the Netherlands was the only other Member State with a share of primary natural gas production in excess of 10 %, accounting for 32.0 % of EU-25 natural gas production in 2004.

Table 13.8

Production and proved reserves of oil, 2005 (1)

	Production (million barrels/day)	Proved reserves (billion barrels) (2)	R/P ratio (years) (3)
North America	13.6	59.5	11.8
South and Central America	7.0	103.5	40.7
Africa	9.8	114.3	31.8
Western Europe (DK, IT, UK, NO)	5.3	15.7	8.2
Central & Eastern Europe, Eurasia	12.3	124.8	27.9
Middle East	25.1	742.7	81.0
Asia Pacific	8.0	40.2	13.8
World	81.1	1 200.7	40.6

(1) Oil includes gas condensate and natural gas liquids as well as crude oil.

(2) As of end 2005.

(3) Ratio of reserves divided by production.

Source: BP Statistical Review of World Energy 2006

As can be seen in Figures 13.12 and 13.13 the origin of supply of gross inland consumption is different for the two types of hydrocarbons, with net imports of natural gas exceeding primary production by just 18.3 %, while net imports of crude oil were 4.1 times as high as primary production in 2004. Gross inland consumption of hydrocarbons increased from 922 million toe in 1994 to 1 100 million toe in 2004. Crude oil was responsible for most of this total (62.0 %) in 2004, although its share was less than in 1994 (69.1 %).

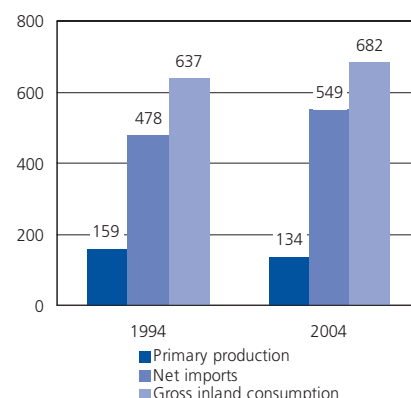
These two types of hydrocarbons are also notably different in their use. Crude oil is essentially a transformation input, used in refineries - see Subchapter 13.2. In contrast an analysis of the gross inland consumption of natural gas shows that three tenths (29.1 %) was taken for transformation, of which nearly all (94.7 %) was for use in conventional thermal power stations and the remainder in district heating plants (see Subchapter 13.3). After consumption by the energy sector itself and distribution losses (3.9 %), the remaining 67.0 % of gross inland consumption was available for final consumption.

Considering both intra- and extra-EU trade flows, Russia was the most important supplier of crude oil to the EU-25 in 2004, exceeding the combined supply of the next two largest suppliers, namely Norway and Saudi Arabia. The only Member State among the top suppliers was the United Kingdom - see Figure 13.14.

FOCUS ON NUCLEAR FUELS

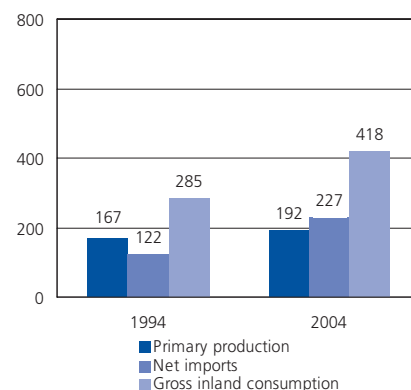
According to the Euratom supply agency, preliminary figures indicate that worldwide natural uranium production in 2005 was 41 752 tU (tonnes of contained uranium). The mining of uranium and thorium ores (NACE Division 12) in the EU-25 is a very small activity, with only one operating uranium mine in the EU, in the Czech Republic, and according to the Euratom supply agency this mine is expected to continue operation until 2008, while exploration work is taking place in Slovakia, Finland and Sweden. According to the same source, Russia, Canada, Niger and Australia were the largest suppliers of uranium to EU-15 utilities in 2005.

Figure 13.12

Main indicators for crude oil, EU-25
(million toe)

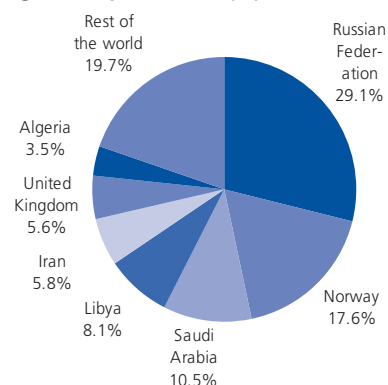
Source: Eurostat (Energy statistics (ES) - quantities)

Figure 13.13

Main indicators for natural gas, EU-25
(million toe)

Source: Eurostat (Energy statistics (ES) - quantities)

Figure 13.14

Crude oil
Sum of EU-25 Member States:
origin of imports, 2004 (%)

Source: Eurostat (Energy statistics (ES) - quantities)

13.2: FUEL PROCESSING

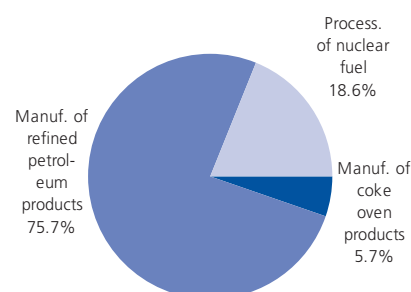
This subchapter covers the manufacture of coke oven products (NACE Group 23.1), the manufacture of refined petroleum products (NACE Group 23.2) and the processing of nuclear fuels (NACE Group 23.3). Hereafter these are collectively referred to as fuel processing activities (NACE Subsection DF). Note that these activities essentially involve the processing of products whose extraction was covered in the previous subchapter, such as coal, crude oil, and ores.

STRUCTURAL PROFILE

In the fuel processing sector (NACE Subsection DF), EUR 30.0 billion of value added was generated in 2003 in the EU-25, and 167 300 persons were employed. Three quarters (75.7 %) of this workforce were employed in the manufacture of refined petroleum products (NACE Group 23.2), and close to one fifth (18.6 %) in the processing of nuclear fuel (NACE Group 23.3), with the remaining 5.7 % in the manufacture of coke oven products (NACE Group 23.1) – see Figure 13.15.

In the fuel processing sector (NACE Subsection DF), Germany accounted for 17.6 % of the EU-25's value added in 2003, ahead of Poland (13.6 %), Spain (12.8 %), the United Kingdom (12.3 %) and France (11.2 %). The high Polish contribution to fuel processing mainly resulted from a specialisation in the manufacture of refined petroleum products which alone accounted for 8.3 % of Polish industrial value added. Lithuania (6.3 %) and Hungary (4.3 %) also recorded large shares of industrial value added generated by the refined petroleum products manufacturing subsector. In the manufacture of coke oven products, Poland contributed over 60 % to the EU-25 value-added, although it should be noted that this is a small activity in all of the Member States, including Poland.

Figure 13.15
Manufacture of coke, refined petroleum products and nuclear fuel (NACE Division 23)
Breakdown of sectoral employment, EU-25, 2003 (%)



Source: Eurostat (SBS)

Through the second half of the 1990s and until 2002 the EU-25's index of production for fuel processing (NACE Subsection DF) reflected a pattern of alternating growth and contraction, with the 5.9 % contraction in 1999 the most significant annual movement. However, since 2002 three years of growth have been recorded, averaging 2.1 %. As in many other industrial activities employment fell almost every year since 1995 (beginning of the series), the only growth recorded between then and 2005 was in 1999. Over the ten years to 2005 the index fell by an average of 2.3 % per annum.

As for the extraction of crude petroleum and natural gas (see Subchapter 13.1), domestic output prices for fuel processing rose sharply in 1999 and 2000, fell in 2001 and 2002, and increased since then, with particularly large increases in 2004 (10.9 %) and 2005 (20.0 %).

Like the other activities in this chapter, fuel processing was dominated by large enterprises (with 250 or more persons employed), as these enterprises employed 86.9 % of the persons in this sector. This was slightly above the average for the energy sector, and more than double

the share employed by large enterprise in industry as a whole.

LABOUR FORCE CHARACTERISTICS

The EU-25's fuel processing activities (NACE Subsection DF) workforce is typical for the energy sector, in that it is dominated by men and full-time workers: while this domination is less pronounced than in energy mining and quarrying, it is more pronounced than for the network supply of fuels and heat. Table 13.10 shows that 82.6 % of the persons employed in this sector were male, just 1.1 percentage points higher than the energy sector average. The proportion of full-time workers was 95.8 %, very close to the energy sector average and 3.4 percentage points above the industrial average.

COSTS, PRODUCTIVITY AND PROFITABILITY

The ratio of gross tangible investment to the EU's ⁽⁷⁾ gross operating expenditure was 2.3 % in the fuel processing sector in 2003. The very high level of operating expenditure is mainly due to the very high share of purchases of goods and services (including, in particular, the purchase of the new energy raw material to be processed) in the gross operating expenditure ⁽⁸⁾, as despite high average personnel costs (see below), purchases of goods and services accounted for 96.0 % of the total, and personnel costs just 4.0 %.

⁽⁷⁾ EU average, 2003; Sweden, 2002; excluding Belgium, Denmark, Greece, Ireland, Cyprus, Latvia, Malta, Austria and Slovakia.

⁽⁸⁾ EU average, 2003; Sweden, 2002; excluding Denmark, Greece, Ireland, Cyprus, Latvia, Malta, Austria and Slovakia.

Table 13.9

Manufacture of coke, refined petroleum products and nuclear fuel (NACE Division 23)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (1)	Highest share of national industrial employment (%) (2)
1	Germany (5 287.6)	17.6	France (29.2)	17.4	Poland (8.6)	Lithuania (1.2)
2	Poland (4 074.8)	13.6	United Kingdom (26.2)	15.7	Lithuania (6.3)	Hungary (0.9)
3	Spain (3 827.0)	12.8	Germany (21.5)	12.9	Belgium (4.7)	Belgium (0.8)
4	United Kingdom (3 692.0)	12.3	Italy (18.1)	10.8	Hungary (4.3)	Finland (0.8)
5	France (3 366.5)	11.2	Poland (16.8)	10.1	Spain (3.0)	United Kingdom (0.7)

(1) Sweden, 2002; Denmark, Greece, Ireland, Cyprus, Latvia, Malta, Austria and Slovakia, not available.

(2) Sweden, provisional; Denmark, Greece, Ireland, Cyprus, Malta, Austria and Slovakia, not available.

Source: Eurostat (SBS)

Average personnel costs in the EU-25's fuel processing sector were EUR 59 600 per employee in 2003. In the manufacture of coke oven products they were as low as EUR 15 700 per employee, while in the other two subsectors they were above EUR 60 000. The gross operating rate (ratio of gross operating surplus to turnover) in the fuel processing sector was 6.0 %, the only one of the three main parts of the energy sector where this ratio was below the industrial average (10.3 %).

FOCUS ON COAL AND LIGNITE DERIVATIVES

Over one fifth (22.3 %) of the hard coal that was transformed in the EU in 2004 was used as an input in coke oven, patent fuel and briquetting plants, while for lignite the share was just 2.9 %: nearly all of the remainder of the transformation input for both of these products was destined for power stations, with a small proportion for district heating plants and gas works. The output of coke, patent fuels and brown coal briquettes in the EU-25 in 2004 was 36.8 million toe, of which 91.2 % was coke. Furthermore, gases derived from coke ovens generated 7.8 million toe. A large proportion of these derived products were further transformed in other sectors, notably coke used in blast furnaces, and coke oven gases used as input for power stations.

FOCUS ON REFINED PETROLEUM PRODUCTS

EU-25 transformation output of petroleum products was 721.3 million tonnes in 2004. Diesel oil accounted for 35.7 % of this output in 2004, motor spirit 21.9 %, residual fuel oil 15.0 % and jet fuel, naphtha, refinery gas and liquified petroleum gas (LPG) collectively accounted for a further 19.5 %. The remainder was split between a range of smaller products. Four fifths of the transformation output of petroleum products (79.8 %) was available for final consumption in 2004, with 84.8 % of this consumed as energy and the remainder for non-energy purposes. Transport consumed 70.0 % of final energy consumption of petroleum products, households 11.3 % and industry 10.6 %.

Table 13.10 Manufacture of coke, refined petroleum products and nuclear fuel (NACE Division 23)
Labour force characteristics, 2005

	Male		Full-time	
	Proportion of those employed (%)	Index (industry=100)	Proportion of those employed (%)	Index (industry=100)
EU-25	82.6	115.8	95.8	103.7
BE	84.3	111.3	93.4	104.9
CZ	72.4	112.4	100.0	102.6
DK	:	:	:	:
DE	82.5	113.8	91.4	103.3
EE (1)	:	:	100.0	103.9
EL	90.8	122.5	98.7	100.6
ES	82.4	109.6	100.0	105.0
FR	89.3	125.0	98.9	105.3
IE	:	:	:	:
IT	88.3	123.5	96.5	103.4
CY	:	:	:	:
LV	:	:	:	:
LT	:	:	100.0	102.2
LU	:	:	:	:
HU	84.7	135.9	99.5	102.3
MT	:	:	:	:
NL	85.0	109.8	76.1	104.2
AT	67.0	89.7	91.7	102.0
PL	89.8	130.1	100.0	103.9
PT	:	:	100.0	103.0
SI	:	:	:	:
SK	79.2	124.3	100.0	101.1
FI (1)	:	:	93.0	98.7
SE	:	:	:	:
UK	77.9	104.0	95.7	104.8

(1) 2004.

Source: Eurostat (LFS)

13.3: NETWORK SUPPLY OF FUELS AND HEAT

This subchapter focuses on the production and distribution of electricity, whether generated from fossil, nuclear or renewable fuels (NACE Group 40.1), and the manufacture and distribution of gas via mains (NACE Group 40.2). The manufacture of gas includes the manufacture of gas from the carbonisation of coal, from by-products of agriculture or from waste, but does not include the manufacture of refined petroleum products, or of industrial gases. The distribution of gas concerns only through a mains network, and does not include the bulk sale and transport of gaseous fuels, or its distribution in canisters.

This subchapter also covers steam and hot water supply (NACE Group 40.3), normally for district heating, also known as city heating. District heating is the distribution of heat through a network to one or several buildings using hot water or steam produced centrally, often from co-generation plants, from waste heat from industry, or from dedicated heating systems. Large scale district heating in Europe is commonly found in central and eastern Europe and in the Nordic countries.

The gas and electricity markets in the EU have been changing through the requirements of the second Electricity and Gas Directives adopted in 2003, although several Member States did not adopt implementing legislation within the required timescale. The aim is to have gas and electricity markets open for all customers by July 2007, as well as further unbundling the sector's supply and distribution/transmission enterprises. The Commission's 2005 Communication ⁽⁹⁾ on these markets highlighted the most important shortcoming as the lack of integration between national markets. This is indicated by the absence of

⁽⁹⁾ COM(2005) 568 final.

price convergence and the low level of cross-border trade, generally due to barriers to entry, inadequate use of existing infrastructure and - in the case of electricity - insufficient interconnection between many Member States. Moreover, many national markets display a high degree of concentration, impeding the development of effective competition. Regulation (EC) No 1775/2005 of the European Parliament and of the Council on conditions for access to the natural gas transmission networks was adopted in September 2005. This provides a legal basis for existing voluntary rules on key aspects of third party access to networks, for example concerning criteria for charges for access to networks, third party access services, capacity allocation mechanisms and congestion management procedures. It is expected that these common standards for network access conditions will lead to increased competition. In 2004 a Directive on measures to safeguard security of gas supply was adopted, and this was followed up by a Directive of the European Parliament and of the Council concerning measures to safeguard security of electricity supply and infrastructure investment adopted in January 2006. The aims of the directive are to increase interconnections between national networks for security and to encourage competition within the liberalised electricity market, and also to develop reserve capacity.

STRUCTURAL PROFILE

In electricity, gas, steam and hot water supply (NACE Division 40) EU-25 value added in 2003 was EUR 139.0 billion, 64.7 % of the energy sector total, and 8.2 % of industrial value added. Over 1.1 million persons worked in the electricity, gas, steam and hot water supply sector across the EU-25, 67.5 % of the energy sector's workforce and 3.2 % of the industrial workforce. There was generally less specialisation among the Member States in this sector than in the other energy sectors presented in Subchapters 13.1 and 13.2. Nevertheless, this sector did account for as

much as 25.5 % of industrial value added in Slovakia, and as little as 5.2 % in the Netherlands.

An analysis of the subsectors identifies the production and distribution of electricity (NACE Group 40.1) as the largest in value added terms, as it contributed approximately three quarters (77 %) ⁽¹⁰⁾ of the sector's value added. The data availability for the two remaining subsectors is weaker, but in terms of employment, the steam and hot water supply sector (NACE Group 40.3) contributed more than one third of the electricity, gas, steam and hot water supply's workforce in Latvia (42.9 %), the Czech Republic (38.4 %), Estonia (35.3 %), and Lithuania (35.2 %), more than one quarter in Poland (27.5 %), and around one fifth in Denmark (22.3 %) and Hungary (18.3 %).

The EU-25's index of production for electricity, gas, steam and hot water supply (NACE Division 40) shows uninterrupted year on year growth since 1995, averaging 2.3 % per year. This is the highest average growth over this period of any of the NACE divisions covered in this chapter on energy. Annual average growth for the production and distribution of electricity (NACE Group 40.1) was 2.0 % over the same period while for the manufacture of gas and the distribution of gaseous fuels through mains (NACE Group 40.2) average growth was higher, 3.7 % per annum. As in many other industrial activities employment fell every year since 1995 (beginning of the series). Over the ten years to 2005 the employment index for electricity, gas, steam and hot water supply fell by an average of 3.1 % per annum, far faster than the industrial average of -1.2 %. Of the industrial NACE divisions this was the fourth fastest rate of employment loss over the period considered.

⁽¹⁰⁾ EU average, 2003; Sweden, 2002; excluding Estonia, Greece, Ireland, Cyprus, Malta and the Netherlands.

Table 13.11
Electricity, gas, steam and hot water supply (NACE Division 40)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (1)	Highest share of national industrial employment (%) (2)
1	Germany (31 198.7)	22.4	Germany (230.2)	20.3	Slovakia (25.5)	Latvia (8.4)
2	France (22 095.6)	15.9	Poland (172.7)	15.2	Lithuania (19.0)	Lithuania (7.5)
3	United Kingdom (18 556.9)	13.3	France (161.6)	14.2	Latvia (15.7)	Slovakia (6.6)
4	Italy (13 326.1)	9.6	Italy (102.1)	9.0	Poland (13.5)	Poland (6.2)
5	Spain (11 038.4)	7.9	United Kingdom (94.3)	8.3	Estonia (13.1)	Estonia (5.3)

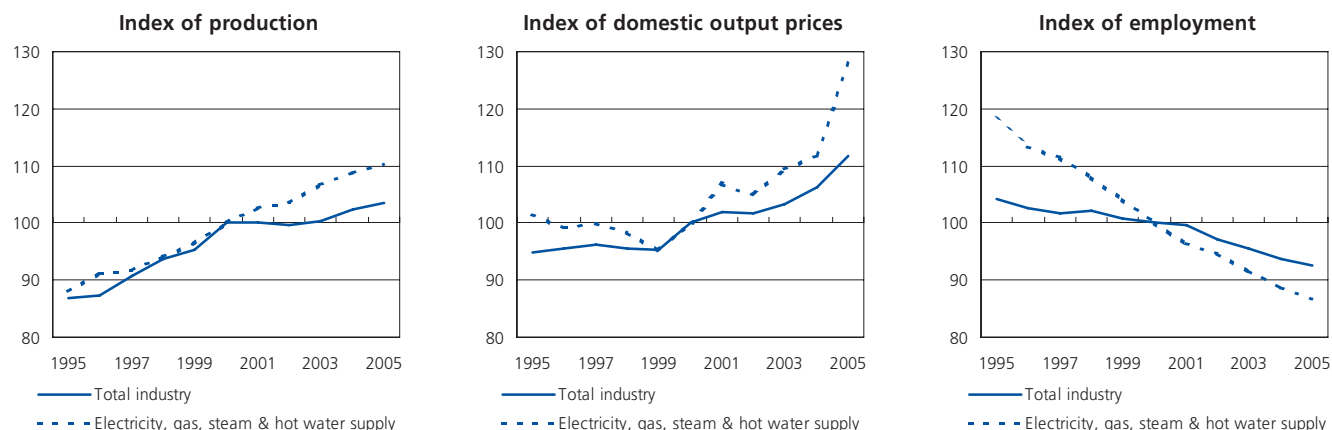
(1) Sweden, 2002; Greece, Ireland, Cyprus and Malta, not available.

(2) Sweden, provisional; Greece, Ireland, Cyprus and Malta, not available.

Source: Eurostat (SBS)

Figure 13.16

Electricity, gas, steam and hot water supply (NACE Division 40)
Evolution of main indicators, EU-25 (2000=100)



Source: Eurostat (STS)

After three years out of four of falling prices between 1996 and 1999 electricity, gas, steam and hot water supply recorded price increases in five out of the six following years, with increases averaging 5.0 % between 1999 and 2005. The strongest price increase was recorded in 2005 (14.4 %).

Although large enterprises (with 250 or more persons employed) clearly dominated the electricity, gas, steam and hot water supply sector in the EU-25 in terms of their share of the workforce, this was to a lesser extent than in the other activities covered by this chapter. Large enterprises employed 82.7 % of the electricity, gas, steam and hot water supply workforce, and generated 79.5 % of value added in 2003.

LABOUR FORCE CHARACTERISTICS

Of the three main parts of the energy sector presented in Subchapters 13.1 to 13.3, electricity, gas, steam and hot water supply is the least dominated by men and has the lowest proportion of full-time workers, but for both indicators it still reported proportions above the industrial average. Table 13.12 shows that the proportion of the workforce accounted for by men in the EU-25 was 79.1 % in 2005 - this was 2.9 % below the energy sector average, but nevertheless 11.0 % above the industrial average. The proportion of full-time employment was 94.6 %, just 1.0 % below the energy sector average, but 2.5 % above the industrial average.

Table 13.12

Electricity, gas, steam and hot water supply (NACE Division 40)
Labour force characteristics, 2005

	Male		Full-time	
	Proportion of those employed (%)	Index (industry=100)	Proportion of those employed (%)	Index (industry=100)
EU-25	79.1	111.0	94.6	102.5
BE	80.9	106.8	93.7	105.2
CZ	79.5	123.4	98.9	101.5
DK	74.6	107.2	98.6	109.7
DE	78.0	107.5	92.8	104.9
EE	77.8	139.5	98.1	100.5
EL	80.9	109.1	99.7	101.5
ES	81.2	108.0	97.0	101.8
FR	79.2	111.0	90.1	95.9
IE	78.8	111.7	95.1	100.4
IT	87.2	121.9	97.9	104.8
CY	77.4	112.0	100.0	106.7
LV	71.8	122.4	98.2	101.9
LT	77.5	145.4	99.2	101.4
LU	88.7	108.7	98.5	105.0
HU	72.3	115.9	97.8	100.5
MT (1)	98.3	128.1	98.3	102.7
NL	72.9	94.2	74.7	102.2
AT	80.3	107.5	90.3	100.4
PL	79.8	115.6	97.8	101.6
PT	83.7	141.3	98.9	101.9
SI	81.4	127.3	99.6	103.7
SK	82.7	129.7	98.8	99.8
FI	75.2	105.2	96.8	101.9
SE	72.2	96.2	91.9	101.9
UK	75.2	100.4	94.0	102.9

(1) 2004.

Source: Eurostat (LFS)

COSTS, PRODUCTIVITY AND PROFITABILITY

An analysis of capital and operating expenditure indicates the capital nature of this activity. The ratio of gross tangible investment to the EU's ⁽¹¹⁾ gross operating expenditure was 10.1 % in the electricity, gas, steam and hot water supply sector in 2003, which was approximately double the industrial average. On the other hand, the share of personnel costs in gross operating expenditure for the EU ⁽¹²⁾ was 10.8 %, just over half the average share for industry.

Average personnel costs in the EU-25's electricity, gas, steam and hot water supply sector were EUR 43 200 in 2003, just above the energy sector average, and close to one third higher than the industrial average. The apparent labour productivity was EUR 122 400 per person employed, high in absolute terms, but slightly below the energy sector average. The resulting wage adjusted labour productivity ratio was 283.3 % indicating that value added per person employed was 2.8 times as high as average personnel costs. The gross operating rate, calculated as the ratio of the gross operating surplus to turnover was 16.9 %, above both the industrial and energy sector averages.

⁽¹¹⁾ EU average, 2003; Latvia and Sweden, 2002; excluding Belgium, Greece, Ireland, Cyprus, Malta and the Netherlands.
⁽¹²⁾ EU average, 2003; Latvia and Sweden, 2002; excluding Greece, Ireland, Cyprus and Malta.

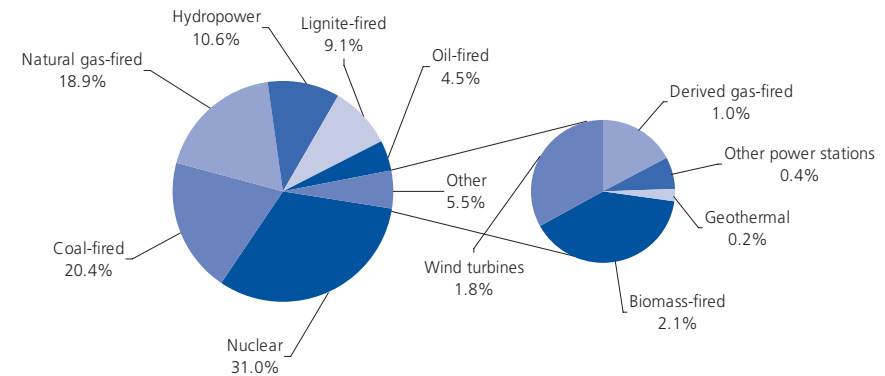
FOCUS ON ELECTRICITY

Gross electricity generation is the electricity measured at the outlet of the main transformers, in other words, including the consumption of electricity in plant auxiliaries and in transformers. Gross electricity generation in the EU-25 in 2004 was 3 179 TWh. Just over half of this was generated in conventional (coal, natural gas, lignite-fired, oil fired or derived gas-fired) thermal power stations (53.8 %) and just under one third (31.0 %) in nuclear power stations. The largest part of the remaining generation was in hydroelectric power plants (10.6 %), biomass-fired power stations (2.1 %) and wind turbines (1.8 %) - see Figure 13.17.

Within Europe there are some movements of electricity across borders and in fact some smaller Member States are particularly dependent on external sources for their electricity supply. For example, in Luxembourg the level of net imports is very high relative to gross electricity generation - see Figure 13.18. Among the larger Member States, only France and Poland are major net exporters of electricity.

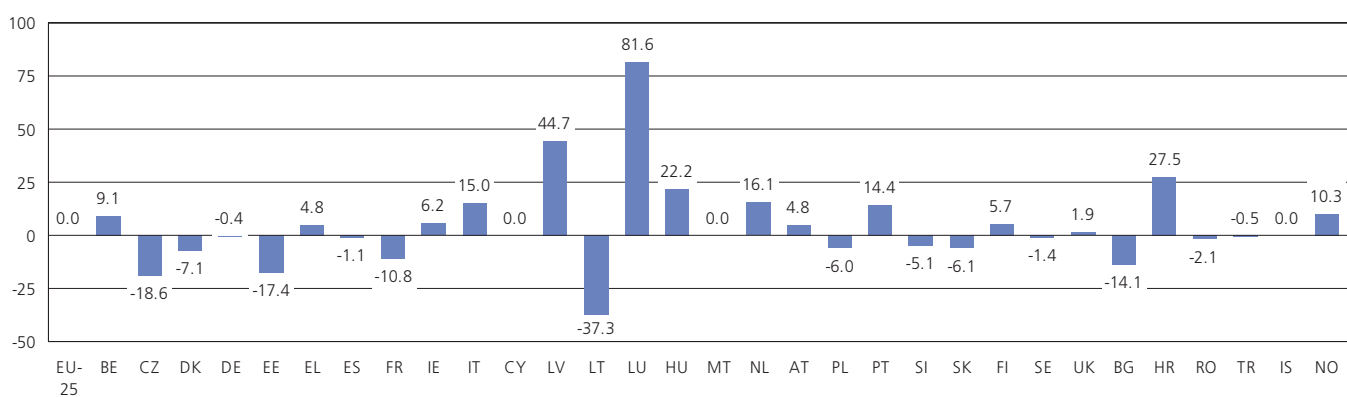
In 2001 a target of 21 % was set for the share of renewable energy sources (wind, solar, geothermal, wave, tidal, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases) in electricity consumption by 2010. Figure 13.19 shows the targets and the contribution to electricity generation from renewables in 2004 in terms of gross national electricity consumption (gross national electricity generation from all fuels plus net electricity imports). Several of the Member States recorded a large increase in the contribution of renewables in the ten years to 2004, with the share more than doubling in Denmark (from 5.6 % to 27.0 %), Hungary (from 0.5 % to 2.3 %), the Netherlands (from 1.9 % to 5.7 %) and Germany (from 4.3 % to 9.7 %). However, nine of the Member States recorded a fall in the contribution of renewables over the period considered.

Figure 13.17
Gross electricity generation by type of power plant, EU-25, 2004 (%)



Source: Eurostat (Energy statistics (ES) - quantities)

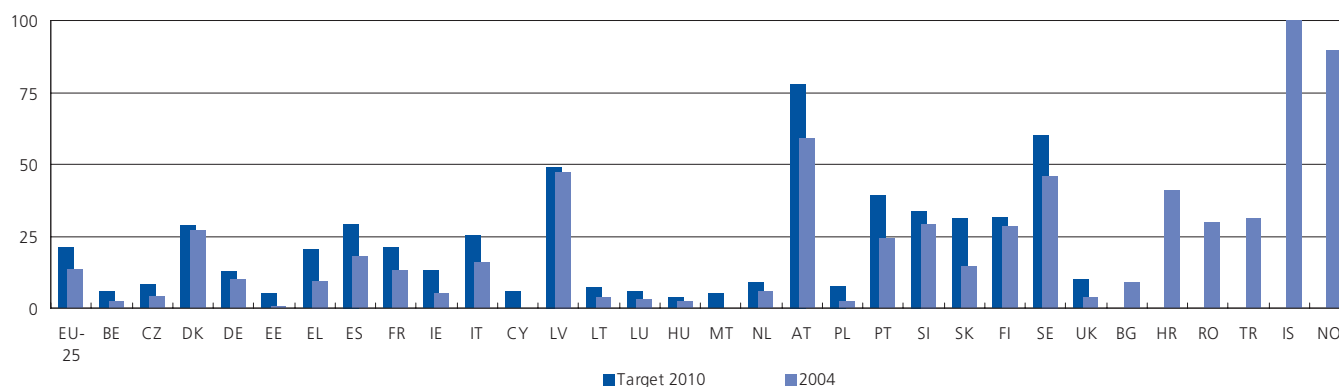
Figure 13.18
Net electricity imports relative to gross electricity generation, 2004 (%) (1)



(1) A negative sign indicates net exports.
Source: Eurostat (Energy statistics (ES) - quantities)

Figure 13.19

Contribution of electricity from renewables to total electricity consumption, 2004 and target for 2010 (%) (1)



(1) Target 2010 only for EU-25 Member States.

Source: Eurostat (Structural indicators)

Concerns about safety and waste have been issues for nuclear energy for a long time. In December 2005 the European Commission adopted a final proposal ⁽¹³⁾ for a Council Directive on the control of shipments of radioactive waste and spent fuel. The benefits of nuclear fuel have however been boosted as concerns about the security of energy supply have risen along with the increase in EU imports of oil and gas, while at the same time Member States have committed themselves to reduce emissions. According to the World Nuclear Association, as of May 2006 the only nuclear reactors under construction or planned in Europe were in France, Finland, Bulgaria, Romania, Russia and the Ukraine, while there are proposals for reactors in the Czech Republic, France, Lithuania, Slovakia, Romania, Turkey and Russia, all of whom (except for Turkey) already have nuclear reactors. Outside of Europe most of the countries planning for new nuclear reactors are in Asia.

FOCUS ON GAS

In 2004 natural gas available for final consumption in the EU-25 was 279.7 million toe of which 95.8 % was consumed as energy, the remainder was for non-energy purposes and was mainly used by the chemical sector. Households' share of final consumption of natural gas as energy was 43.3 %, while industry's share was 35.8 %.

⁽¹³⁾ COM(2005) 673.

Table 13.13

Mining of coal and lignite; extraction of peat (NACE Division 10)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million) (2)	13 000	: 1 674	31	3 522	:	:	835	369	:	:	0	37	15	0	72	0	
Production (EUR million)	:	: 1 495	24	3 275	:	:	876	366	:	:	0	36	18	0	56	0	
Value added at factor cost (EUR million)	:	: 687	9	2 817	:	:	568	-56	:	:	0	17	8	0	21	0	
Gross operating surplus (EUR million)	:	: 252	2	93	:	:	57	-495	:	:	0	9	2	0	8	0	
Purchases of goods and services (EUR million)	:	: 940	17	3 652	:	:	480	833	:	:	0	21	10	0	53	0	
Gross investment in tangible goods (EUR million)	:	: 160	3	393	:	:	116	12	:	:	0	6	3	0	3	0	
Number of persons employed (thousands)	:	: 39	0	58	:	:	13	5	:	:	0	2	1	0	1	0	
Personnel costs (EUR million)	:	: 435	7	2 724	:	:	511	439	:	:	0	8	5	0	13	0	
App. labour productivity (EUR thous./pers. emp.) (2)	25.0	: 17.6	55.9	48.3	:	:	43.4	-10.5	:	:	:	9.8	6.3	:	17.1	:	
Average personnel costs (EUR thous./employee) (2)	23.0	: 11.2	44.0	46.8	:	:	39.3	82.8	:	:	:	4.5	4.5	:	11.1	:	
Wage adjusted labour productivity (%) (2)	110.0	: 157.2	127.1	103.2	:	:	110.7	-12.7	:	:	:	215.8	139.1	:	154.0	:	
Gross operating rate (%) (2)	6.0	: 15.0	6.2	2.6	:	:	6.8	-134.0	:	:	:	25.0	13.6	:	10.4	:	
Investment per person employed (EUR thousand)	:	: 4.1	16.6	6.7	:	:	8.8	2.3	:	:	:	3.3	2.2	:	2.1	:	
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million)	:	: 3 999	0	:	98	356	148	1 506	231	:	466	:	:	:	120	:	
Production (EUR million)	:	: 4 883	0	:	88	350	146	1 540	232	:	537	:	:	:	121	:	
Value added at factor cost (EUR million)	:	: 2 605	0	:	54	127	:	602	136	:	371	:	:	:	35	:	
Gross operating surplus (EUR million)	:	: 519	0	-7	11	83	:	149	50	:	92	:	:	:	15	:	
Purchases of goods and services (EUR million)	:	: 1 847	0	:	48	239	98	838	108	:	238	:	:	:	86	:	
Gross investment in tangible goods (EUR million) (3)	:	: 334	0	:	6	55	17	75	29	:	75	:	:	:	23	:	
Number of persons employed (thousands)	0	: 165	0	:	7	1	1	11	18	:	40	:	:	:	0	:	
Personnel costs (EUR million)	:	: 2 086	0	:	43	45	:	453	86	:	280	:	:	:	20	:	
App. labour productivity (EUR thous./pers. emp.)	:	: 15.8	:	:	7.4	91.1	:	56.9	7.6	:	9.2	:	:	:	137.0	:	
Average personnel costs (EUR thous./employee)	:	: 13.3	:	:	5.9	34.4	:	42.9	4.8	:	6.9	:	:	:	78.8	:	
Wage adjusted labour productivity (%)	:	: 119.4	:	:	125.6	264.8	:	132.5	158.4	:	132.7	:	:	:	173.7	:	
Gross operating rate (%)	:	: 13.0	:	:	11.2	23.3	:	9.9	21.8	:	19.6	:	:	:	12.4	:	
Investment per person employed (EUR thousand) (3)	:	: 2.0	:	:	0.8	39.7	25.0	7.1	1.6	:	1.9	:	:	:	88.6	:	

(1) Sweden, provisional; Denmark, Lithuania, Malta and Slovakia, 2002. (2) EU-25, rounded estimate based on non-confidential data. (3) Bulgaria, 2002.

Source: Eurostat (SBS)

Table 13.14

Extraction of crude petroleum and natural gas; service activities incidental to oil and gas extraction, excluding surveying
(NACE Division 11)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million)	:	:	: 4 512	6 138	:	:	282	2 866	:	:	0	0	83	0	61	0	
Production (EUR million)	:	:	: 4 640	5 969	:	:	329	4 200	:	:	0	0	82	0	55	0	
Value added at factor cost (EUR million)	:	:	: 3 788	1 535	:	:	141	1 463	:	:	0	0	43	0	25	0	
Gross operating surplus (EUR million)	:	:	: 3 675	958	:	:	84	1 255	:	:	0	0	37	0	8	0	
Purchases of goods and services (EUR million)	:	:	: 861	3 553	:	:	189	2 643	:	:	0	0	28	0	36	0	
Gross investment in tangible goods (EUR million) (2)	:	:	: 704	218	:	:	15	124	:	:	0	0	12	0	12	0	
Number of persons employed (thousands) (3)	65	:	: 2	6	:	:	1	2	:	:	0	0	0	0	1	0	
Personnel costs (EUR million)	4 609	:	: 114	577	:	:	58	208	:	:	0	0	6	0	17	0	
App. labour productivity (EUR thous./pers. emp.)	:	:	: 1 977.2	242.8	:	:	98.9	618.2	:	:	:	:	104.5	:	24.3	:	
Average personnel costs (EUR thous./employee) (4)	70.0	:	: 59.5	91.3	:	:	40.4	87.9	:	:	:	:	13.7	:	16.5	:	
Wage adjusted labour productivity (%)	:	:	: 3 324.1	266.0	:	:	244.5	703.4	:	:	:	:	765.6	:	146.9	:	
Gross operating rate (%)	:	:	: 81.4	15.6	:	:	29.6	43.8	:	:	:	:	44.8	:	13.1	:	
Investment per person employed (EUR thousand) (2)	:	:	: 367.5	34.4	:	:	10.5	71.3	:	:	:	:	30.3	:	11.6	:	
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million) (5)	18 297	:	71	:	:	118	0	3 36 163	:	:	2 509	:	:	:	50 147	:	
Production (EUR million) (5)	7 961	:	72	:	:	116	0	3 33 494	:	:	1 964	:	:	:	52 310	:	
Value added at factor cost (EUR million) (5)	4 977	:	52	:	:	70	0	: 20 978	:	:	-404	:	:	:	24 067	:	
Gross operating surplus (EUR million) (5)	4 491	:	35	:	:	58	0	: 18 648	:	:	-837	:	:	:	20 741	:	
Purchases of goods and services (EUR million) (5)	12 279	:	19	:	:	47	0	3 15 105	:	:	2 812	:	:	:	20 207	:	
Gross investment in tangible goods (EUR million) (5, 6)	1 212	:	5	:	:	20	0	1 8 169	:	:	434	:	:	:	833	:	
Number of persons employed (thousands)	6	:	1	:	:	1	0	0 28	:	:	85	:	:	:	24	:	
Personnel costs (EUR million) (5)	485	:	17	:	:	12	0	: 2 329	:	:	433	:	:	:	3 326	:	
App. labour productivity (EUR thous./pers. emp.)	:	: 49.4	:	:	:	47.9	:	: 739.7	:	:	-4.8	:	:	:	989.0	:	
Average personnel costs (EUR thous./employee)	:	: 16.2	:	:	:	8.1	:	: 82.4	:	:	5.1	:	:	:	136.7	:	
Wage adjusted labour productivity (%)	:	: 305.6	:	:	:	589.7	:	: 898.0	:	:	-93.4	:	:	:	723.5	:	
Gross operating rate (%) (5)	24.5	: 48.5	:	:	:	48.9	:	: 51.6	:	:	-33.4	:	:	:	41.4	:	
Investment per person employed (EUR thousand) (6)	:	: 5.0	:	:	:	13.8	:	: 29.0	12.8	:	5.1	:	:	:	27.9	:	

(1) Sweden, provisional; Denmark, Lithuania, Malta and Slovakia, 2002. (2) France, 2002. (3) EU-25, 2002. (4) EU-25, rounded estimate based on non-confidential data.

(5) The Netherlands, 2002. (6) Norway, 2002.

Source: Eurostat (SBS)

Table 13.15

Manufacture of coke, refined petroleum products and nuclear fuel (NACE Division 23)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million)	331 724	16 896	2 067	:	110 784	43	:	23 038	51 703	:	30 500	:	:	1 536	0	5 691	:
Production (EUR million)	:	16 895	1 746	:	87 304	35	:	18 344	51 296	:	28 086	:	:	1 544	0	3 925	:
Value added at factor cost (EUR million)	29 963	2 361	117	:	5 288	7	:	3 827	3 367	:	2 108	:	:	151	0	698	:
Gross operating surplus (EUR million)	20 024	1 730	77	:	3 490	2	:	3 337	1 126	:	1 209	:	:	100	0	490	:
Purchases of goods and services (EUR million)	:	14 204	1 910	:	70 512	36	:	19 302	36 100	:	23 634	:	:	1 379	0	4 038	:
Gross investment in tangible goods (EUR million) (2)	:	173	33	:	781	3	:	342	872	:	638	:	:	99	0	260	:
Number of persons employed (thousands)	167	6	3	:	22	1	:	8	29	:	18	:	0	4	0	8	:
Personnel costs (EUR million)	9 939	631	40	:	1 798	5	:	490	2 241	:	899	:	:	51	0	208	:
App. labour productivity (EUR thous./pers. emp.)	179.1	427.4	37.3	:	245.6	7.0	:	466.0	115.4	:	116.2	:	:	42.1	:	84.8	:
Average personnel costs (EUR thous./employee)	59.6	114.6	13.1	:	83.5	4.7	:	59.7	76.8	:	51.0	:	:	14.1	:	25.3	:
Wage adjusted labour productivity (%)	300.7	372.8	284.5	:	294.0	148.5	:	781.1	150.2	:	228.0	:	:	297.6	:	334.9	:
Gross operating rate (%)	6.0	10.2	3.7	:	3.2	5.3	:	14.5	2.2	:	4.0	:	:	6.5	:	8.6	:
Investment per person employed (EUR thousand) (2)	:	29.5	10.5	:	36.3	3.4	:	41.7	29.9	:	35.2	:	:	27.5	:	31.6	:
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million) (3)	18 076	:	9 220	5 433	25	:	4 911	984	37 206	:	:	1 829	:	:	:	0	:
Production (EUR million) (3)	14 865	:	8 757	5 579	19	:	3 960	959	37 166	:	:	1 852	:	:	:	0	:
Value added at factor cost (EUR million) (4)	1 246	:	4 075	520	2	:	570	240	3 692	:	:	-56	:	:	:	0	:
Gross operating surplus (EUR million) (4)	715	:	3 842	387	-3	:	641	102	1 967	:	:	-126	:	:	:	0	:
Purchases of goods and services (EUR million) (3)	16 086	:	5 727	5 064	20	:	4 393	695	20 606	:	:	1 590	:	:	:	0	:
Gross investment in tangible goods (EUR million) (3)	282	:	314	110	0	:	141	302	928	:	:	74	:	:	:	0	:
Number of persons employed (thousands) (3)	6	:	17	2	0	:	3	3	26	:	:	11	:	:	:	0	:
Personnel costs (EUR million) (4)	531	:	233	133	5	:	182	139	1 725	:	:	70	:	:	:	0	:
App. labour productivity (EUR thous./pers. emp.) (4)	221.4	:	241.9	243.6	5.9	:	169.4	96.2	140.8	:	:	-5.3	:	:	:	:	:
Average personnel costs (EUR thous./employee) (4)	94.4	:	13.6	62.3	15.0	:	54.1	55.9	66.0	:	:	6.5	:	:	:	:	:
Wage adjusted labour productivity (%) (4)	234.6	:	1 773.5	390.8	39.2	:	313.2	172.1	213.4	:	:	-81.0	:	:	:	:	:
Gross operating rate (%) (4)	4.0	:	41.7	7.1	-11.2	:	13.0	11.2	5.3	:	:	-6.9	:	:	:	:	:
Investment per person employed (EUR thousand) (3)	50.2	:	18.6	51.7	0.3	:	41.8	116.8	35.4	:	:	6.9	:	:	:	:	:

(1) Romania, 2002. (2) Belgium, 2002. (3) Sweden, provisional. (4) Sweden, 2002.

Source: Eurostat (SBS)

Table 13.16

Electricity, gas, steam and hot water supply (NACE Division 40)
Main indicators, 2003

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million)	534 871	22 974	8 805	10 645	163 618	842	:	32 397	54 753	:	48 722	:	702	1 647	766	8 348	:
Production (EUR million)	:	23 026	8 709	8 080	164 078	528	:	26 714	55 247	:	47 997	:	719	1 555	503	3 662	:
Value added at factor cost (EUR million)	139 045	4 008	2 490	2 497	31 199	209	:	11 038	22 096	:	13 326	:	248	456	212	1 656	:
Gross operating surplus (EUR million) (1)	90 267	2 616	1 929	2 017	16 383	145	:	9 039	11 843	:	9 424	:	151	278	150	1 038	:
Purchases of goods and services (EUR million)	:	19 092	6 411	5 574	127 596	622	:	22 541	32 331	:	35 753	:	476	1 206	564	7 128	:
Gross investment in tangible goods (EUR million) (2)	:	305	864	1 111	7 055	237	:	5 267	4 591	:	6 668	:	185	255	141	823	:
Number of persons employed (thousands)	1 136	15	46	13	230	8	:	37	162	:	102	:	15	23	1	39	:
Personnel costs (EUR million) (1)	48 778	1 391	561	488	14 816	64	:	2 000	10 252	:	3 902	:	112	178	62	618	:
App. labour productivity (EUR thous./pers. emp.)	122.4	266.3	54.5	190.6	135.5	27.7	:	299.1	136.8	:	130.5	:	16.2	20.0	229.2	42.1	:
Average personnel costs (EUR thous./employee) (1)	43.2	93.0	12.6	38.5	64.4	8.5	:	56.4	63.5	:	39.0	:	6.6	7.8	69.2	15.8	:
Wage adjusted labour productivity (%) (1)	283.3	286.4	432.9	494.6	210.5	325.1	:	529.8	215.2	:	334.8	:	234.6	255.5	331.1	266.1	:
Gross operating rate (%) (1)	16.9	11.4	21.9	18.9	10.0	17.2	:	27.9	21.6	:	19.3	:	21.3	16.9	19.6	12.4	:
Investment per person employed (EUR thousand) (2)	:	16.4	18.9	84.8	30.6	31.4	:	142.7	28.4	:	65.3	:	10.9	11.2	152.0	20.9	:
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million) (3)	25 951	15 894	22 620	9 464	1 440	5 137	8 074	21 318	63 037	3 598	:	6 749	:	:	:	:	:
Production (EUR million) (3)	26 088	16 012	14 984	9 107	1 381	5 148	5 192	17 597	65 637	1 810	:	6 929	:	:	:	:	:
Value added at factor cost (EUR million) (4)	3 361	4 494	6 380	2 783	441	1 636	2 523	4 896	18 557	793	:	838	:	:	:	:	:
Gross operating surplus (EUR million) (4)	2 215	2 688	4 420	2 157	266	1 329	1 986	3 739	13 936	545	:	285	:	:	:	:	:
Purchases of goods and services (EUR million) (3)	22 740	11 376	16 639	6 655	1 001	3 514	5 791	12 156	43 908	2 914	:	5 907	:	:	:	:	:
Gross investment in tangible goods (EUR million) (3)	:	1 047	1 754	858	180	290	680	3 345	5 168	518	:	992	:	:	:	:	:
Number of persons employed (thousands) (3)	24	29	173	13	8	31	13	23	94	41	:	111	:	:	:	:	:
Personnel costs (EUR million) (4)	1 146	1 806	1 960	626	175	306	591	1 156	4 621	249	:	554	:	:	:	:	:
App. labour productivity (EUR thous./pers. emp.) (4)	141.4	154.0	36.9	220.4	57.0	52.8	193.8	214.2	196.7	19.3	:	7.6	:	:	:	:	:
Average personnel costs (EUR thous./employee) (4)	48.2	62.7	11.3	50.7	23.2	9.9	45.4	52.2	49.1	6.1	:	5.0	:	:	:	:	:
Wage adjusted labour productivity (%) (4)	293.4	245.6	326.5	435.1	245.2	533.6	426.5	410.6	400.9	318.1	:	151.2	:	:	:	:	:
Gross operating rate (%) (4)	8.5	16.9	19.5	22.8	18.5	25.9	24.6	19.7	22.1	15.1	:	4.2	:	:	:	:	:
Investment per person employed (EUR thousand) (3)	:	35.9	10.2	68.0	23.2	9.4	52.3	146.1	54.8	12.6	:	9.0	:	:	:	:	:

(1) Latvia, 2002. (2) Belgium and Latvia, 2002. (3) Sweden, provisional. (4) Sweden, 2002.

Source: Eurostat (SBS)

Water supply, sewerage and waste management



STRUCTURAL PROFILE

The recycling and water supply sector (NACE Divisions 37 and 41) generated EUR 24.0 billion of added value within the EU-25 in 2003, and employed some 400 000 persons. These figures equate to a 1.4 % share of industrial value added (NACE Sections C to E) and a 1.1 % share of the total number of persons employed in the EU-25's industrial economy. Recycling (NACE Division 37) accounted for one fifth (20.5 %) of the value added generated by the recycling and water supply sector, while water supply (NACE Division 41) accounted for the remainder. In employment terms the contribution of the recycling subsector was greater exceeding one quarter (26.8 %) of the total.

Regional specialisation in the recycling and water supply sector in employment terms is shown in the map on page 248. The top four most specialised regions (at the level of detail shown in the map) were all in Romania, and several regions in Bulgaria were also relatively specialised in these activities. Among the Member States, many regions in Belgium, the Czech Republic and Poland were also relatively specialised in this sector, as well as Hungary, Lithuania and Slovenia (considered each as one region at the level of detail in the map).

A size class analysis - see Figure 14.1 - of the recycling and water supply in the EU-25 indicates very different structures in these subsectors, with recycling dominated by SMEs (with less than 250 persons employed) and water supply dominated by large enterprises (with more than 250 persons employed). In recycling, SMEs contributed 85.6 % of value added in 2003, while in water supply their contribution was just 34.8 %.

Waste management and recycling (Subchapter 14.1) covers the recycling of waste and scrap (NACE Division 37), as well as the collection and treatment of waste (NACE Class 90.02) and sanitation, remediation and similar activities (NACE Class 90.03) such as decontamination and snow and ice clearing.

Water supply and sewage (Subchapter 14.2) covers the supply of water (NACE Division 41) and the collection and treatment of sewage (NACE Class 90.01).

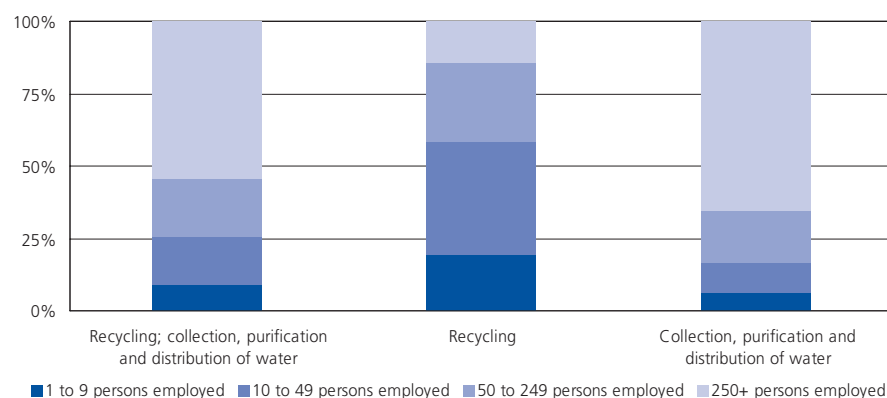
Coverage is limited to Recycling (NACE Division 37) and Water supply (NACE Division 41) when presenting the traditional business statistics, except the information on workforce characteristics, as these data sources currently do not cover the waste management and sewage parts (NACE Division 90).

NACE

- 37: recycling;
- 37.1: recycling of metal waste and scrap;
- 37.2: recycling of non-metal waste and scrap;
- 41: collection, purification and distribution of water;
- 90: sewage and refuse disposal, sanitation and similar activities.

Figure 14.1

Recycling; collection, purification and distribution of water (NACE Divisions 37 and 41)
Share of value added by enterprise size class, EU-25, 2003 (%) (1)



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

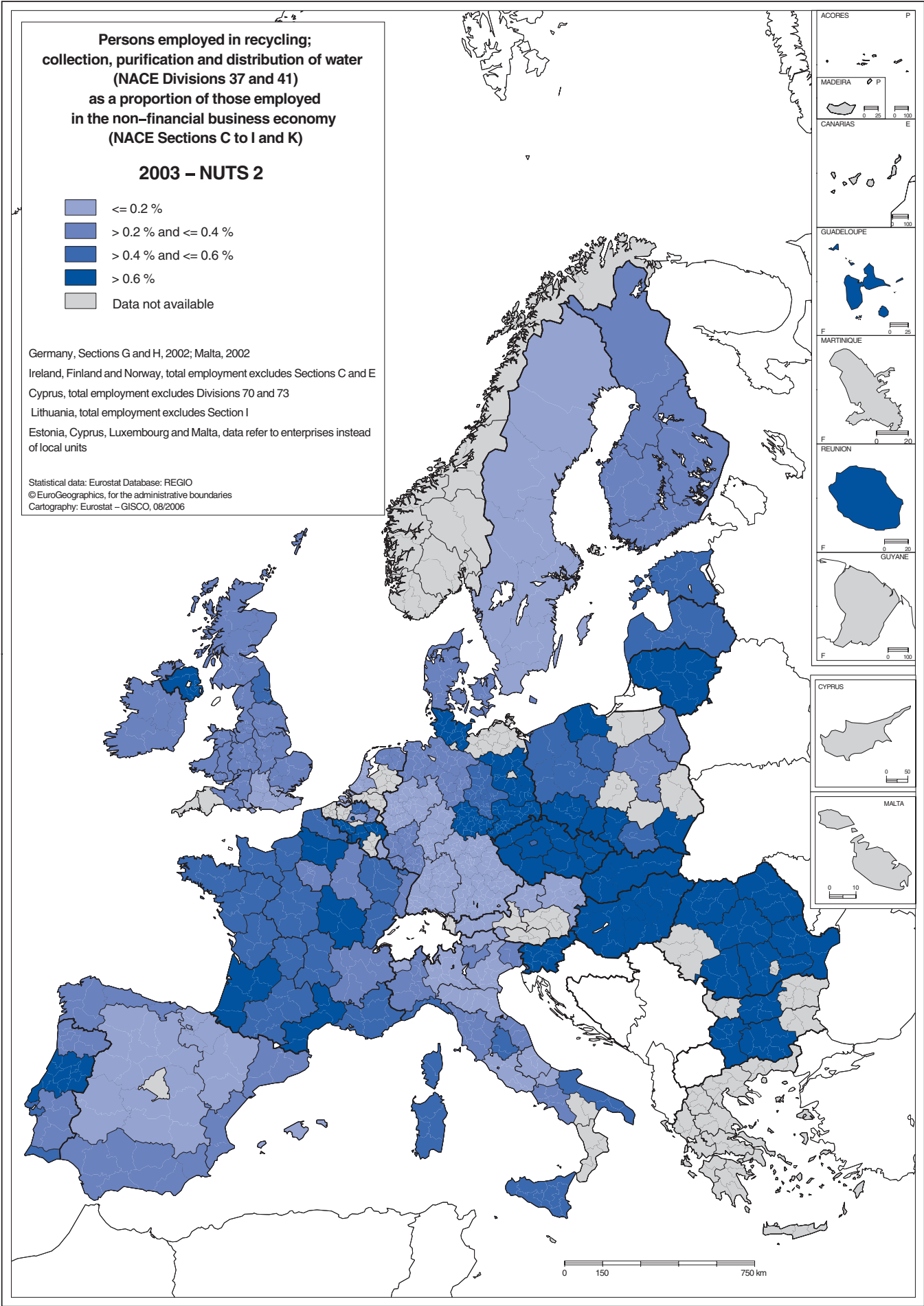


Table 14.1

Recycling; collection, purification and distribution of water (NACE Divisions 37 and 41)
Structural profile, EU-25, 2003 (1)

	Value added (EUR million)	Share of industrial value added (%)	Number of persons employed (thousands)	Share of industrial employment (%)
Recycling; collection, purification and distribution of water	24 000	1.4	400	1.1
Recycling	4 900	0.3	110	0.3
Collection, purification and distribution of water	19 000	1.1	300	0.9

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

Source: Eurostat (SBS)

Table 14.2

Recycling; collection, purification and distribution of water; sewage and refuse disposal, sanitation and similar activities
(NACE Divisions 37, 41 and 90)
Labour force characteristics, 2005

	Male		Full-time		Breakdown by age (% share of total)		
	Proportion of those employed (%)	Index (industry=100)	Proportion of those employed (%)	Index (industry=100)	< 30 years (1)	30-49 years	50+ years
EU-25	80.4	112.8	92.6	100.2	15.7	58.5	25.9
BE	84.1	111.1	96.2	108.0	17.2	64.5	18.3
CZ	79.2	122.9	95.0	97.4	17.8	48.9	33.3
DK	87.9	126.3	92.7	103.1	:	52.1	44.2
DE	80.5	111.0	88.6	100.1	12.3	61.1	26.6
EE	63.2	113.4	97.3	99.7	23.3	37.7	39.0
EL	87.0	117.3	97.5	99.4	:	60.3	31.7
ES	81.1	107.8	93.9	98.5	23.2	57.7	19.2
FR	80.5	112.7	93.6	99.6	17.0	62.3	20.7
IE	83.8	118.8	91.9	97.1	:	51.7	32.2
IT	87.2	122.0	92.4	98.9	10.8	66.9	22.3
CY	97.8	141.5	100.0	106.7	:	51.0	47.8
LV	64.9	110.7	92.3	95.7	15.4	56.9	27.6
LT	65.5	122.9	94.2	96.3	:	56.5	36.4
LU	85.6	105.0	94.6	100.9	:	71.9	:
HU	74.7	119.7	96.7	99.5	13.3	54.8	32.0
MT	88.1	114.2	97.3	101.9	:	:	:
NL	78.8	101.9	78.9	108.0	19.7	57.3	23.0
AT	77.3	103.4	85.0	94.5	19.3	64.6	:
PL	79.1	114.7	96.6	100.4	15.9	56.2	27.8
PT	70.2	118.4	99.3	102.2	17.0	61.1	25.4
SI	79.0	123.5	95.4	99.3	28.1	51.7	20.2
SK	80.9	126.8	93.5	94.5	11.2	56.0	32.8
FI	78.4	109.7	90.2	95.0	20.5	48.7	30.8
SE	85.0	113.2	93.4	103.6	17.1	44.4	38.6
UK	78.0	104.1	90.6	99.2	20.0	52.5	27.5

(1) Portugal, 2004.

Source: Eurostat (LFS)

LABOUR FORCE CHARACTERISTICS

The labour force in the EU-25's water supply, sewerage and waste management sector (NACE Divisions 37, 41 and 90) was characterised by a high proportion of male employment, 80.4 % in 2005 - see Table 14.2. This was 9.1 percentage points higher than the industrial average (71.3 %). 92.6 % of those employed worked full-time in the EU-25, which is only fractionally above the industrial average of 92.3 %.

The characteristics of the recycling (NACE Division 37) sector's labour force did not diverge greatly from the average for the water supply, sewerage and waste management (NACE Divisions 37, 41 and 90) sector as a whole in 2005, with 91.3 % in full-time employment and male employment reaching 80.0 %. For the supply of water (NACE Division 41) male employment (78.0 %) was slightly lower than the water supply, sewerage and waste management average, but full-time employment was much higher, at 95.2 %. The

labour force in sewage and refuse disposal, sanitation and similar activities (NACE Division 90) was typical of the water supply, sewerage and waste management sector as a whole in terms of full-time employment with a rate of 91.8 %. However, the proportion of the workforce that was male was 81.4 %, higher than either of the other sectors.

COSTS, PRODUCTIVITY AND PROFITABILITY

The relative importance of tangible investment was very different in recycling (NACE Division 37) and water supply (NACE Division 41). Gross tangible investment was equivalent to 6.1 % of operating costs in the EU's ⁽¹⁾ recycling sector in 2003, whereas it was approximately five times as high (31.9 %) in the EU's ⁽²⁾ water supply sector.

⁽¹⁾ EU average, 2003; Malta and Sweden, 2002; excluding Belgium, Denmark and Greece.

⁽²⁾ EU average, 2003; Latvia and Sweden, 2002; excluding Belgium, Greece, Cyprus, Malta and the Netherlands.

An analysis of the labour productivity ratios also shows a big difference between the two activities. Apparent labour productivity in the EU-25's recycling sector was EUR 45 000 per person employed in 2003, close to 10 % below the industrial average. In contrast in the water supply sector it reached EUR 61 900, nearly 25 % above the industrial average. Average personnel costs were much closer in the two activities, EUR 26 500 per employee in recycling and EUR 28 000 in water supply, both well below the industrial average (EUR 32 600). One consequence of these relatively low average personnel costs was that both sectors recorded quite high wage adjusted labour productivity, as value added per person employed was equivalent to 170 % of average personnel costs in the recycling sector, and 220 % in water supply.

The EU-25's gross operating rate for the recycling sector was 10 %, comparable with the industrial average of 10.3 %. For the water supply sector it was much higher, as the gross operating surplus was equivalent to 27 % of turnover in 2003: this was the highest gross operating rate of any industrial NACE division in the EU-25 in 2003, far ahead of the next highest rate (16.9 %) recorded for electricity, gas, steam and hot water supply (NACE Division 40).

14.1: WASTE MANAGEMENT AND RECYCLING

NACE characterises waste management as the collection and transportation of solid and other waste (apart from sewage) not intended for a further industrial use, as well as its treatment and final disposal, for example by means of land-fill or incineration (with or without energy recovery), but not recycling or re-use. In NACE these activities are classified as the collection and treatment of waste other than sewage (NACE Class 90.02), while the collection and treatment of sewage is covered in Subchapter 14.2.

Recycling under the NACE covers the processing of used or unused, sorted or unsorted, waste and scrap into secondary raw materials which can then be used by other sectors as an intermediate good - note that it does not extend to the production of new final products. Recycling, under this definition, therefore involves a number of treatment stages, such as sorting, crushing, mechanical reduction, stripping, separation and cleaning which may be followed by further treatments to prepare raw materials for use by other sectors. These activities are classified as the recycling of waste and scrap (NACE Division 37).

Waste management and recycling are closely related activities. The basis for the classification of enterprises depends on the economic value of the output: if it is marginal compared with costs involved, the main activity is waste treatment, while if most of the revenues come from the selling of recycled material the main activity is recycling. Note that substantial waste collection, treatment and recycling are carried out also by enterprises as ancillary activities, without the involvement of other enterprises. Note also that the re-use of products (when no real transformation process is required) is not considered either as a waste management or a recycling activity in NACE.

The sixth environment action programme (EAP) is the current framework for EU environmental policy: one of its main priorities concerns the sustainable management of natural resources and wastes. In the domain of waste, its objectives include to reduce the volume of waste and hazardous waste that is produced, as well as reducing the disposal of waste. The sixth EAP

foresees the revision of legislation in a number of specific areas important for the waste and recycling domain. The most notable legislative proposals that have been agreed or adopted during 2005 and 2006 include: agreement (but not yet formal adoption at the time of writing) of a new directive for the collection and recycling of batteries and accumulators ⁽³⁾; adoption in

March 2006 of a directive on the management of waste from extractive industries (see Chapter 12); and the adoption in April 2006 of a new directive on waste ⁽⁴⁾.

⁽³⁾ COM(2003) 723 final.

⁽⁴⁾ Directive 2006/12/EC repealing Directive 75/442/EEC.

In December 2005 the European Commission adopted a new Thematic Strategy on Waste Prevention and Recycling ⁽⁵⁾ to encourage the reduction in waste and greater recycling. The strategy is based around a life-cycle approach, which refers to a more sustainable use of resources and includes the establishment of national programmes for waste prevention. Concerning recycling, the strategy aims to support the development of the market for recycled materials. The new strategy should merge, streamline and clarify legislation which at the present time is focused on individual types of waste (such as batteries, packaging or old cars). As part of this thematic strategy, in December 2005 the European Commission adopted a proposal for a Waste Framework Directive ⁽⁶⁾ to replace the 1975 Waste Framework Directive, in order to streamline and clarify existing legislation within a single, comprehensive framework.

WASTE RECOVERY AND DISPOSAL

Table 14.3 shows the municipal waste generated in 2004 and how this was treated: as landfill, incinerated or recovered. Recovery is defined here as any waste management operation that diverts a waste material from the waste stream and which results in a certain product with a potential economic or ecological benefit. Recovery includes material, energy and biological recovery, and as such includes recycling, although as noted above the economic activity of recycling is separate from waste management in NACE.

Table 14.3
Municipal waste generated, 2004 (thousand tonnes)

	Generated	Recovery or disposal treatment			
		Landfilled	Incinerated	Recovery	
EU-25	245 554	112 935 (46%)	43 195 (18%)	89 424 (36%)	
EU-15	222 145	92 713 (42%)	42 389 (19%)	87 043 (39%)	
BE	4 871	489 (10%)	1 599 (33%)	2 784 (57%)	
CZ	2 841	2 267 (80%)	397 (14%)	177 (6%)	
DK	3 757	169 (4%)	2 046 (54%)	1 542 (41%)	
DE	49 504	8 573 (17%)	11 654 (24%)	29 277 (59%)	
EE	606	383 (63%)	0 (0%)	223 (37%)	
EL	4 781	4 388 (92%)	0 (0%)	394 (8%)	
ES	28 038	15 422 (55%)	1 794 (6%)	10 822 (39%)	
FR	34 116	13 040 (38%)	11 057 (32%)	10 018 (29%)	
IE	3 500	1 600 (46%)	0 (0%)	1 900 (54%)	
IT	31 150	17 742 (57%)	3 552 (11%)	9 855 (32%)	
CY	533	480 (90%)	0 (0%)	53 (10%)	
LV	720	601 (83%)	28 (4%)	92 (13%)	
LT	1 260	1 152 (91%)	0 (0%)	108 (9%)	
LU	302	56 (18%)	122 (40%)	124 (41%)	
HU	5 117	4 274 (84%)	211 (4%)	632 (12%)	
MT	229	183 (80%)	0 (0%)	45 (20%)	
NL	10 138	273 (3%)	3 413 (34%)	6 452 (64%)	
AT	5 105	1 024 (20%)	1 106 (22%)	2 975 (58%)	
PL	9 759	9 194 (94%)	87 (1%)	478 (5%)	
PT	4 548	3 327 (73%)	1 004 (22%)	217 (5%)	
SI	869	493 (57%)	15 (2%)	360 (41%)	
SK	1 475	1 195 (81%)	68 (5%)	212 (14%)	
FI	2 374	1 423 (60%)	236 (10%)	715 (30%)	
SE	4 169	380 (9%)	1 944 (47%)	1 845 (44%)	
UK	35 792	24 808 (69%)	2 861 (8%)	8 123 (23%)	

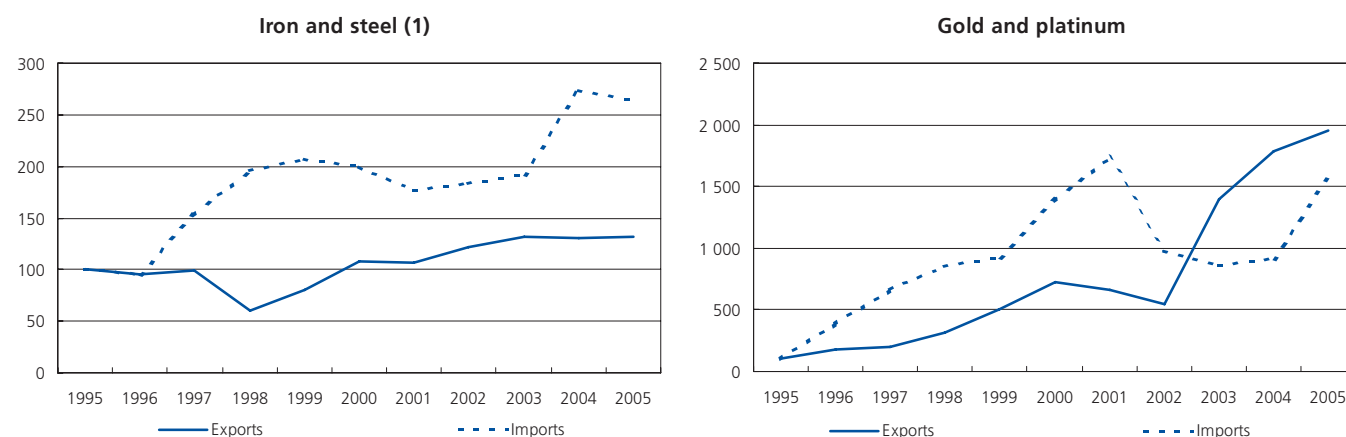
Source: Eurostat (Waste)

Figure 14.2 shows the development in the quantity of scrap imported and exported since 1995. Waste and scrap iron and steel is an important source of materials for metal processing activities, and as can be seen imports have grown particularly strongly in the ten years to 2005.

⁽⁵⁾ COM(2005) 666 final.

⁽⁶⁾ COM(2005) 667 final.

Figure 14.2
Quantity of external trade in waste and scrap of selected metals, EU-25 (1995=100)



(1) Cast iron, stainless and alloy steels, tinned iron and steel, other iron and steel.
Source: Eurostat (Comext)

Table 14.4

Recycling (NACE Division 37)**Value added and employment: ranking of the top 5 Member States, 2003**

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	France (1 278.2)	26.1	France (27.8)	25.3	France (0.5)	Luxembourg (0.7)
2	Germany (929.8)	19.0	United Kingdom (15.9)	14.5	Belgium (0.5)	France (0.7)
3	United Kingdom (848.3)	17.3	Germany (15.1)	13.7	Slovenia (0.5)	Belgium (0.6)
4	Italy (570.3)	11.6	Italy (13.6)	12.4	Luxembourg (0.5)	Lithuania (0.5)
5	Belgium (251.7)	5.1	Poland (8.8)	8.0	Lithuania (0.4)	United Kingdom (0.4)

(1) Malta and Sweden, 2002; Denmark and Greece, not available.

(2) Malta, 2002; Denmark and Greece, not available.

(3) Malta and Sweden, 2002; Denmark, Greece and Ireland, not available.

(4) Malta, 2002; Denmark, Greece and Ireland, not available.

Source: Eurostat (SBS)

STRUCTURAL PROFILE

The rest of this subchapter concerns the recycling activity (NACE Division 37). In 2003, this sector generated a value added of EUR 4.9 billion and employed 110 000 persons in the EU-25. This was equivalent to 0.3 % of industrial (NACE Sections C to E) value added and employment. Recycling was by far the smallest manufacturing (NACE Section D) NACE division in the EU-25 in value added terms and was only larger than the manufacture of tobacco and tobacco products (NACE Division 16) in terms of employment. In the EU-25 the recycling sector was fairly equally split between the recycling of metal waste and scrap (NACE Group 37.1) and non-metal waste and scrap (NACE Group 37.2) in both value added and employment terms in 2003. The recycling of metal waste and scrap was slightly smaller, with employment of 51 000 compared with 60 000 persons for non-metal waste and scrap recycling.

France reported the largest contribution to the EU-25's value added in the recycling sector, with a 26.1 % share in 2003; Germany (19.0 %) and the United Kingdom (17.3 %) were the next largest Member States in this sector, followed at some distance by Italy (11.6 %). Combined, the four largest Member States accounted for 74.0 % of EU-25 recycling value added, 5.8 percentage points higher than their share of all industrial value added. France, Belgium, Slovenia, Luxembourg and Lithuania had the highest industrial value added specialisation ⁽⁷⁾ in recycling, as this sector contributed 0.4 % or more of industrial value added in 2003.

⁽⁷⁾ Malta and Sweden, 2002; Denmark, Greece and Ireland, not available.

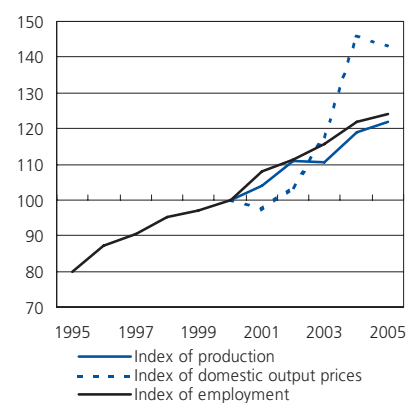
The index of production for recycling for the EU-25 is available since 2000 and shows that output grew in four of the last five years, contracting only in 2003 (-0.3 %). Over the period 2000 to 2005 the recycling activity saw its output expand at an average annual rate of 4.0 %, far ahead of the industrial average of 0.7 % over the same period. As such, based on the production index, this was the fastest growing industrial NACE division during this period. This performance was confirmed by the employment index which grew by 4.4 % per year on average over the same five year period, and by 4.5 % per annum over the ten years to 2005: only four industrial NACE divisions recorded overall growth during this ten year period and recycling had by far the fastest growth rate among them.

A domestic output price index is available for recycling from 2001 and this shows higher than average (for industry) price increases in 2002, 2003 and 2004, followed by a fall in prices in 2005 (-1.9 %) compared with strong growth in industrial prices as a whole (5.2 %). The recycling activity was one of only four industrial NACE divisions to record falling prices in 2005.

Micro and small enterprises (with less than 50 persons employed) accounted for 58.7 % of the value added generated in the EU-25's recycling sector in 2003; this was the highest share of any industrial NACE division. Small enterprises (with 10 to 49 persons employed) were also particularly important in this sector, as their 39.4 % contribution to recycling value added was not just the largest of any industrial NACE division, but of all the non-financial business economy NACE divisions. By contrast, the 14.4 % share of value added accounted for by large enterprises (with 250 or more persons employed) in the recycling sector was the second smallest of any non-financial business economy NACE division, larger only than in real estate services (NACE Division 70).

Figure 14.3

Recycling (NACE Division 37)
Evolution of main indicators, EU-25
(2000=100)



Source: Eurostat (STS)

Table 14.5

Recycling (NACE Division 37)**Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003**

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	6.1	86.5	13.5	45.0	26.5	170.0	10.0
1	Finland (18.7)	Latvia (94.5)	Luxembourg (26.7)	Ireland (85.0)	Sweden (36.7)	Malta (307.3)	Malta (22.8)
2	Portugal (12.0)	Poland (92.7)	Austria (18.7)	Netherlands (74.9)	Netherlands (36.0)	Estonia (294.3)	Austria (19.8)
3	Slovakia (10.6)	Lithuania (92.2)	Malta (17.8)	Austria (73.9)	Luxembourg (35.7)	Ireland (271.0)	Ireland (19.0)
4	Italy (9.2)	Hungary (91.8)	Slovenia (17.4)	Belgium (64.9)	Austria (35.0)	Latvia (236.8)	Estonia (17.7)
5	Slovenia (8.8)	Belgium (91.6)	France (17.1)	Finland (64.0)	Germany (34.8)	Slovakia (226.2)	Slovakia (15.1)

(1) Malta and Sweden, 2002; Belgium, Denmark and Greece, not available; EU-25 is an EU based on available data for 2002 and 2003.

(2) Malta and Sweden, 2002; Denmark and Greece, not available; EU-25 is an EU based on available data for 2002 and 2003.

(3) Malta and Sweden, 2002; Denmark and Greece, not available; EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

COSTS, PRODUCTIVITY AND PROFITABILITY

An analysis of current expenditure in the EU's ⁽⁸⁾ recycling sector shows that personnel costs accounted for 10.1 % of total operating costs in recycling of metal waste and scrap (NACE Group 37.1), and nearly double (19.4 %) that share for the non-metal waste and scrap subsector (NACE Group 37.2). The share of personnel costs in total operating costs for the recycling of the non-metal waste and scrap subsector was slightly higher than the industrial average, whereas for metal waste and scrap it was considerably lower.

⁽⁸⁾ EU average, 2003; Malta and Sweden, 2002; excluding Denmark and Greece.

In 2003, the apparent labour productivity of the recycling sector was EUR 45 000 per person employed in the EU-25 (see Table 14.5) and, as such, was EUR 4 600 lower than the industrial average. The recycling of metal waste and scrap recorded an apparent labour productivity of EUR 48 000 per person employed in 2003, higher than the non-metal waste and scrap subsector (EUR 40 000), but still below the industrial average. Average personnel costs (EUR 26 500 per employee) in recycling were nearly one fifth below the industrial average (EUR 32 600). Due to these particularly low average personnel costs, the wage adjusted labour productivity ratio was high in the EU-25's recycling sector, at 170 % compared with an industrial average of 152 %. There was little difference in the wage adjusted labour productivity between the two subsectors, as the recycling of metal waste and scrap recorded a ratio of 176 %, compared with 166 % for the recycling of non-metal waste and scrap. The wage adjusted labour productivity ratio in the recycling sector was close to or above the industrial average in all of the Member States ⁽⁹⁾ except the Czech Republic, Hungary, Luxembourg and Poland.

⁽⁹⁾ Malta and Sweden, 2002; Denmark, Greece and Ireland, not available.

The gross operating rate, calculated as the ratio of the gross operating surplus (value added minus personnel costs) to turnover, was 10 % for the EU-25's recycling sector in 2003, comparable with the industrial average of 10.3 %. This rate was higher (14 %) for the non-metal waste and scrap subsector than for the recycling of metal waste and scrap (8.8 %).

14.2: WATER SUPPLY AND SEWERAGE

This subchapter describes the activities of (public) water supply and sewerage. The former concerns for the collection, purification, desalinisation and distribution of water (NACE Division 41) and is treated in NACE separately from the collection and treatment of sewage, which are found within NACE Class 90.01. It should be noted that considerable amounts of water used in production processes do not come from the (public) water supply system, but rather are abstracted directly for own use. Similarly, some enterprises have their own wastewater treatment facilities.

The organisation of water supply and wastewater treatment within the EU varies between countries, with state-owned, private and mutual enterprises, as well as municipalities involved in terms of the ownership or operation of infrastructure. The two activities are strongly related, with many enterprises providing both water supply and wastewater services, where sometimes the fees paid by users for water supply include the service of treating the resulting wastewater. Among the key issues that affect this sector are pricing and the metering of water use in the context of the efficient use of water resources, and also the costs of water services (such as wastewater collection and treatment).

PUBLIC WATER SUPPLY AND URBAN WASTE WATER TREATMENT

Table 14.6 shows the volume of public water supply (PWS), with information on the proportion supplied to households and the extent of their connection to the PWS network. Although the data set is incomplete, in all Member States with data available, the proportion of households connected to the PWS was close to or in excess of three quarters, and in many Member States the proportion exceeded 90 %. In most Member States the majority of the population was connected to the urban wastewater collecting system and most wastewater was treated after collection - see Table 14.7.

STRUCTURAL PROFILE

The rest of this subchapter focuses on the water supply sector (NACE Division 41). In 2003 the EU-25's water supply sector generated an estimated EUR 19 billion of value added and employed 300 000 persons. As such, this activity accounted for 1.1 % of value added and 0.9 % of employment in the industrial economy (NACE Sections C to E). In value added terms, the water supply sector was dominated by Germany and the United Kingdom, with 24.7 % and 20.1 % shares of the EU-25's value added in 2003 - see Table 14.8. In employment terms, Poland's water supply sector contributed 15.3 % of the persons employed in this sector in the EU-25, larger than

the 13.7 % share for Germany. The water supply sector was relatively important in the industrial economies of Lithuania, Slovakia and Estonia ⁽¹⁰⁾, where this sector contributed more than 2 % to industrial value added, between 2.0 and 2.3 times the share for the EU-25 as a whole.

Figure 14.4 shows the production index for water supply in the EU-25. In comparison with the industrial production index, water supply output was more stable, particularly between 1998 and 2002, with larger variations in the three most recent years. Between 1995 and 1999 the employment index for water supply fell in a similar manner to that for industry as a whole. However, in 2000 and 2001 it grew by around 1 % in each year and then stabilised, before it fell by 1.2 % in 2004 and by a further 1.3 % in 2005. In contrast, over the same period the industrial employment index continued its pattern of annual net job losses. The domestic output price index for water supply grew each and every year from 1995 to 2005, while the overall industrial output price index fell on three occasions during the same period. The average annual growth rate of domestic output prices in water supply was 3.2 % over this ten year period, while for industry as a whole it was half this rate (1.6 %): among the industrial NACE divisions only tobacco manufacturing and the energy

⁽¹⁰⁾ Sweden, 2002; Greece, Ireland, Cyprus and Malta, not available.

Table 14.6

Public water supply (PWS)
(million m³ per year)

	Latest year	Total PWS	of which, to households	Proportion of households connected to PWS (%)
BE	2002	:	:	96.4
CZ	2002	545	343	89.8
DK	2002	380	240	97.0
DE (1)	2001	4 774	3 779	99.1
EE	2002	71	:	72.0
ES	2002	4 339	2 625	:
FR (1)	2001	5 685	3 414	99.4
IE	2002	:	:	90.0
CY	2003	:	:	100.0
LV (1)	2003	322	69	:
LT (1)	2002	45	43	76.0
HU	2002	:	381	93.0
NL	2002	1 257	709	99.9
AT	2002	:	356	89.6
PL	2003	1 657	1 269	85.2
SI	2002	123	89	90.6
SK	2003	378	:	84.0
SE	2002	708	526	:
UK	2002	6 312	:	:

(1) Households includes all public water supply other than to agriculture, forestry, fishing, industry and construction.

Source: Eurostat (Water)

Table 14.7

Proportion of the population connected to urban wastewater systems (%)

	Latest year	Urban wastewater collecting system			Urban wastewater treatment		
		Total	Without treatment	With treatment	Primary treatment	Secondary treatment	Tertiary treatment
CZ	2002	80	8	72	:	:	:
DE	2001	95	2	93	0	5	88
EE	2002	72	1	71	1	24	46
ES	2002	100	11	89	1	62	26
FR	2001	82	2	79	2	51	27
IE	2001	93	23	70	41	21	8
LV	2003	:	:	72	2	35	33
LT	2003	73	11	62	32	7	21
LU	2003	:	5	95	7	66	22
HU	2002	62	5	57	22	25	11
MT	2001	100	87	13	:	:	:
NL	2002	99	0	99	0	14	85
AT	2002	86	0	86	0	:	:
PL	2003	:	:	58	3	25	31
SI	2002	63	:	33	10	18	5
SK	2003	55	3	52	:	:	:
FI	2002	81	:	81	:	:	81
SE	2002	85	:	85	:	5	80
UK (1)	2002	98	0	98	1	60	39

(1) England and Wales only.
Source: Eurostat (Water)

related activities of extraction of crude petroleum and natural gas and fuel processing (NACE Divisions 11, 16 and 23) recorded higher growth rates over this period.

In contrast to the small and micro enterprises that dominated the recycling sector, the water supply sector in the EU-25 was dominated by large enterprises (with 250 or more persons employed) – see Figure 14.1 in the overview of this chapter. In 2003 these enterprises contributed 65.2 % of value added in the water supply sector, a larger proportion than the industrial average (57.7 %). An analysis of the size class breakdown shows a fairly similar pattern among Member States, with large enterprises accounting for at least 50 % of the water supply sector's value added, except in Denmark, although data availability means that this analysis is only possible for 13 Member States in either 2002 or 2003.

COSTS, PRODUCTIVITY AND PROFITABILITY

Gross tangible investment was equivalent to 31.9 % of operating costs in the EU's ⁽¹¹⁾ water supply sector, reflecting the capital intensive nature of this sector and the relatively low operating costs (see Table 14.9). The low operating costs resulted from particularly low purchases of goods and services, which

⁽¹¹⁾ EU average, 2003; Latvia and Sweden, 2002; excluding Belgium, Greece, Cyprus, Malta and the Netherlands.

accounted for just 71.3 % of total operating costs in the EU ⁽¹²⁾ compared to the industrial average (NACE Sections C to E) of 81.1 %. The capital intensive nature of the sector was also reflected in the apparent labour productivity of EUR 61 900 per person employed for the EU-25's water supply sector in 2003, well above the industrial average (NACE Sections C to E) of EUR 49 600. Average personnel costs in 2003 were EUR 28 000 per employee, well below the industrial average of EUR 32 600 per employee. Combining this high apparent labour productivity, and low average personnel costs, the resulting wage adjusted labour productivity ratio in 2003 was 220 %, indicating that value added per person employed was more than double the average cost of personnel. This was much higher than the industrial average of 152 % in 2003, and was the third highest ratio recorded among the available ⁽¹³⁾ industrial NACE divisions in 2003. Particularly high wage adjusted labour productivity ratios were recorded in Germany, the United Kingdom and Finland where this indicator for the water supply sector was at least twice as high as the industrial economy average ⁽¹⁴⁾.

⁽¹²⁾ EU average, 2003; Latvia and Sweden, 2002; excluding Greece, Cyprus and Malta.

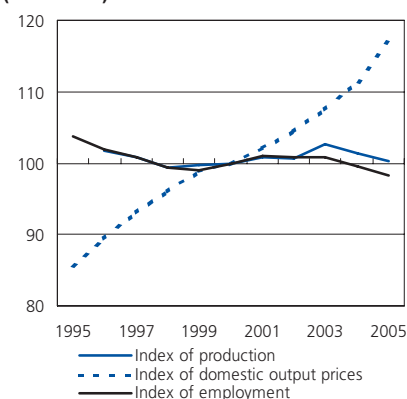
⁽¹³⁾ NACE Divisions 11, 12, 13 and 16, not available.

⁽¹⁴⁾ Latvia and Sweden, 2002; Greece, Ireland, Cyprus and Malta, not available.

Figure 14.4

Collection, purification and distribution of water (NACE Division 41)

Evolution of main indicators, EU-25 (2000=100)



Source: Eurostat (STS)

The gross operating rate, one measure of profitability, was 27 % in the EU-25's water supply sector in 2003, which was 2.6 times as high as the industrial average. This was the highest gross operating rate of all industrial NACE divisions ⁽¹⁵⁾. The gross operating rate of the water supply sector was above the industrial average in 2003 in every Member State ⁽¹⁶⁾.

⁽¹⁵⁾ NACE Divisions 11, 12, 13 and 32, not available.

⁽¹⁶⁾ Latvia and Sweden, 2002; Greece, Ireland, Cyprus and Malta, not available.

Table 14.8

Collection, purification and distribution of water (NACE Division 41)

Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national industrial value added (%) (3)	Highest share of national industrial employment (%) (4)
1	Germany (4 697.1)	24.7	Poland (46.0)	15.3	Lithuania (2.6)	Slovakia (3.0)
2	United Kingdom (3 819.9)	20.1	Germany (41.1)	13.7	Slovakia (2.4)	Hungary (2.4)
3	France (2 483.0)	13.1	France (34.4)	11.5	Estonia (2.2)	Lithuania (2.2)
4	Spain (1 609.8)	8.5	United Kingdom (27.7)	9.2	Portugal (2.0)	Poland (1.6)
5	Italy (1 344.3)	7.1	Spain (26.7)	8.9	Poland (1.9)	Slovenia (1.6)

(1) Sweden, 2002; Greece, Cyprus and Malta, not available.

(2) Greece, Cyprus and Malta, not available.

(3) Sweden, 2002; Greece, Ireland, Cyprus and Malta, not available.

(4) Greece, Ireland, Cyprus and Malta, not available.

Source: Eurostat (SBS)

Table 14.9

Collection, purification and distribution of water (NACE Division 41)

Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	31.9	71.3	28.7	61.9	28.0	220.0	27.0
1	United Kingdom (99.2)	France (82.5)	Lithuania (49.9)	Netherlands (168.2)	Luxembourg (63.9)	United Kingdom (389.0)	Finland (51.6)
2	Portugal (94.1)	Denmark (75.2)	Slovakia (46.6)	Luxembourg (162.2)	Netherlands (57.4)	Finland (370.8)	United Kingdom (49.0)
3	Finland (89.7)	Czech Republic (71.3)	Poland (46.5)	United Kingdom (138.0)	Belgium (55.2)	Netherlands (292.8)	Austria (44.7)
4	Estonia (77.7)	Italy (70.3)	Hungary (41.6)	Finland (135.8)	France (48.5)	Austria (291.9)	Poland (38.6)
5	Slovakia (61.6)	Spain (68.1)	Slovenia (40.5)	Austria (116.3)	Italy (42.3)	Germany (275.7)	Netherlands (37.4)

(1) Latvia and Sweden, 2002; Belgium, Greece, Ireland, Cyprus, Malta and the Netherlands, not available; EU-25 is an EU based on available data for 2002 and 2003.

(2) Latvia and Sweden, 2002; Greece, Ireland, Cyprus and Malta, not available; EU-25 is an EU based on available data for 2002 and 2003.

(3) Latvia and Sweden, 2002; Greece, Ireland, Cyprus and Malta, not available; EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

Table 14.10

Recycling (NACE Division 37)

Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million) (2)	22 000	1 495	410	3 847	21	784	5 482	111	2 636	12	19	69	38	118	8		
Production (EUR million)	1 316	377	3 221	21	740	4 542	107	2 545	10	19	62	37	65	8			
Value added at factor cost (EUR million) (2)	4 900	252	76	930	6	174	1 278	33	570	3	2	10	12	16	3		
Gross operating surplus (EUR million) (2)	2 200	138	39	420	4	76	416	21	300	1	1	5	3	7	2		
Purchases of goods and services (EUR million)	1 241	348	2 941	16	630	4 183	79	2 099	9	17	58	26	101	4			
Gross investment in tangible goods (EUR million) (3)	74	14	164	0	39	335	7	217	0	1	2	2	7	0			
Number of persons employed (thousands) (2)	110	4	6	15	0	3	28	0	14	0	0	2	0	2	0		
Personnel costs (EUR million) (2)	2 650	114	37	510	2	98	862	12	271	2	1	5	10	9	1		
App. labour productivity (EUR thous./pers. emp.) (2)	45.0	64.9	13.8	61.6	19.0	49.6	46.0	85.0	41.9	23.9	6.0	6.1	45.5	9.0	35.7		
Average personnel costs (EUR thous./employee) (2)	26.5	33.2	8.1	34.8	6.5	28.7	32.1	31.4	25.7	13.1	2.5	3.1	35.7	5.8	11.6		
Wage adjusted labour productivity (%) (2)	170.0	195.6	169.5	177.0	294.3	173.2	143.2	271.0	162.9	181.8	236.8	198.4	127.3	156.7	307.3		
Gross operating rate (%) (2)	10.0	9.2	9.5	10.9	17.7	9.6	7.6	19.0	11.4	11.3	7.2	7.1	7.8	5.9	22.8		
Investment per person employed (EUR thousand) (3)	19.7	2.4	10.8	1.0	11.1	12.1	17.5	15.9	3.2	1.3	1.2	8.8	3.7	2.6			
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million) (4)	996	216	693	224	104	43	125	610	3 470	510	350	280					
Production (EUR million) (4)	946	214	466	208	90	36	126	616	3 298	51	68						
Value added at factor cost (EUR million) (5)	240	76	109	45	29	12	25	98	848	30	23						
Gross operating surplus (EUR million) (5)	124	43	59	22	13	7	12	39	468	11	23						
Purchases of goods and services (EUR million) (4)	758	145	637	185	76	32	103	498	2 615	462	215						
Gross investment in tangible goods (EUR million) (4)	49	13	20	25	8	4	22	34	141	28	28						
Number of persons employed (thousands) (4)	3	1	9	2	1	1	0	2	16	11	1						
Personnel costs (EUR million) (5)	115	33	51	24	16	5	13	58	380	21	46						
App. labour productivity (EUR thous./pers. emp.) (5)	74.9	73.9	12.4	26.1	31.1	16.1	64.0	59.1	53.4	4.8	72.2						
Average personnel costs (EUR thous./employee) (5)	36.0	35.0	7.1	14.3	17.5	7.1	34.4	36.7	25.3	2.1	48.5						
Wage adjusted labour productivity (%) (5)	208.1	211.1	175.0	183.0	177.3	226.2	185.9	160.8	210.5	229.9	148.9						
Gross operating rate (%) (5)	12.5	19.8	8.5	9.6	12.3	15.1	9.9	7.1	13.5	5.8	8.1						
Investment per person employed (EUR thousand) (4)	15.4	12.8	2.3	14.4	8.6	5.3	56.1	19.8	8.9	2.6	29.2						

(1) Malta, 2002. (2) EU-25, rounded estimate based on non-confidential data. (3) Belgium, 2002. (4) Sweden, provisional. (5) Sweden, 2002.

Source: Eurostat (SBS)

Table 14.11

Collection, purification and distribution of water (NACE Division 41)

Main indicators, 2003

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million) (1)	40 000	1 231	810	436	8 093	64	3 298	10 340	0 3 117	37	97	30	563				
Production (EUR million)	1 280	819	435	8 230	65	3 444	10 595	0 3 368	37	101	23	556					
Value added at factor cost (EUR million) (1)	19 000	654	323	171	4 697	35	1 610	2 483	0 1 344	25	61	18	285				
Gross operating surplus (EUR million) (1, 2)	10 000	248	130	84	2 993	23	697	812	0 564	2	27	2	80				
Purchases of goods and services (EUR million)	604	479	264	3 218	24	1 951	7 876	0 1 843	12	35	11	289					
Gross investment in tangible goods (EUR million) (3)	116	201	93	2 415	28	545	286	0 630	2	26	4	94					
Number of persons employed (thousands) (1)	300	7	22	3	41	2	27	34	0 20	2	7	0	22				
Personnel costs (EUR million) (1, 2)	9 000	406	193	87	1 704	13	913	1 671	0 780	3	35	7	205				
App. labour productivity (EUR thous./pers. emp.) (1)	61.9	88.6	15.0	54.2	114.3	20.1	60.3	72.1	68.9	12.3	9.3	162.2	12.7				
Average personnel costs (EUR thous./employee) (1, 2)	28.0	55.2	9.1	29.3	41.5	7.3	34.8	48.5	42.3	4.0	5.3	63.9	9.2				
Wage adjusted labour productivity (%) (1, 2)	220.0	160.4	164.0	185.0	275.7	274.6	173.4	148.5	162.9	171.6	175.3	254.0	138.2				
Gross operating rate (%) (1, 2)	27.0	20.2	16.0	19.3	37.0	35.4	21.1	7.9	18.1	26.6	27.4	7.1	14.1				
Investment per person employed (EUR thousand) (3)	16.1	9.3	29.6	58.8	16.0	20.4	8.3	32.3	2.1	4.0	35.4	4.2					
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million) (4)	1 670	464	1 332	751	199	237	464	225	5 824	194	352						
Production (EUR million) (4)	1 707	480	1 371	722	208	251	484	232	6 020	197	380						
Value added at factor cost (EUR million) (5)	948	315	908	439	110	153	327	110	3 820	96	180						
Gross operating surplus (EUR million) (5)	624	207	514	214	42	68	239	69	2 855	33	44						
Purchases of goods and services (EUR million) (4)	600	163	454	352	99	97	160	107	2 021	106	196						
Gross investment in tangible goods (EUR million) (4)	79	214	542	94	112	222	136	2 962	15	231							
Number of persons employed (thousands) (4)	6	3	46	13	4	14	2	1	28	19	49						
Personnel costs (EUR million) (5)	324	107	394	224	67	85	88	41	965	63	136						
App. labour productivity (EUR thous./pers. emp.) (5)	168.2	116.3	19.7	34.8	27.1	10.9	135.8	115.0	138.0	5.1	3.7						
Average personnel costs (EUR thous./employee) (5)	57.4	39.8	8.6	17.9	16.6	6.1	36.6	46.4	35.5	3.4	2.8						
Wage adjusted labour productivity (%) (5)	292.8	291.9	228.0	194.9	162.9	179.5	370.8	247.8	389.0	152.4	131.8						
Gross operating rate (%) (5)	37.4	44.7	38.6	28.5	21.3	28.5	51.6	36.8	49.0	17.0	12.5						
Investment per person employed (EUR thousand) (4)	29.3	4.6	43.0	23.3	8.0	92.5	130.5	107.0	0.8	4.7							

(1) EU-25, rounded estimate based on non-confidential data. (2) Latvia, 2002. (3) Belgium and Latvia, 2002. (4) Sweden, provisional. (5) Sweden, 2002.

Source: Eurostat (SBS)

Construction



Building and civil engineering involves the construction of normally unique projects, with the time scale from conception to completion typically much longer than in many other sectors, often years. The construction of many projects often involves a large number of sub-contracting enterprises with various specialisations, organised by a project co-ordinating enterprise or lead developer.

The European Construction Industry Federation ⁽¹⁾ provides a project-based breakdown of construction output. According to these estimates, approximately 20 % of construction work in Europe ⁽²⁾ was accounted for by civil engineering in 2005, while the largest building segment was non-residential (31 %). Renovation and maintenance (23 %), and new residential building (26 %) accounted for the remainder of total construction output.

The main EU legal framework for construction activity is Council Directive 89/106/EEC on the approximation of laws, regulations and administrative provisions of the Member States relating to construction products, known as the Construction Products Directive. The Commission believes that this directive only partially eliminates barriers to trade and does not establish optimal conditions allowing the free circulation and use of construction products inside the Community, and it is currently reviewing the directive in the context of legislative simplification.

⁽¹⁾ FIEC (The European Construction Industry Federation), more information at: <http://www.fiec.org>.

⁽²⁾ EU-15 plus the Czech Republic, Hungary, Poland, Slovakia, Bulgaria, Romania, Turkey, Norway and Switzerland.

STRUCTURAL PROFILE

The construction sector had a value added of EUR 414.5 billion in the EU-25 in 2003 and employed 12.4 million persons, equivalent to 8.6 % of the non-financial business economy's (NACE Sections C to I and K) value added and 10.6 % of its employment (see Table 15.1). The United Kingdom had the largest construction sector in the EU-25 with an 18.3 % share of the EU-25 total in 2003 (see Table 15.2). Spain had the second largest sector in value added terms, with a 17.0 % share of the EU-25's construction value added, which was close to double its 8.9 % share of value added in the EU-25's non-financial business economy. Unsurprisingly, therefore, Spain was the most specialised Member State ⁽³⁾ in the construction sector in 2003 as it generated 16.5 % of its non-financial business economy value added in this sector, far ahead of the next most specialised countries, namely Luxembourg (11.4 %) and Portugal (11.2 %). Slovakia, Malta (2002), Hungary, Germany and Poland reported the lowest relative shares, as the construction sector accounted for less than 6 % of the value added generated in their respective non-financial business economies.

⁽³⁾ Lithuania, Malta and Sweden, 2002; Greece, Ireland and Cyprus, not available.

The statistical classification of economic activities covers construction activities within NACE Section F which is the same as NACE Division 45. Some technical activities related to the construction sector, although not formally part of it, such as architectural services or landscaping, are covered within Chapter 22. In previous editions of this publication real estate services were covered in this chapter alongside construction, as many actors, such as property developers, are closely related to construction: in this edition, real estate services have been combined with some other services and are now covered within Subchapter 23.1.

Within NACE, construction is defined according to chronological stages of the construction process, starting with demolition and site preparation (NACE Group 45.1), passing through general construction activities (NACE Group 45.2), and ending with installation (NACE Group 45.3) and completion work (NACE Group 45.4). One final construction activity covers the renting with an operator of construction equipment (NACE Group 45.5). Each of these five groups is treated in a separate subchapter.

NACE

- 45: construction;
- 45.1: site preparation;
- 45.2: building of complete constructions or parts thereof; civil engineering;
- 45.3: building installation;
- 45.4: building completion;
- 45.5: renting of construction or demolition equipment with operator;
- 70: real estate activities;
- 70.1: real estate activities with own property;
- 70.2: letting of own property;
- 70.3: real estate activities on a fee or contract basis.

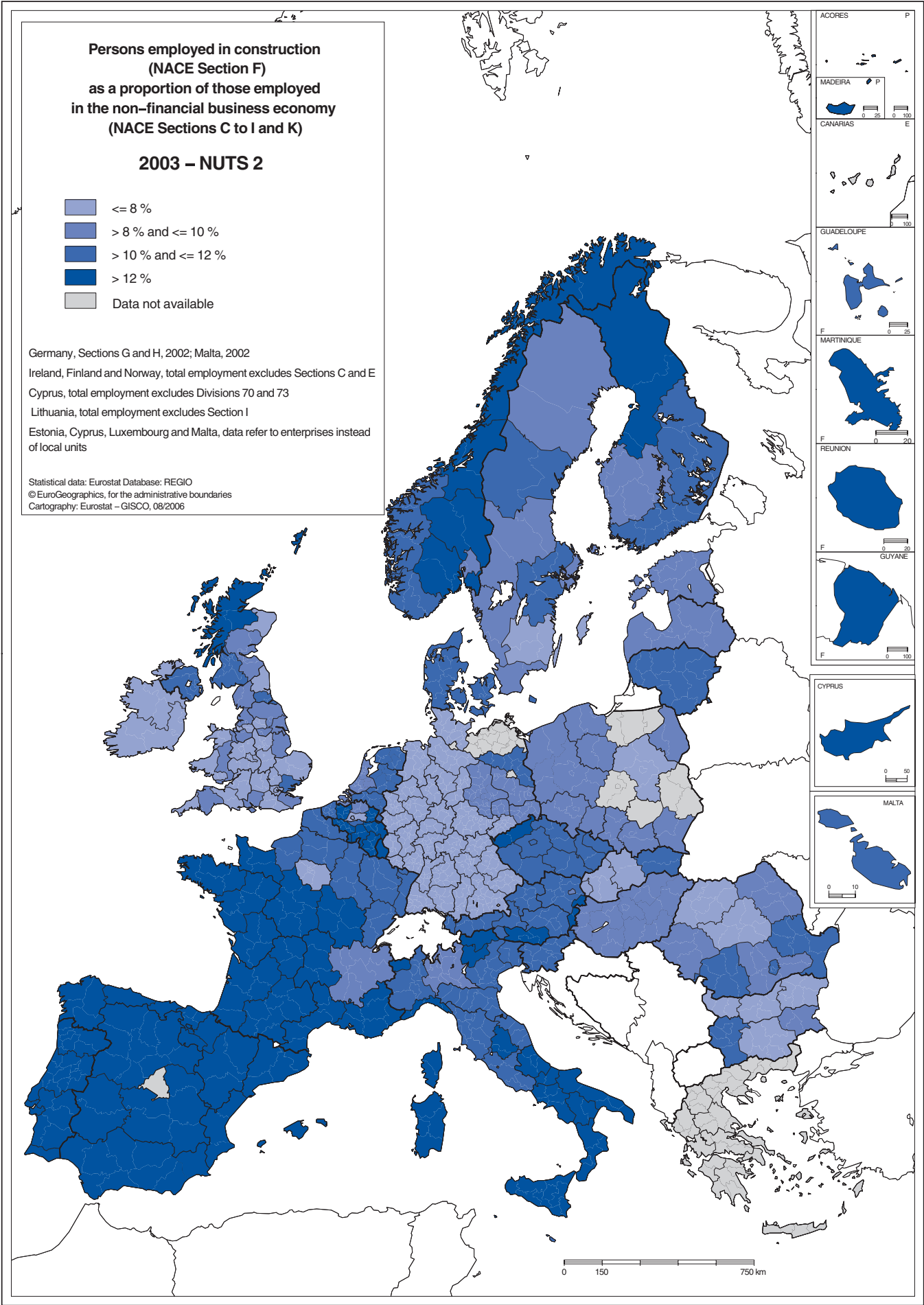


Table 15.1

Construction (NACE Division 45)
Structural profile, EU-25, 2003

	Value added (EUR million)	Share of non-financial business economy value added (%)	Number of persons employed (thousands)	Share of non-financial business economy employment (%)
Construction	414 489	8.6	12 377	10.6
Site preparation (1)	14 600	0.3	388	0.3
General construction	241 329	5.0	6 626	5.7
Building installation	92 834	1.9	2 974	2.5
Building completion	62 588	1.3	2 318	2.0
Renting of construction or demolition equipment with operator (1)	2 960	0.1	69	0.1

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

Source: Eurostat (SBS)

Table 15.2

Construction (NACE Division 45)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national non-financial business economy value added (%) (3)	Highest share of national non-financial business economy employment (%) (4)
1	United Kingdom (76 048.7)	18.3	Spain (2 310.5)	18.7	Spain (16.5)	Spain (18.7)
2	Spain (70 279.2)	17.0	Italy (1 705.7)	13.8	Luxembourg (11.4)	Luxembourg (16.2)
3	Germany (58 733.1)	14.2	Germany (1 697.8)	13.7	Portugal (11.2)	Portugal (15.2)
4	France (56 318.8)	13.6	France (1 494.7)	12.1	Austria (10.0)	Italy (11.8)
5	Italy (47 016.5)	11.3	United Kingdom (1 322.6)	10.7	Netherlands (9.7)	Slovenia (11.2)

(1) Malta and Sweden, 2002; Greece, not available.

(2) Sweden, provisional; Malta, 2002; Greece, not available.

(3) Malta and Sweden, 2002; Greece, Ireland and Cyprus; not available.

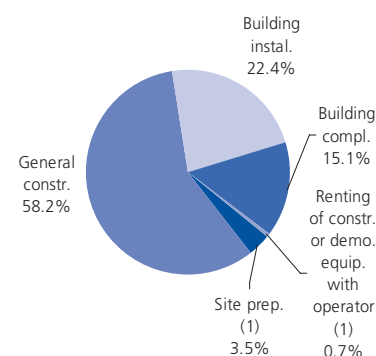
(4) Sweden, provisional; Lithuania and Malta, 2002; Greece, Ireland and Cyprus; not available.

Source: Eurostat (SBS)

The situation with respect to employment was somewhat different. The Spanish construction sector was the largest by this measure with 2.3 million persons employed, 18.7 % of the EU-25 total, ahead of Italy (13.8 %), Germany (13.7 %) and France (12.1 %). The United Kingdom, which contributed the largest share of EU-25 value added in construction, had only the fifth largest workforce, with just 10.7 % of the EU-25 total. The map on page 258 shows the contribution of the construction sector to employment within the non-financial business economy (NACE Sections C to I and K) of each region. The importance of this activity in several southern European Member States is clear, but this sector also provided an important contribution to employment in several parts of Belgium, and in Luxembourg, as well as in several regions of Norway. The top six regions in terms of the contribution of this sector to the non-financial business economy's workforce were all in Spain.

The largest of the five subsectors (NACE groups) in the EU-25, both in employment and value added terms, was the building of complete constructions or parts thereof and civil engineering (NACE Group 45.2, hereafter referred to as general construction). This subsector alone accounted for more than half of the value added (58.2 %) and employment (53.5 %) in the EU-25's construction sector. Building installation work (NACE Group 45.3) and building completion work (NACE Group 45.4) were the next largest subsectors, with 22.4 % and 15.1 % respectively of the EU-25's value added in construction - see Figure 15.1. The two smallest subsectors were site preparation (NACE Group 45.1) and the renting of construction or demolition equipment with an operator (NACE Group 45.5) which contributed respectively 3.5 % and 0.7 % of construction value added in the EU-25 in 2003.

Figure 15.1

Construction (NACE Division 45)
Breakdown of sectoral value added, EU-25, 2003 (%)


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

Source: Eurostat (SBS)

The construction sector (NACE Section F) is characterised by a large number of small enterprises, and relatively few large ones - see Figure 15.2 - with most enterprises serving a relatively small geographical market. Micro and small enterprises (with less than 50 persons employed) together generated 65.3 % of the EU-25's value added in the construction sector in 2003, a relatively high share compared with many other activities – the average for the non-financial business economy was just 39.6 %. Large enterprises (with more than 250 persons employed) generated less than one fifth of the EU's value added (17.4 %) in construction, compared with a non-financial business economy average of 42.7 %. Most Member States ⁽⁴⁾ displayed a similar pattern, as in 2003 the combination of micro and small enterprises generated at least half of the construction sector's value added in all Member States except the Baltic States, Ireland (2002), Luxembourg and Slovakia. The largest contribution of micro and small enterprises was in the Italian construction sector where these enterprises generated 83.4 % of construction value added.

DEVELOPMENTS IN OUTPUT, CONFIDENCE, COSTS AND PRICES

The construction sector is considered to be cyclical, influenced by business and consumer confidence, interest rates and government programmes. Figures 15.3 and 15.4 show the development of construction output in the EU-25 and some of the larger Member States based on the 'classification of constructions' (rather than NACE). It can be seen that building work has been through more than one cycle in recent years, with an overall upward trend. After an upswing, building output contracted in 1996 and 1997, and grew more strongly in the three years through to 2000 averaging 2.4 % growth per annum. More recently 2001 was a year of a small contraction in activity, followed by another period of growth, four consecutive years so far, averaging 1.1 % per annum. The development for civil engineering was somewhat different, with short cyclical movements since the mid-1990s with no significant overall growth or decline.

⁽⁴⁾ Greece, Ireland, Malta and Sweden, 2002.

Figure 15.2
Construction (NACE Division 45)
Share of value added by enterprise size class, 2003 (%)

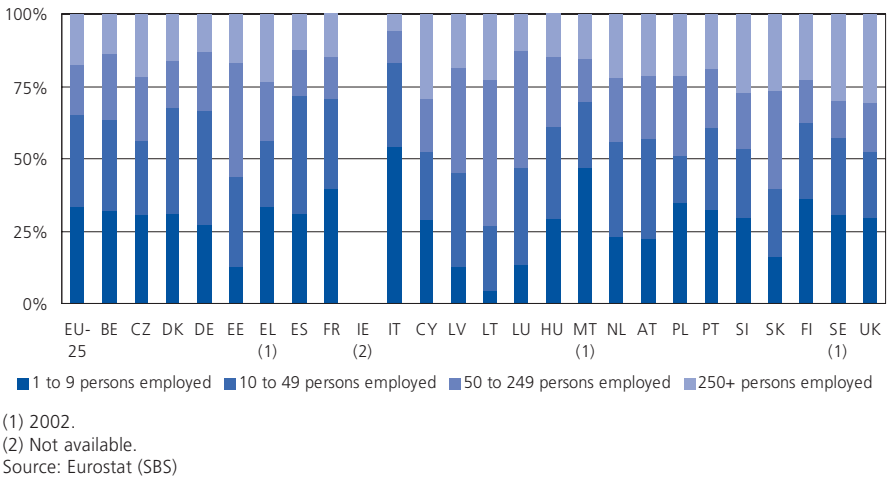


Figure 15.3
Production indices: building and civil engineering, EU-25 (2000=100) (1)

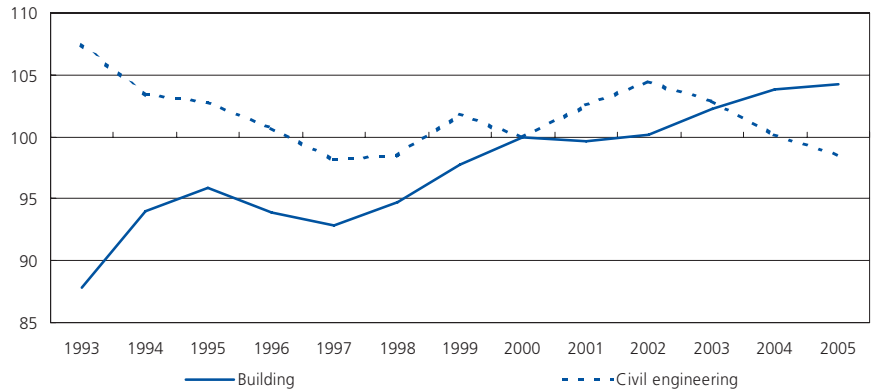


Figure 15.4
Production indices for construction (2000=100) (1)

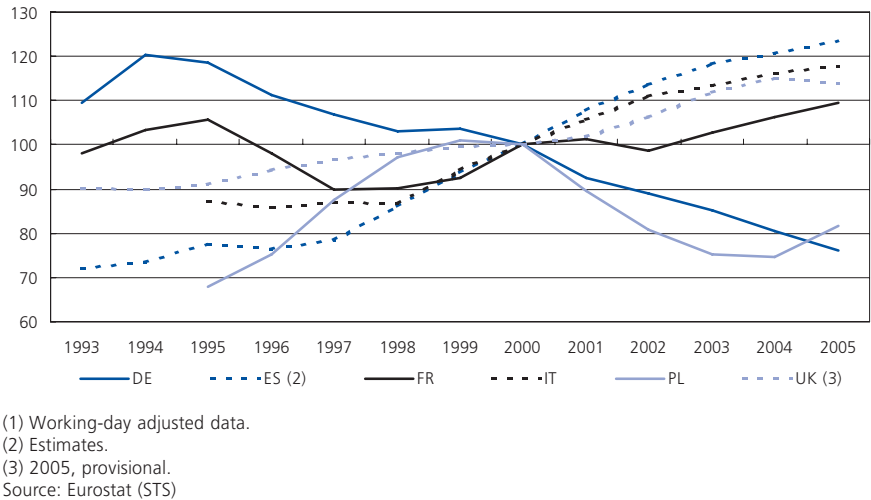
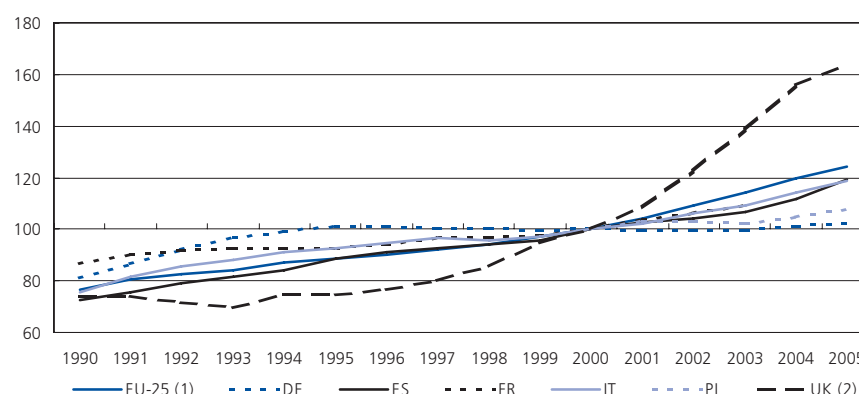


Figure 15.4 shows the contrasting development in construction output in six of the larger Member States. Italy, the United Kingdom and most notably Spain all recorded more or less sustained periods of growth as regards construction activity from the middle of the 1990s, continuing through to 2005, with only occasional annual contractions in output. However, construction in Germany only expanded in one year since 1995, with the production index falling by an average of 4.3 % per annum over the ten years to 2005: to some extent this decline reflects a return from the high levels of activity seen in the early 1990s following reunification. The time-series for Poland shows very rapid growth between the beginning of the series in 1995 and 1999, averaging 10.4 % per annum, followed by a period of contraction, averaging 5.9 % per annum over the five years to 2004. At the end of this period the rate of contraction had slowed substantially, and in 2005 the Polish construction activity recorded its first expansion in six years, growing by 9.3 %.

Declining construction activity in Germany as indicated by the construction production indices was reflected also in the output price indices for residential buildings shown in Figure 15.5, as the German index remained more or less unchanged since 1995. Nevertheless, price increases of around 1 % in both 2004 and 2005 were the highest since 1995. Of the six Member States shown in the figure, the United Kingdom recorded the fastest increase in output prices since 1990 (Poland only available since 2000; France until 2003), with prices increasing on average by 5.4 % per annum. Spain recorded output price increasing on average by 3.4 % per annum over the same period and Italy by 3.1 % per annum, one just above and the other just below the EU-25 average of 3.3 %.

The balance of construction confidence (the percentage of positive responses minus the percentage of negative responses, seasonally adjusted) for the EU-25 was equal to -3 in May 2006. This was slightly above the levels of the previous least pessimistic balance in mid-2000, and therefore the highest level for this indicator during the period since January 1995.

Figure 15.5
Output price indices for residential buildings (2000=100)



(1) 2004 and 2005, estimates.

(2) 2005, provisional.

Source: Eurostat (STS)

LABOUR FORCE CHARACTERISTICS

The high importance of micro and small enterprises in the construction sector (NACE Section F) reflects the importance of self-employment. The proportion of paid employees in the total construction workforce was 81.1 % in the EU-25 in 2003 according to structural business statistics, well below the industrial (NACE Sections C to E) average of 93.9 % (2002) and also slightly below the non-financial services (NACE Sections G to I and K) average of 81.6 % (2002).

An analysis based on Labour Force Survey data of the EU-25's construction workforce shows that the age profile was quite similar to the average for the whole of the non-financial business economy (NACE Sections C to I and K) in 2005. The youngest age group, namely persons aged 15 to 29, made up 24.7 % of the construction labour force, and the oldest age group, aged 50 or over, accounted for 21.4 % of the total, both less than 1 % different from non-financial business economy averages.

Like other activities involving physical labour (such as mining), the male proportion of the labour force in the construction sector was relatively high, at 91.8 % in the EU-25 in 2005 - see Table 15.3. This was 26.3 percentage points higher than the non-financial business economy average, and the highest of all of the non-financial business economy NACE divisions for which data are available. In all Member States the proportion of men in the construction labour force was between 28 % and 58 % higher than national non-financial business economy averages.

Full-time employment was also high in the construction sector, as 94.2 % of persons were employed on this basis in the EU-25 in 2005 compared with 85.3 % in the non-financial business economy as a whole, and 92.4 % for industrial activities (NACE Sections C to E).

Table 15.3

Construction (NACE Division 45)
Labour force characteristics, 2005

	Male		Full-time		Breakdown by age (% share of total)		
	Proportion of those employed (%)	Index (non-financial business economy=100)	Proportion of those employed (%)	Index (non-financial business economy=100)	< 30 years	30-49 years	50+ years
EU-25	91.8	140.3	94.2	110.4	24.7	53.9	21.4
BE	91.7	135.0	94.1	112.9	24.9	57.4	17.6
CZ	91.6	143.3	98.1	102.1	20.7	53.6	25.7
DK	90.5	136.5	94.2	116.0	26.0	48.7	25.3
DE	87.1	136.7	90.5	113.4	21.1	56.4	22.5
EE	90.8	157.9	96.5	102.2	27.1	55.5	17.4
EL	97.9	141.4	97.9	101.4	23.3	52.6	24.1
ES	94.6	139.7	97.1	107.9	30.0	53.0	17.0
FR	91.1	139.5	94.5	107.2	24.5	54.0	21.5
IE	95.1	143.3	97.1	110.9	39.2	44.0	16.8
IT	94.4	138.4	94.5	107.0	23.3	57.7	19.0
CY	93.8	145.1	96.3	104.3	24.6	49.3	26.1
LV	89.8	156.2	96.0	100.9	30.2	48.3	21.5
LT	90.9	155.1	99.2	103.1	24.1	53.7	22.2
LU	91.2	134.0	94.3	106.9	18.7	64.8	16.4
HU	93.5	151.2	97.6	101.5	25.1	54.1	20.7
MT	96.7	127.5	96.6	106.3	21.5	53.8	24.7
NL	90.9	137.1	85.8	138.7	24.5	53.0	22.5
AT	88.3	141.9	92.2	113.9	31.0	53.1	15.9
PL	93.0	143.4	95.3	102.6	23.5	56.2	20.4
PT	95.4	149.9	97.3	102.5	27.1	56.2	16.7
SI	92.9	149.0	96.4	102.6	22.3	57.4	20.3
SK	93.9	148.2	99.1	100.9	24.3	55.2	20.6
FI	93.1	144.7	94.8	108.8	22.2	48.9	28.9
SE	93.0	136.6	92.4	112.3	19.2	48.6	32.2
UK	89.7	137.6	92.2	117.8	23.2	50.4	26.5

Source: Eurostat (LFS)

COSTS, PRODUCTIVITY AND PROFITABILITY

An analysis of the construction sector's expenditure on tangible investment, personnel, and the purchase of goods and services can be made for an EU ⁽⁵⁾ average based on 21 Member States with data available for the construction sector and each of its five NACE groups. In the EU's construction sector as a whole (NACE Section F) gross tangible investment was equivalent to 3.6 % of total operating expenditure (made up of personnel costs and purchases of goods and services). This relatively low level of investment was observed in three of the construction subsectors, namely general construction, building installation, and building completion activities (NACE Groups 45.2 to 45.4). For site preparation (NACE Group 45.1) a ratio of 8.0 % was recorded, while for the renting of construction or demolition equipment with an operator

(NACE Group 45.5) the highest ratio among the construction NACE groups was recorded, 21.7 %. This high level of investment in the renting of construction or demolition equipment with an operator reflects the capital intensive nature of this activity. The division of operating costs between personnel costs on the one hand and purchases of goods and services on the other also showed some diversity between the construction subsectors. In the EU's construction sector as a whole, personnel costs accounted for one quarter (25.2 %) of operating costs in 2003. In the general construction activities subsector (NACE Group 45.2) the share of personnel costs was lower than this, at 22.2 %, while for site preparation the share was almost the same as the construction average, at 25.0 %. In the building installation and completion subsectors, personnel costs accounted for just under one third of operating expenditure, while the highest share (33.9 %) was recorded for the renting of construction or demolition equipment with an operator subsector.

Apparent labour productivity in the EU-25's construction sector in 2003 was EUR 33 500 per person employed, well below the non-financial business economy (NACE Sections C to I and K) average of EUR 41 200. Among the Member States, only in the United Kingdom was apparent labour productivity in the construction sector higher than the non-financial business economy average ⁽⁶⁾. In the EU-25, average personnel costs were EUR 27 000 per employee, below the non-financial business economy average for 2002 of EUR 28 400. Only in the Netherlands and the United Kingdom were average personnel costs in the construction sector significantly higher than national non-financial business economy averages. The relatively low levels of apparent labour productivity and average personnel costs were particularly notable given the small proportion of part-time employment within this sector, which has the

⁽⁵⁾ EU average, 2003; Malta and Sweden, 2002; excluding Greece, Ireland, Cyprus and the Netherlands.

⁽⁶⁾ Lithuania, Malta and Sweden, 2002; Greece, Ireland and Cyprus, not available.

Table 15.4

Construction (NACE Division 45)**Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003**

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	3.5	74.7	25.3	33.5	27.0	123.9	11.9
1	Latvia (6.2)	Hungary (88.6)	Cyprus (44.5)	Ireland (97.9)	Ireland (46.7)	Latvia (254.7)	Ireland (21.3)
2	Portugal (6.1)	Latvia (88.1)	Germany (35.4)	United Kingdom (57.5)	Netherlands (44.0)	Ireland (209.5)	Malta (18.1)
3	Denmark (5.4)	Czech Republic (86.9)	Luxembourg (35.0)	Netherlands (48.6)	Sweden (38.2)	United Kingdom (165.0)	United Kingdom (16.5)
4	Belgium (5.3)	Estonia (86.5)	Austria (34.3)	Austria (47.0)	Denmark (37.9)	Estonia (154.2)	Cyprus (16.4)
5	Lithuania (5.0)	Poland (84.8)	France (31.3)	Finland (44.8)	Austria (34.9)	Lithuania (153.3)	Latvia (16.2)

(1) Malta and Sweden, 2002; Greece and Ireland, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Malta and Sweden, 2002; Greece, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Malta and Sweden, 2002; Greece, not available.

Source: Eurostat (SBS)

effect of bringing these ratios lower. Most of the other activities that recorded low values for these two indicators, for example, distributive trades or hotels and restaurants, were characterised by considerably higher levels of part-time employment.

The wage adjusted labour productivity ratio provides a measure of the extent to which value added per person employed covers average personnel costs per employee, and as such is less affected by issues of part-time employment or hours worked. In the construction sector in 2003 this ratio was 123.9 % for the EU-25, indicating that value added per person employed was 23.9 % higher than average personnel costs per employee. Again this was lower than the 2002 average for the non-financial business economy which was 143.8 %. Among the five NACE groups that make up the construction sector the wage adjusted labour productivity ratio in the EU-25 ranged from 105 % for building completion activities (NACE Group 45.4) to 151 % for the renting of construction or demolition equipment with an operator.

In contrast, the gross operating rate (the relation between the gross operating surplus and turnover) in the construction sector was 11.9 % in the EU-25 in 2003, above the 10.8 % (2002) average for the non-financial business economy. This is partly an effect of the relatively high share of self-employment in construction, since the gross operating surplus (value added minus personnel costs) is positively correlated with the share of self employment (as the working owners for example contribute to the value added created but are 'paid' through the gross profits and not in the form of personnel costs). The gross operating rate in the EU-25's construction sector ranged from 11.1 % for general construction activities to 14.5 % for building completion activities, with the renting of construction or demolition equipment with an operator posting a gross operating rate well above this range, at 21.6 %.

15.1: SITE PREPARATION

Site preparation (NACE Group 45.1) includes relatively diverse activities, ranging from test drilling and boring to determine ground conditions, through demolition of existing buildings and structures, site clearance, ground stabilisation, excavation, to earth moving and trench digging.

STRUCTURAL PROFILE

Site preparation (NACE Group 45.1) generated EUR 14.6 billion of value added in the EU-25 in 2003 and employed 388 000 persons, equivalent to 3.5 % of value added in the construction sector (NACE Section F) and 3.1 % of employment. As such this was the second smallest NACE group within the construction sector, larger only than the renting of equipment with an operator (NACE Group 45.5).

The largest site preparation sector in the EU-25, in value added terms, was in France which accounted for close to one quarter (24.6 %) of the EU-25 total in 2003, followed by Spain (18.0 %) - see Table 15.5. In the majority of the Member States ⁽⁷⁾, site preparation accounted for less than 4 % of the value added generated in the construction sector, with Finland (11.0 %), Sweden (8.8 %, 2002), France (6.4 %), the Czech Republic (5.6 %) and Hungary (5.4 %) the only Member States above this share. In contrast, in Poland (0.9 %) and Latvia (0.8 %) this sector accounted for less than 1 % of construction value added.

⁽⁷⁾ Malta and Sweden, 2002; Greece, Cyprus and the Netherlands, not available.

COSTS, PRODUCTIVITY AND PROFITABILITY

In 2003 the EU-25's site preparation sector (NACE Group 45.1) reported higher apparent labour productivity, average personnel costs, and wage adjusted labour productivity than the construction average. Apparent labour productivity was EUR 37 700 per person employed in 2003, EUR 4 200 higher than the construction average. Average personnel costs were EUR 28 700 per employee, some EUR 1 700 higher than the construction average. The combination of higher apparent labour productivity and average personnel costs resulted in a wage adjusted labour productivity ratio of 132 %, again higher than the construction average of 123.9 %. Poland was the only Member State where this ratio was below 100 %, indicating that value added per person was lower than average personnel costs. The EU-25's gross operating rate (the gross operating surplus as a percentage of turnover) was 13.5 % in 2003 in this sector, above the construction average, but lower than for building completion (NACE Group 45.4) and for the renting of construction or demolition equipment with an operator (NACE Group 45.5).

Table 15.5

Site preparation (NACE Group 45.1)

Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national non-financial business economy value added (%) (3)	Highest share of national non-financial business economy employment (%) (4)
1	France (3 590.1)	24.6	France (84.0)	21.6	Finland (0.9)	Finland (1.0)
2	Spain (2 634.7)	18.0	Spain (71.9)	18.5	Sweden (0.7)	Sweden (0.8)
3	Germany (1 626.0)	11.1	Italy (40.4)	10.4	Spain (0.6)	Czech Republic (0.7)
4	Italy (1 542.8)	10.6	Germany (40.1)	10.3	France (0.5)	France (0.6)
5	United Kingdom (1 046.0)	7.2	Czech Republic (24.2)	6.2	Czech Republic (0.5)	Spain (0.6)

(1) Malta and Sweden, 2002; Greece, Cyprus and the Netherlands, not available.

(2) Sweden, provisional; Malta, 2002; Greece and Cyprus, not available.

(3) Malta and Sweden, 2002; Greece, Ireland, Cyprus, Lithuania and the Netherlands, not available.

(4) Sweden, provisional; Lithuania and Malta, 2002; Greece, Ireland and Cyprus, not available.

Source: Eurostat (SBS)

15.2: GENERAL CONSTRUCTION

The building of complete constructions (or parts thereof) and civil engineering (NACE Group 45.2), hereafter referred to as general construction, constitute the core activities of the construction sector. These two activities are the first stages of most construction activities, following on from the activities of architects, structural engineers and landscape designers. At the four-digit level of NACE there are five parts to the activity: general construction of buildings and civil engineering (NACE Class 45.21) which includes most building work as well as engineering projects such as bridges, tunnels, and cable and pipe networks; the erection of roof covering and frames (NACE Class 45.22); the construction of motorways, roads, airfields and sports facilities (NACE Class 45.23); the construction of water projects (NACE Class 45.24) including waterways, locks and ports, as well as dredging work; and other special trades construction work (NACE Class 45.25) including for example foundations work, pile-driving and scaffolding.

STRUCTURAL PROFILE

General construction activities (NACE Group 45.2) generated EUR 241.3 billion of value added in the EU-25 in 2003, and as such accounted for close to three fifths (58.2 %) of the construction sector's (NACE Section F) value added. In terms of employment, its 6.6 million strong workforce was equivalent to 53.5 % of the construction sector's total.

The largest contributor to EU-25 value added in the general construction sector was the United Kingdom with EUR 47.7 billion of value added, 19.8 % of the EU-25 total, only slightly more than the Spanish general construction sector's share of 19.0 % - see Table 15.6 - Germany, Italy and France all contributed at least 10 % of the EU-25 total. In employment terms the Spanish general construction sector's workforce was by far the largest, its 1.3 million persons employed constituted 20.4 % of the EU-25 total. In comparison, the workforce of this sector in the United Kingdom represented just 11.3 % of the EU-25 total, less than in Italy or Germany.

In most of the Member States ⁽⁸⁾ general construction activities generated approximately half or more of the construction sector's value added, with Sweden (47.7 %, 2002), France (43.3 %) and Denmark (42.9 %) below this level. Cyprus reported the highest concentration of activity within the general construction sector in 2003, with 84.8 % of its construction value added generated in this subsector.

A more detailed analysis of the EU's ⁽⁹⁾ general construction sector is available for 2003. The general construction of buildings and civil engineering work (NACE Class 45.21) was by far the largest part of NACE Group 45.2, with 71.5 % of value added - see Figure 15.6. Other construction work involving special trades (NACE Class 45.25) was the second largest class with 11.1 % of value added, while the specialist activity of the erection of roof coverings and frames (NACE Class 45.22) accounted for 7.0 %. The two classes that are mainly associated with civil engineering projects, namely road building including also the construction of airfields and sports facilities (NACE Class 45.23) and water projects (NACE Class 45.24) generated 9.6 % and 0.9 % of value added in the general construction sector respectively. General construction of buildings and civil engineering work accounted for at least half of the employment in the general construction sector in all countries for which data are available, except France where its share was just 36.7 %.

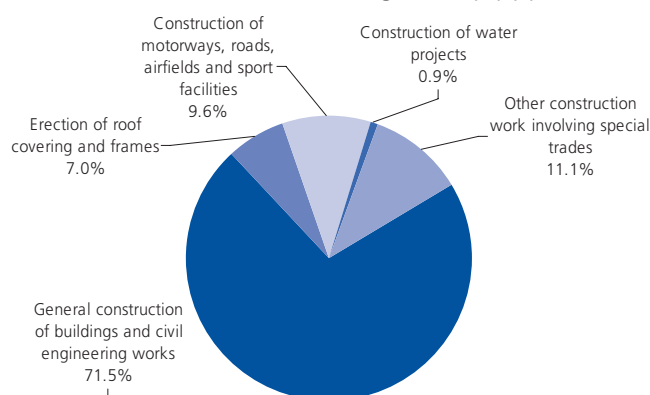
⁽⁸⁾ Malta and Sweden, 2002; Greece, not available.

⁽⁹⁾ EU average, 2003; Malta and Sweden, 2002; excluding the Czech Republic, Denmark, Greece, Ireland and the Netherlands.

Figure 15.6

General construction (NACE Group 45.2)

Breakdown of sectoral value added, EU average, 2003 (%) (1)



(1) EU average based on available data for 2002 and 2003 (Malta and Sweden, 2002; excluding the Czech Republic, Denmark, Greece, Ireland and the Netherlands).

Source: Eurostat (SBS)

Table 15.6

General construction (NACE Group 45.2)

Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national non-financial business economy value added (%) (3)	Highest share of national non-financial business economy employment (%) (4)
1	United Kingdom (47 669.9)	19.8	Spain (1 349.8)	20.4	Spain (10.8)	Spain (11.0)
2	Spain (45 891.1)	19.0	Italy (882.9)	13.3	Portugal (8.4)	Portugal (10.7)
3	Germany (30 887.6)	12.8	Germany (779.7)	11.8	Luxembourg (6.1)	Luxembourg (8.7)
4	Italy (28 207.8)	11.7	United Kingdom (745.6)	11.3	Lithuania (6.0)	Slovenia (7.1)
5	France (24 406.4)	10.1	France (630.0)	9.5	Estonia (5.9)	Lithuania (7.0)

(1) Malta and Sweden, 2002; Greece, not available.

(2) Sweden, provisional; Malta, 2002; Greece, not available.

(3) Lithuania, Malta and Sweden, 2002; Greece, Ireland, Cyprus, not available.

(4) Sweden, provisional; Lithuania and Malta, 2002; Greece, Ireland and Cyprus, not available.

Source: Eurostat (SBS)

COSTS, PRODUCTIVITY AND PROFITABILITY

The EU-25's general construction activity reported apparent labour productivity of EUR 36 400 per person employed in 2003, EUR 2 900 higher than the construction average. Average personnel costs in this activity were EUR 27 300 per employee, only marginally above the construction average. The combination of a higher apparent labour productivity and average personnel costs that were more typical of those recorded for the construction sector as a whole, led to a wage adjusted labour productivity ratio of 133.4 %, nearly 10 percentage points higher than the

construction average. Despite this, its gross operating rate in 2003 was 11.1 %, the lowest of the construction NACE groups. Rarely did the gross operating rate in general construction activities exceed the construction average in the Member States ⁽¹⁰⁾, although this was the case in Ireland and Cyprus.

⁽¹⁰⁾ Malta and Sweden, 2002; Greece, not available.

15.3: BUILDING INSTALLATION ACTIVITIES

Installation work is divided into four classes at the NACE four-digit level: installation of electrical wiring and fittings (NACE Class 45.31); insulation (NACE Class 45.32); plumbing (NACE Class 45.33) including all water and gas supply, drainage, heating and ventilation work; and other building installation activities (NACE Class 45.34). Note that the installation of industrial equipment (for example, the installation of industrial furnaces and turbines) is excluded.

Building installation activities include the installation of a range of utilities and these activities are usually performed at the site of the construction. For example, activities such as plumbing, installation of heating and air-conditioning systems, aerials, alarm systems and other electrical work, sprinkler systems, elevators and escalators are included. Also included are insulation work (water, heat, and sound), sheet metal work, commercial refrigeration work, and the installation of illumination and signalling systems for roads, railways, airports, harbours, etc.

Building installation enterprises are generally active in construction projects after general and special trades' enterprises, and before the completion work. As well as work on new structures, the renovation, repair and maintenance markets are also important for enterprises in these activities.

STRUCTURAL PROFILE

Building installation activities (NACE Group 45.3) employed 3.0 million persons in the EU-25 and generated EUR 92.8 billion of value added in the EU-25 in 2003. As such, building installation activities made up more than one fifth of the construction sector (NACE Section F), contributing 24.0 % of the workforce and 22.4 % of the value added.

Table 15.7

Building installation (NACE Group 45.3)

Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national non-financial business economy value added (%) (3)	Highest share of national non-financial business economy employment (%) (4)
1	United Kingdom (16 472.4)	17.7	Germany (492.1)	16.5	Luxembourg (3.1)	Luxembourg (4.2)
2	Germany (15 715.3)	16.9	Italy (456.9)	15.4	Spain (2.8)	Spain (3.6)
3	France (14 143.8)	15.2	Spain (440.6)	14.8	Netherlands (2.5)	Italy (3.1)
4	Spain (11 913.2)	12.8	France (374.2)	12.6	Austria (2.4)	Austria (3.1)
5	Italy (11 095.3)	12.0	United Kingdom (327.2)	11.0	Sweden (2.3)	Denmark (3.0)

(1) Malta and Sweden, 2002; Greece, not available.

(2) Sweden, provisional; Malta, 2002; Greece, not available.

(3) Lithuania, Malta and Sweden, 2002; Greece, Ireland and Cyprus, not available.

(4) Sweden, provisional; Lithuania and Malta, 2002; Greece, Ireland and Cyprus, not available.

Source: Eurostat (SBS)

The United Kingdom, Germany and France had the three largest building installation sectors in the EU-25, each contributing more than 15 % of EU-25 value added within this sector. In employment terms, while Germany had the largest workforce, this sector was larger in Italy and Spain than in both France and the United Kingdom. Within the construction sector the building installation sector ⁽¹¹⁾ was most important in value added terms in Malta and Sweden (both 2002) where it contributed 30 % or more of construction value added. In contrast, this sector contributed just 9.8 % of construction value added in Cyprus.

A more detailed analysis of this sector can be made for an average of the available Member States ⁽¹²⁾. This analysis shows that at the class level of NACE the two largest activities in the EU in value added terms were the installation of electrical wiring and fittings (NACE Class 45.31) with nearly one half (48.5 %) of total value added, and plumbing (NACE Class 45.33) with more than two fifths of the total (40.7 %). The two remaining classes, namely insulation (NACE Class 45.32) and other building installation activities (NACE Class 45.34) were much smaller, with 5.1 % and 5.7 % of the total respectively.

⁽¹¹⁾ Malta and Sweden, 2002; Greece, not available.

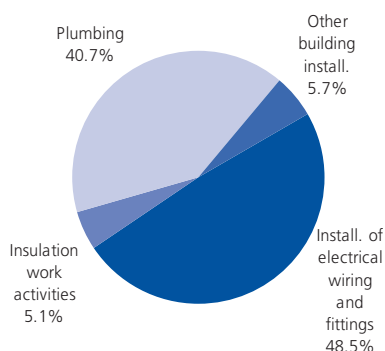
⁽¹²⁾ EU average, 2003; Malta and Sweden, 2002; excluding the Czech Republic, Denmark, Greece, Latvia and the Netherlands.

COSTS, PRODUCTIVITY AND PROFITABILITY

The building installation sector recorded apparent labour productivity of EUR 31 200 per person employed in the EU-25 in 2003 and average personnel costs of EUR 26 900 per employee. These were both higher than in building completion activities (NACE Group 45.4), but otherwise were the lowest among the construction NACE groups. Despite relatively low average personnel costs, the wage adjusted labour productivity ratio of the building installation activities was just 116.1 %, well below the construction average of 123.9 %, and again higher only than the building completion sector (among construction NACE groups). In Belgium, the building installation sector recorded a wage adjusted labour productivity ratio (99.4 %) that was just below the threshold of 100 %, indicating that added value per person employed was lower than average personnel costs per employee. At 12.2 %, the EU-25's gross operating rate for the building installation activities was above that for general construction activities (NACE Group 45.2), but lower than that recorded for the other construction NACE groups.

Figure 15.7

Building installation (NACE Group 45.3)
Breakdown of sectoral value added, EU average, 2003 (%) (1)



(1) EU average based on available data for 2002 and 2003; Malta and Sweden, 2002; excluding the Czech Republic, Denmark, Greece, Latvia and the Netherlands.

Source: Eurostat (SBS)

15.4: BUILDING COMPLETION ACTIVITIES

Completion work is divided into five classes at the NACE four-digit level: plastering (NACE Class 45.41); joinery installation (NACE Class 45.42); floor and wall covering (NACE Class 45.43); painting and glazing (NACE Class 45.44); and other building completion activities (NACE Class 45.45).

Building completion encompasses activities that contribute to the completion or finishing of a construction, such as glazing, plastering, painting and decorating, floor and wall tiling or covering with other materials like parquet, carpets, wallpaper, etc., cleaning of the exterior. As with building installation activities, repair work relating to these activities is also important.

STRUCTURAL PROFILE

Building completion activities (NACE Group 45.4) employed 2.3 million persons in the EU-25 in 2003, around 656 000 less than building installation (NACE Group 45.3), thus making it the third largest NACE group within the construction sector (NACE Section F) with an 18.7 % share of the construction workforce. The value added generated by this workforce was EUR 62.6 billion in the EU-25, some 15.1 % of the construction sector total.

Spain had the largest workforce in the building completion sector, its 441 000 strong workforce making up 19.0 % of the EU-25 total. France (17.3 % of the EU-25 total), Germany (16.6 %) and Italy (13.9 %) had the next largest building completion workforces. In value added terms, Spain's contribution was only the fourth largest (15.1 % of the EU-25 total), behind France (22.3 %), Germany (16.7 %) and the United Kingdom (15.6 %).

The building completion sector was particularly important in Denmark and France where it generated 26.2 % and 24.8 % of construction value added respectively in 2003 ⁽¹³⁾. In contrast, building completion activities contributed just 1.4 % of construction value added in Estonia, and less than 4 % in Ireland, Cyprus and Slovakia.

A more detailed analysis of this sector can be made for an EU average of the Member States ⁽¹⁴⁾ with data available for value added, although it should be noted that this excludes Spain, the fourth largest contributor to EU-25 value added in this subsector. The largest parts of building completion were painting and glazing (NACE Class 45.44), with 31.2 % of the sector's total, and joinery installation (NACE Class 45.42) with 31.1 %. Floor and wall covering (NACE Classes 45.43 and 45.45) contributed similar shares to building completion value added, 15.7 % and 13.8 % respectively. The smallest building completion activity was plastering (NACE Class 45.41) with an 8.2 % share of the total.

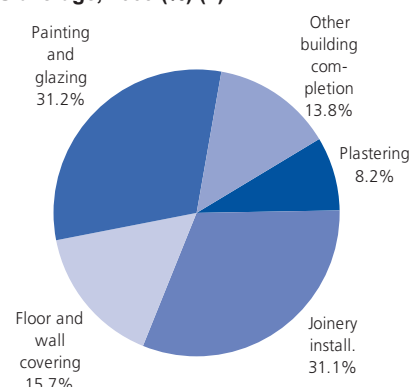
COSTS, PRODUCTIVITY AND PROFITABILITY

Building completion activities in the EU-25 recorded apparent labour productivity of EUR 27 000 per person employed in 2003, the lowest of the construction NACE groups. Average personnel costs in these activities were EUR 25 700 per employee, again the lowest among the construction NACE groups. The low average personnel costs were not enough to compensate for low apparent labour productivity, and as such wage adjusted labour productivity (which combines the two ratios) was just 105 %, around 19 percentage points below the construction average and clearly the

lowest of the five construction NACE groups. This ratio shows that the value added per person employed was only 5 % higher than average personnel costs. This particularly low ratio for the EU-25 was reflected in the fact that eight Member States ⁽¹⁵⁾ recorded a wage adjusted labour productivity ratio below 100 % in 2003, indicating that added value was lower than personnel costs (after adjusting for the ratio of persons employed to employees). This was most notably the case in Cyprus, the Czech Republic, Hungary and the Netherlands (between 80 % and 90 %). The building completion sector generated a gross operating surplus of EUR 22.2 billion in 2003, equivalent to 14.5 % of turnover: this was a higher gross operating rate than recorded for all construction NACE groups except the renting of construction or demolition equipment with an operator (NACE Group 45.5).

⁽¹⁵⁾ Malta and Sweden, 2002; Greece, not available.

Figure 15.8
Building completion (NACE Group 45.4)
Breakdown of sectoral value added,
EU average, 2003 (%) (1)



(1) EU average based on available data for 2002 and 2003; Malta and Sweden, 2002; excluding the Czech Republic, Greece, Spain, Latvia and the Netherlands.
Source: Eurostat (SBS)

Table 15.8

Building completion (NACE Group 45.4)

Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national non-financial business economy value added (%) (3)	Highest share of national non-financial business economy employment (%) (4)
1	France (13 982.9)	22.3	Spain (441.0)	19.0	Spain (2.2)	Spain (3.6)
2	Germany (10 433.5)	16.7	France (402.0)	17.3	Denmark (2.1)	Denmark (3.2)
3	United Kingdom (9 743.9)	15.6	Germany (384.2)	16.6	France (2.0)	Luxembourg (2.9)
4	Spain (9 465.8)	15.1	Italy (322.9)	13.9	Luxembourg (1.8)	France (2.9)
5	Italy (6 089.7)	9.7	United Kingdom (206.9)	8.9	Austria (1.4)	Belgium (2.5)

(1) Malta and Sweden, 2002; Greece, not available.

(2) Sweden, provisional; Malta, 2002; Greece, not available.

(3) Lithuania, Malta and Sweden, 2002; Greece, Ireland and Cyprus, not available.

(4) Sweden, provisional; Lithuania and Malta, 2002; Greece, Ireland and Cyprus, not available.

Source: Eurostat (SBS)

15.5: RENTING OF CONSTRUCTION EQUIPMENT

This final section of the construction chapter covers the activities of renting construction or demolition equipment with an operator (NACE Group 45.5), for example, the renting of cranes with an operator. Note that this activity does not cover the simple renting of construction equipment without an operator, which in NACE is classified as Class 71.32 (see Subchapter 23.2 on renting and leasing).

STRUCTURAL PROFILE

Operated construction equipment (NACE Group 45.5) renting was the smallest NACE group within the EU-25 construction sector (NACE Section F) both in terms of employment and wealth creation. In 2003 this sector generated EUR 3.0 billion of value added with a workforce of 68 500 persons, less than 1 % of the construction sector's total for both indicators. In value added terms, the United Kingdom dominated the sector in the EU-25, with its EUR 1.1 billion of value added equal to 37.7 % of the EU-25 total in 2003. In employment terms, the United Kingdom's contribution to the EU-25 total was 32.1 %, with the Netherlands (11.7 %) and Spain (10.5 %) the only other Member States with shares above 10 %. This sector's contribution to construction value added only exceeded 2 % in two Member States⁽¹⁶⁾ in 2003, namely Estonia (2.9 %) and Slovenia (2.8 %).

⁽¹⁶⁾ Malta and Sweden, 2002; Greece, Cyprus and the Netherlands, not available.

COSTS, PRODUCTIVITY AND PROFITABILITY

The highest productivity and profitability measures among the construction NACE groups in the EU-25 were recorded in 2003 for the operated construction equipment renting activity. To some extent these high measures reflect the nature of the activity which is capital intensive. Financial and depreciation charges constitute the main cost elements, which need to be financed by gross value added and the gross operating surplus. Apparent labour productivity was EUR 43 100 per person employed and the wage adjusted labour productivity ratio was 151 %, the latter around 27 percentage points above the construction average. Average personnel costs were also above the construction average at EUR 28 600 per employee, similar to that recorded for site preparation (NACE Group 45.1), and higher than for the other construction NACE groups. The gross operating rate for operated construction equipment renting was 21.6 % in the EU-25 in 2003.

Table 15.9

Renting of construction or demolition equipment with operator (NACE Group 45.5)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national non-financial business economy value added (%) (3)	Highest share of national non-financial business economy employment (%) (4)
1	United Kingdom (1 116.6)	37.7	United Kingdom (22.0)	32.1	Estonia (0.2)	Slovenia (0.3)
2	Spain (374.3)	12.6	Netherlands (8.0)	11.7	Slovenia (0.2)	Estonia (0.2)
3	France (195.6)	6.6	Spain (7.2)	10.5	Finland (0.1)	Netherlands (0.2)
4	Sweden (132.2)	4.3	Poland (6.7)	9.8	United Kingdom (0.1)	Lithuania (0.2)
5	Finland (97.3)	3.3	France (4.6)	6.7	Lithuania (0.1)	Finland (0.1)

(1) Malta and Sweden, 2002; Greece and the Netherlands, not available.

(2) Sweden, provisional; Malta, 2002; Greece, not available.

(3) Lithuania, Malta and Sweden, 2002; Greece, Ireland, Cyprus and the Netherlands, not available.

(4) Sweden, provisional; Lithuania and Malta, 2002; Greece, Ireland and Cyprus, not available.

Source: Eurostat (SBS)

Table 15.10

Construction (NACE Division 45)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million)	1 204 370	30 149	17 652	20 227	147 615	1 776	:	204 305	156 167	10 308	152 144	1 611	1 514	1 838	3 197	10 655	347
Production (EUR million)	:	29 486	17 196	20 566	146 109	1 121	:	212 031	154 036	10 752	163 116	1 609	1 498	1 780	2 639	6 712	347
Value added at factor cost (EUR million)	414 489	9 315	3 873	7 613	58 733	348	:	70 279	56 319	4 145	47 017	863	403	532	1 288	1 822	148
Gross operating surplus (EUR million)	143 265	2 741	1 785	1 769	10 098	126	:	23 059	11 130	2 196	22 777	265	245	190	262	712	63
Purchases of goods & services (EUR million)	:	20 805	13 884	13 102	88 605	1 425	:	141 411	99 381	7 507	113 578	747	1 162	1 340	1 905	8 656	192
Gross inv. in tangible goods (EUR million)	:	1 441	448	1 026	3 264	54	:	5 664	4 281	:	6 279	50	82	84	56	407	7
Number of persons employed (thousands)	12 377	250	391	171	1 698	35	:	2 311	1 495	42	1 706	32	48	83	32	232	13
Personnel costs (EUR million)	271 225	6 574	2 089	5 844	48 635	222	:	47 221	45 189	1 949	24 240	598	157	342	1 026	1 110	85
App. Lab. Product. (EUR thous./pers. emp.)	33.5	37.3	9.9	44.5	34.6	9.8	:	30.4	37.7	97.9	27.6	26.6	8.4	6.4	40.1	7.8	11.4
Average pers. costs (EUR thous./employee)	27.0	34.8	8.2	37.9	32.3	6.4	:	24.4	34.3	46.7	24.0	20.4	3.3	4.2	33.1	5.9	9.2
Wage adjusted labour productivity (%)	123.9	107.1	120.0	117.5	107.0	154.2	:	124.6	109.8	209.5	114.9	130.6	254.7	153.3	121.2	133.4	123.7
Gross operating rate (%)	11.9	9.1	10.1	8.7	6.8	7.1	:	11.3	7.1	21.3	15.0	16.4	16.2	10.3	8.2	6.7	18.1
Investment per person empl. (EUR thousand)	:	5.8	1.1	6.0	1.9	1.5	:	2.5	2.9	:	3.7	1.5	1.7	1.0	1.7	1.7	0.5
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million) (2)	67 588	27 158	20 172	29 735	3 781	2 505	16 926	30 272	220 239	2 094	:	5 717	:	:	:	20 519	:
Production (EUR million) (2)	66 790	26 680	19 412	30 715	3 632	2 408	16 395	31 033	220 776	2 051	:	5 860	:	:	:	20 157	:
Value added at factor cost (EUR million) (3)	22 511	11 863	5 285	6 816	988	523	5 548	10 252	76 049	414	:	1 205	:	:	:	7 375	:
Gross operating surplus (EUR million) (3)	5 612	3 685	2 578	2 188	290	155	1 696	2 476	36 384	145	:	357	:	:	:	1 829	:
Purchases of goods & services (EUR million) (2)	44 891	15 678	15 134	24 507	2 825	1 971	11 754	20 405	146 685	1 803	:	4 897	:	:	:	13 269	:
Gross inv. in tangible goods (EUR million) (2)	1 234	682	828	1 765	105	57	639	1 243	7 295	168	:	877	:	:	:	549	:
Number of persons employed (thousands) (2)	463	252	626	436	64	68	124	244	1 323	134	:	364	:	:	:	142	:
Personnel costs (EUR million) (3)	16 899	8 178	2 707	4 628	698	368	3 901	7 776	39 665	270	:	848	:	:	:	5 547	:
App. Lab. Product. (EUR thous./pers. emp.) (3)	48.6	47.0	8.4	15.6	15.5	7.7	44.8	43.3	57.5	3.1	:	3.3	:	:	:	51.8	:
Average pers. costs (EUR thous./employee) (3)	44.0	34.9	6.2	12.4	12.9	5.4	34.4	38.2	34.9	2.3	:	2.4	:	:	:	45.7	:
Wage adjusted labour productivity (%) (3)	110.6	134.9	135.9	126.2	120.4	141.2	130.1	113.5	165.0	133.9	:	139.3	:	:	:	113.2	:
Gross operating rate (%) (3)	8.3	13.6	12.8	7.4	7.7	6.2	10.0	8.4	16.5	6.9	:	6.2	:	:	:	8.9	:
Investment per person empl. (EUR thousand) (2)	2.7	2.7	1.3	4.1	1.6	0.8	5.2	5.1	5.5	1.3	:	2.4	:	:	:	3.9	:

(1) Malta, 2002.

(2) Sweden, provisional.

(3) Sweden, 2002.

Source: Eurostat (SBS)

Motor trades



The services of motor trades are covered by the European Commission's proposal for a Directive on services in the internal market. The objective of the proposal is to achieve a genuine internal market in services by removing legal and administrative barriers to the development of service activities between Member States, facilitating the provision and use of cross-border services in the EU. At the time of writing, it is expected that this Directive will be adopted in the near future - see Chapter 22 for more information.

The activities covered by this chapter are very different in terms of the frequency of purchase of the goods and services offered. Indeed, in contrast to the retail of automotive fuel, the purchase of motor vehicles is usually the result of a long-term process, the collection of information, and comparison between different vehicles and different suppliers. However, retailing of motor vehicles and motorcycles on the one hand, and repair on the other hand, are to some extent substitutes, in that the purchase of a replacement vehicle, whether new or used, can often be postponed by repairing an existing vehicle.

STRUCTURAL PROFILE

Motor trades (NACE Division 50) value added in the EU-25 was EUR 141.2 billion in 2003 and represented 15.2 % of distributive trades (NACE Section G) value added and 5.3 % of non-financial services (NACE Sections G to I and K) value added - see Table 16.1. There were 3.8 million persons employed in the EU-25's motor trades sector in 2003, a slightly lower share of the distributive trades workforce (13.3 %), but a higher share of the non-financial services workforce (5.5 %), underlining the generally low level of apparent labour productivity (value added per person employed) in distributive trades as a whole. Motor vehicles and motorcycles distribution (NACE Groups 50.1 to 50.4) accounted for more than nine tenths (91.8 %) of the EU-25's value added for the motor trades sector (see Subchapter 16.1), while the remaining 8.2 % share of wealth creation was generated by the retail sale of automotive fuel (NACE Group 50.5, see Subchapter 16.2). The retail sale of automotive fuel subsector employed 11.6 % of the motor trades workforce, indicating lower apparent labour productivity in this subsector. Unsurprisingly, given that the

Motor trades (NACE Division 50) cover the wholesale, retail sale and repair of motor vehicles and motorcycles, as well as the retailing of automotive fuels and lubricants.

NACE

- 50: sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel;
- 50.1: sale of motor vehicles;
- 50.2: maintenance and repair of motor vehicles;
- 50.3: sale of motor vehicle parts and accessories;
- 50.4: sale, maintenance and repair of motorcycles and related parts and accessories;
- 50.5: retail sale of automotive fuel.

retail sale of automotive fuel subsector is a pure retail activity, whereas motor vehicles and motorcycles distribution involves a mixture of distributive trade and repair activities, the retail sale of automotive fuel subsector had an even higher share (12.8 %) of the sector's EUR 1 101 billion of turnover.

Table 16.1

Motor trades (NACE Division 50) Structural profile, EU-25, 2003

	Turnover (EUR million)	Value added (EUR million)	Share of non-financial services value added	Number of persons employed (thousands)	Share of non-financial services employment
Motor trades	1 100 657	141 175	5.3	3 812	5.5
Motor vehicles and motorcycles distribution	959 645	129 577	4.9	3 371	4.9
Sale of motor vehicles	739 772	78 310	3.0	1 525	2.2
Maintenance and repair of motor vehicles	94 381	29 619	1.1	1 231	1.8
Sale of motor vehicle parts and accessories	104 655	18 676	0.7	518	0.8
Sale, maintenance and repair of motorcycles and related parts and accessories	20 837	2 972	0.1	96	0.1
Retail sale of automotive fuel	141 012	11 598	0.4	441	0.6

Source: Eurostat (SBS)

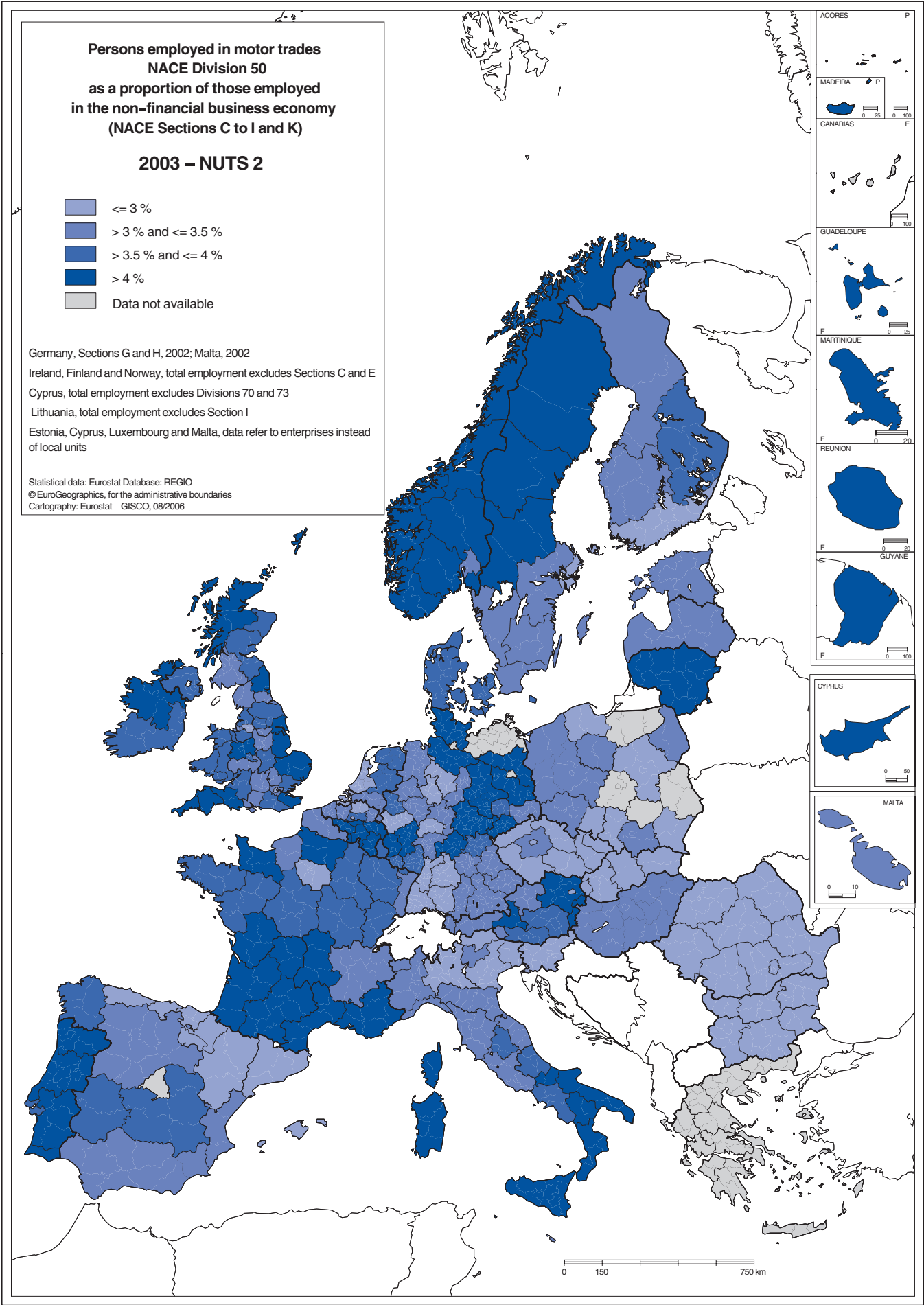


Table 16.2

Motor trades (NACE Division 50)**Turnover, value added and employment: ranking of the top 5 Member States, 2003**

Rank	Highest turnover (EUR million) (1)	Share in EU-25 turnover (%) (1)	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	United Kingdom (219 209.4)	19.9	Germany (35 737.6)	25.3	Germany (667.9)	17.5	Slovenia (7.8)	Lithuania (9.7)
2	Germany (168 451.5)	15.3	United Kingdom (32 093.0)	22.7	United Kingdom (608.7)	16.0	Lithuania (7.1)	Portugal (8.3)
3	Italy (152 402.9)	13.8	France (16 911.1)	12.0	Italy (467.2)	12.3	Portugal (6.9)	Slovenia (6.3)
4	France (143 691.5)	13.1	Italy (13 567.2)	9.6	France (461.5)	12.1	Germany (6.7)	Denmark (6.2)
5	Spain (95 650.2)	8.7	Spain (11 432.4)	8.1	Spain (364.3)	9.6	Hungary (6.2)	Italy (5.9)

(1) Malta, 2002; Greece, not available.

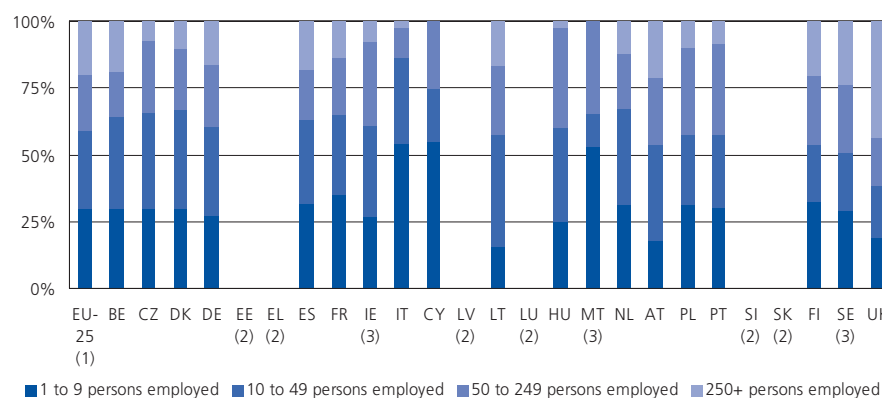
(2) Lithuania and Malta, 2002; Greece and Cyprus, not available.

Source: Eurostat (SBS)

Table 16.2 shows that the United Kingdom had the largest share of EU-25 motor trades turnover in 2003, while Germany recorded the highest shares of value added and employment. Germany was also the fourth most specialised Member State for motor trades in value added terms, relative to non-financial services as a whole, after Slovenia, Lithuania and Portugal, which were also the three most specialised Member States in employment terms. Regional specialisation (in some cases the whole country is treated as one region) can be seen from the map on page 272 which is based on the employment share of this sector in the whole non-financial business economy. Motor trades share of non-financial business employment was highest (at the level of detail shown in the map) in the French islands of Martinique and Réunion.

Small and medium-sized enterprises (with less than 250 persons employed) generated four fifths (79.8 %) of the EU-25's motor trades value added in 2003, a significantly greater share than the distributive trades average (70.4 %) or the non-financial services average (63.1 %). The importance of small enterprises (with between 10 and 49 persons employed) was particularly of note, as these enterprises contributed 29.0 % of sectoral value added, a proportion that was only exceeded by small wholesale trade enterprises when considering all of the non-financial services NACE divisions. In contrast, the 20.2 % contribution of large enterprises (with 250 or more persons employed) to sectoral value added within motor trades was the second lowest among the non-financial services NACE divisions, higher only than in real estate activities. Among the Member States with data available (see Figure 16.1) only in the United Kingdom was the value added share of large enterprises above 25 %; where it reached 43.5 % in 2003.

Figure 16.1

Motor trades (NACE Division 50)**Share of value added by enterprise size class, 2003 (%)**

(1) Rounded estimates based on non-confidential data for 1 to 9 and for 10 to 49 persons employed.

(2) Not available.

(3) 2002.

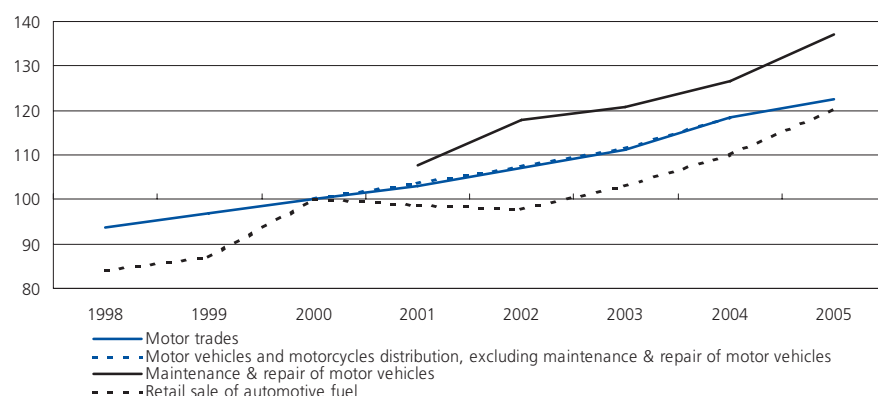
Source: Eurostat (SBS)

Short-term statistics provide a picture of the evolution of the motor trades sector in the EU-25 over the period 1998 to 2005, in terms of turnover and employment indices. The annual growth rate for the EU-25's motor trades turnover index (in current prices) was between 3.0 % and 4.0 % each year during this period except in 2004 when it reached 6.5 %. Figure 16.2 shows the index for motor trades as a whole, and for some of its parts. Whereas motor vehicles and motorcycles distribution (NACE Groups 50.1 to 50.4) recorded stable year on year growth, the development of the index for the retail sale of automotive fuels was more volatile, growing strongly in 2000, contracting slightly in 2001 and 2002, and then growing increasingly strongly in the three years to 2005. Note that these indices for turnover need to be interpreted with some care, as they include the effects of price changes as well as changes in volumes (they are therefore likely, at least to some degree to follow the evolution of oil prices).

The index of employment for motor trades in the EU-25 contracted by 1.5 % between 1998 and 1999, since when the index recorded an employment increase every year - see Figure 16.3. Average employment growth between 1999 and 2005 was 1.1 % per annum, boosted by growth in excess of 2 % in 2004. For comparison, in the EU-25's distributive trades sector as a whole, employment growth was uninterrupted from 1998 through to 2005, and was more regular, never exceeding 2 % in any year.

Figure 16.2

Motor trades (NACE Division 50)
Evolution of the index of turnover, EU-25 (2000=100)



Source: Eurostat (STS)

LABOUR FORCE CHARACTERISTICS

Labour Force Survey data for the motor trades (NACE Division 50) sector showed different employment characteristics compared with the other distributive trades (NACE Section G) activities. This was particularly the case when considering the gender breakdown and the importance of full-time employment. Indeed, in 2005, men represented 82.1 % of the EU-25's motor trades workforce, a proportion that was 43.4 percentage points higher than for retail trade and 15.6 points above the corresponding share for wholesale trade, as well as being well above the non-financial services (NACE Sections G to I and K) average (56.0 %). The high proportion of men that were employed in the motor trades sector was apparent across all the Member States, where men accounted for at least 20 percentage points more of the workforce in motor trades than for non-financial services as a whole.

Most of the persons employed in the EU-25's motor trade sector in 2005 worked full-time (90.5 %), a higher proportion than among either of the other two distributive trades sectors, and again well above the non-financial services average (79.2 %). Only in Denmark and Latvia was the incidence of full-time work slightly lower in motor trades than the non-financial services average (see Table 16.3).

A breakdown by age of the workforce for the EU-25's motor trades sector shows that in 2005 three tenths (30.1 %) of those employed were aged between 15 and 29, half (49.9 %) between 30 and 49, and the remaining one fifth (20.0 %) were persons aged 50 or more; these proportions were quite similar to the averages for distributive trades as a whole.

COSTS, PRODUCTIVITY AND PROFITABILITY

Typically for a distributive trades activity, the level of gross tangible investment relative to operating expenditure was low for motor trades (NACE Division 50), just 1.7 % in the EU ⁽¹⁾ in 2003, which was less than one third of the non-financial services (NACE Sections G to I and K) average. This ratio reflects the high level of operating expenditure associated with distributive trades (NACE Section G) activities, which generally buy and resell products without transformation. This is confirmed by an analysis of operating expenditure, where EU ⁽²⁾ purchases of goods and services accounted for 92.9 % of total operating expenditure in the motor trades sector (and 91.4 % for distributive trades), compared with an EU ⁽³⁾ average of 84.0 % for non-financial services - the remaining part of total operating expenditure concerns personnel costs.

Apparent labour productivity in the EU-25's motor trades sector was EUR 37 000 per person employed in 2003, EUR 4 400 above the average for distributive trades. The motor vehicles and motorcycles distribution subsector recorded apparent labour productivity of EUR 38 400 per person employed, higher than the EUR 26 300 recorded for the retail sale of automotive fuels subsector.

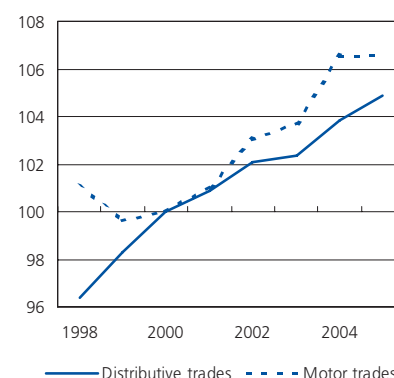
⁽¹⁾ EU average, 2003; Malta, 2002; excluding Greece.

⁽²⁾ EU average, 2003; Malta, 2002; excluding Greece.

⁽³⁾ EU average, 2003; Lithuania and Malta, 2002; excluding Greece and Cyprus.

Figure 16.3

Motor trades (NACE Division 50)
Evolution of the index of employment, EU-25 (2000=100)



Source: Eurostat (STS)

Average personnel costs per employee were EUR 23 600 in the EU-25's motor trade sector in 2002. Nevertheless, this ratio was very different between the two subsectors, as motor vehicles and motorcycles distribution recorded average personnel costs of EUR 24 700 per employee, while the corresponding figure for the retail sale of automotive fuels was EUR 15 400 per employee. Also in 2002, wage adjusted labour productivity (the ratio of apparent labour productivity to average personnel costs) was 156.0 % in the EU-25's motor trade sector. The low average personnel costs in the retail sale of automotive fuel subsector more than compensated for its lower apparent labour productivity, resulting in a higher wage adjusted labour productivity ratio (161.8 %) than for the motor vehicles and motorcycles distribution subsector (155.4 %). Average personnel costs in Latvian motor trades were covered three times by value added per person employed, a wage adjusted labour productivity rate of 302.8 %, the highest among the Member States in 2003 ⁽⁴⁾. Malta (2002), the United Kingdom, Hungary and Germany recorded wage adjusted labour productivity ratios around 200 %.

The gross operating rate (the ratio of gross operating surplus to turnover) in the EU-25's motor trades sector was 6.2 % in 2002. The relatively high turnover inherent in the retail sale of automotive fuel subsector resulted in a relatively low gross operating rate for this subsector (3.7 %), compared with a rate of 6.6 % for the motor vehicles and motorcycles distribution subsector.

⁽⁴⁾ Malta, 2002; Greece, not available.

Table 16.3

Motor trades (NACE Division 50)
Labour force characteristics, 2005

	Male		Full-time		Breakdown by age (% share of total)		
	Proportion of those employed (%)	Index (non-financial services=100)	Proportion of those employed (%)	Index (non-financial services=100)	< 30 years	30-49 years	50+ years
EU-25	82.1	146.6	90.5	114.2	30.1	49.9	20.0
BE	80.8	137.1	89.3	114.3	25.9	55.2	18.9
CZ	79.9	146.3	97.9	104.2	29.5	50.8	19.7
DK	79.6	133.7	73.3	99.1	40.3	36.0	23.7
DE	78.3	148.0	86.9	121.6	30.6	49.8	19.6
EE	74.9	147.1	97.3	106.2	27.9	54.5	17.6
EL	86.9	142.4	98.6	103.1	26.8	54.1	19.1
ES	86.0	156.1	95.2	111.8	31.3	49.6	19.1
FR	80.4	141.2	92.9	110.9	31.9	49.7	18.4
IE	81.5	150.4	89.7	111.0	37.1	45.3	17.6
IT	86.4	144.1	93.8	112.1	23.3	55.5	21.2
CY	85.2	157.2	93.8	103.4	29.4	49.6	21.0
LV	77.7	162.5	93.6	99.4	29.4	59.3	11.2
LT	84.1	160.9	95.0	101.0	32.2	54.6	13.2
LU	85.3	147.4	93.6	110.1	32.9	51.1	16.0
HU	83.5	155.0	99.2	104.3	30.2	53.2	16.5
MT	93.7	133.7	95.9	110.7	:	51.7	:
NL	80.3	138.2	71.0	132.0	32.2	48.2	19.6
AT	77.1	154.4	88.9	120.4	41.1	45.1	13.8
PL	87.4	157.6	93.3	104.0	37.2	48.2	14.5
PT	84.4	152.7	97.6	105.2	25.7	54.4	19.8
SI	80.2	148.5	94.8	103.9	29.0	57.0	14.0
SK	82.5	156.1	98.8	101.8	38.6	50.1	11.2
FI	83.4	152.0	90.5	111.2	29.1	48.4	22.6
SE	84.4	138.8	87.1	113.3	26.3	45.8	27.9
UK	80.2	142.4	85.9	122.1	28.7	45.0	26.3

Source: Eurostat (LFS)

Table 16.4

Motor trades (NACE Division 50)
Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003 (1)

Rank	Investment in tangible goods relative to total operating costs (%) (2)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand)	Average personnel costs (EUR thousand) (2)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	1.7	92.9	7.1	37.0	32.7	156.0	6.2
1	Latvia (5.7)	Poland (98.9)	Germany (10.9)	Germany (53.5)	Belgium (38.1)	Latvia (302.8)	Malta (12.0)
2	Hungary (4.3)	Slovakia (96.9)	Denmark (10.2)	United Kingdom (52.7)	Sweden (37.0)	Malta (209.5)	Germany (11.6)
3	Lithuania (3.9)	Hungary (96.3)	Austria (10.2)	Finland (52.0)	Luxembourg (33.6)	United Kingdom (198.7)	Latvia (9.7)
4	Slovakia (3.8)	Italy (95.8)	Cyprus (9.9)	Luxembourg (47.1)	Finland (33.2)	Hungary (193.5)	United Kingdom (8.0)
5	Estonia (3.4)	Belgium (95.8)	France (9.7)	Sweden (46.9)	France (31.5)	Germany (191.6)	Poland (6.6)

(1) Malta, 2002; Greece, not available.

(2) EU-25 is an EU average based on available data for 2002 and 2003.

(3) EU-25, 2002.

Source: Eurostat (SBS)

16.1: MOTOR VEHICLES AND MOTORCYCLES DISTRIBUTION

These activities cover the wholesale, retail and commission sale of new and used motor vehicles (NACE Group 50.1), parts and accessories (NACE Group 50.3), as well as motorcycles (part of NACE Group 50.4). Note that motor vehicles include not just passenger cars, but also other passenger vehicles, lorries, trailers and caravans.

This subchapter also covers the maintenance and repair of motor vehicles (NACE Group 50.2) and motorcycles (the remainder of NACE Group 50.4). This includes all types of repairs (mechanical, bodywork and electrical), spraying and painting, regular servicing, as well as the installation of replacement parts and accessories. Equally, the data presented cover tyre repair and fitting, towing, roadside assistance and car cleaning services. The renting of motor vehicles is not covered (see Chapter 23).

An aggregate of NACE Groups 50.1 to 50.4 for the whole subchapter is hereafter referred to as motor vehicles and motorcycles distribution, while NACE Groups 50.1 to 50.3 together are referred to as motor vehicles distribution and NACE Group 50.4 as motorcycles distribution.

While purchases of passenger cars, motorcycles and caravans are often made by households, large-scale business customers sometimes buy cars directly from manufacturers, while business customers dominate the market for commercial vehicles and lorries. The annual number of new car registrations provides information on the development of the passenger car market, which is closely linked to the general health of the economy – see Table 16.5 for more information on new car registrations. One issue that influences demand for motor vehicles and motorcycles is taxes, including taxes for the registration of a vehicle ⁽⁵⁾ as well as annual circulation taxes. In July 2005 the European Commission proposed ⁽⁶⁾ a Directive of the European Parliament and the Council that would require Member States to restructure their passenger car taxation systems, most notably to include a CO₂ element into the tax base of both annual circulation taxes and registration taxes. In September 2006 the proposal was supported by the European Parliament.

⁽⁵⁾ Most, but not all, Member States have a registration tax.

⁽⁶⁾ COM(2005) 261.

Table 16.5

New registrations of passenger cars in Western Europe, 2005 (1)

Group	Main brands	Units	Market share (%)
BMW	BMW	632 388	4.4
	MINI	128 515	0.9
	Others	150	0.0
DAIMLER - CHRYSLER	CHRYSLER	56 271	0.4
	JEEP	27 729	0.2
	MERCEDES	687 858	4.7
FIAT	SMART	131 671	0.9
	Others	250	0.0
	ALFA ROMEO	127 739	0.9
FORD	FIAT	699 320	4.8
	LANCIA	118 229	0.8
	IVECO and others	5 343	0.0
FORD	FORD	1 211 084	8.3
	JAGUAR	45 967	0.3
	LAND ROVER	76 770	0.5
GM	VOLVO	239 505	1.7
	Others	2 756	0.0
	CHEVROLET	140 583	1.0
JAPAN	OPEL	1 303 305	9.0
	SAAB	80 558	0.6
	Others	2 620	0.0
KOREA	(2)	1 964 109	13.5
MG ROVER	(3)	562 879	3.9
PSA	ROVER	46 154	0.3
RENAULT	CITROEN	897 461	6.2
	PEUGEOT	1 088 251	7.5
	DACIA	13 679	0.1
VOLKSWAGEN	RENAULT	1 406 856	9.7
	AUDI	606 748	4.2
	SEAT	357 239	2.5
OTHERS	SKODA	281 239	1.9
	VOLKSWAGEN	1 496 263	10.3
	Others	3 985	0.0
OTHERS		61 118	0.4

(1) EU-15, Iceland, Norway and Switzerland.

(2) Honda, Mazda, Mitsubishi, Nissan, Suzuki, Toyota and others.

(3) Daewoo, Hyundai, Kia and others.

Source: ACEA, <http://www.acea.be>.

According to the European Commission's latest report ⁽⁷⁾ on car prices based on figures from the first half of 2006, pre-tax prices in the euro area were generally lowest in Denmark and Hungary and highest in the Czech Republic. According to the same source, between May 2005 and May 2006, car prices increased by just 0.8 % in the EU-25, well below the overall average for consumer prices. Among the ten

Member States that joined the EU in 2004 car prices decreased in the year to May 2006 in seven of the nine countries with data available (Malta, not available), and rose only slightly in the Czech Republic (0.2 %) and Cyprus (0.1 %). Among the EU-15 Member States car prices fell most strongly in Greece (-2.4 %), Finland (-1.7 %) and the United Kingdom (-0.5 %) and rose most strongly in Portugal (3.6 %), Spain (2.7 %) and Italy (2.5 %).

⁽⁷⁾ See 'Car Price Report' from 1/5/2006, available at: http://ec.europa.eu/comm/competition/car_sector/price_diffs.

Table 16.6

Motor vehicles and motorcycles distribution (NACE Groups 50.1 to 50.4)**Turnover, value added and employment: ranking of the top 5 Member States, 2003**

Rank	Highest turnover (EUR million) (1)	Share in EU-25 turnover (%) (1)	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	United Kingdom (190 275.0)	19.8	Germany (33 515.7)	25.9	Germany (615.3)	18.3	Germany (6.3)	Lithuania (7.5)
2	Germany (159 677.9)	16.6	United Kingdom (30 018.9)	23.2	United Kingdom (545.4)	16.2	Portugal (6.2)	Portugal (7.2)
3	France (137 658.6)	14.3	France (16 153.8)	12.5	France (435.1)	12.9	Slovenia (6.0)	Slovenia (5.5)
4	Italy (120 657.0)	12.6	Italy (12 069.9)	9.3	Italy (406.7)	12.1	United Kingdom (5.3)	Germany (5.4)
5	Spain (79 463.8)	8.3	Spain (9 863.6)	7.6	Spain (313.6)	9.3	Finland (5.3)	France (5.2)

(1) Malta, 2002; Greece, not available.

(2) Lithuania and Malta, 2002; Greece and Cyprus, not available.

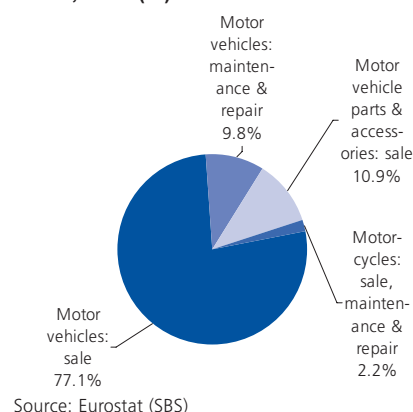
Source: Eurostat (SBS)

Motor vehicles supply, distribution and servicing arrangements have traditionally benefited from a block exemption from EC competition rules. Since October 2002 a new regime has been in force, with a one-year transition period allowing for the adaptation of existing contracts. The aim of the new rules was essentially to increase price competition in new vehicle sales, to allow new ways to sell cars, to facilitate cross-border purchases of new vehicles, and to provide more choice to consumers in the after-sales market. By 30 September 2005, location clauses were to be abolished and dealers were free to set-up secondary sales outlets in other areas of the EU, as well as their own countries. The new rules mean that dealers are able to market their services and reach customers in different countries, while they may also sell more than one brand of car at the same site (multi-franchising).

STRUCTURAL PROFILE

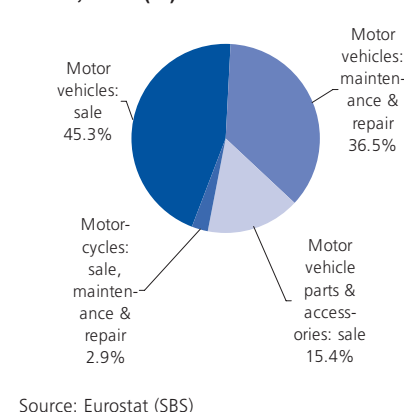
The EU-25's motor vehicles and motorcycles distribution sector (NACE Groups 50.1 to 50.4) generated EUR 129.6 billion of value added in 2003, from a turnover of EUR 959.6 billion, which represented 91.8 % of the motor trades (NACE Division 50) value added and 87.2 % of its turnover. The sector employed 3.4 million persons in the EU-25, which was 88.4 % of the motor trades total.

Figure 16.4
Motor vehicles and motorcycles distribution (NACE Groups 50.1 to 50.4)
Breakdown of sectoral turnover, EU-25, 2003 (%)



Source: Eurostat (SBS)

Figure 16.5
Motor vehicles and motorcycles distribution (NACE Groups 50.1 to 50.4)
Breakdown of sectoral employment, EU-25, 2003 (%)



Source: Eurostat (SBS)

The United Kingdom and Germany were the two largest Member States in the motor vehicles and motorcycles distribution sector (see Table 16.6) in terms of turnover, value added and employment in 2003. While together they accounted for just over one third of the EU-25's employment (34.5 %) and turnover (36.5 %) in this sector, their combined value added share was nearly half (49.1 %) the EU-25 total. This high share of value added resulted in both of these large Member States appearing in the top four most specialised Member States ⁽⁸⁾ in terms of this sector's contribution to non-financial services value added, with Germany the most specialised of all.

⁽⁸⁾ Lithuania and Malta, 2002; Greece and Cyprus, not available.

Motor vehicles distribution (NACE Groups 50.1 to 50.3) dominated the motor vehicles and motorcycles distribution sector, as the motorcycles distribution (NACE Group 50.4) subsector accounted for 2 % to 3 % of sectoral turnover, value added and employment. The relative importance of the three motor vehicles distribution subsectors varied depending on the indicator analysed, as can be seen from Figures 16.4 and 16.5. Whereas the sale of motor vehicles (NACE Group 50.1) dominated motor vehicles and motorcycles distribution turnover (77.1 %), its employment share was considerably less (45.3 %). In contrast, the maintenance and repair of motor vehicles (NACE Group 50.2) generated just 9.8 % of sectoral turnover while its share of sectoral employment was 36.5 %, some 3.7 times as high. The share of sectoral turnover accounted for by the sale of motor vehicle parts and accessories (NACE Group 50.3) was 10.9 %, while this subsector's share of sectoral employment was 1.4 times higher at 15.4 %. A

comparison of these employment and turnover shares indicates the different characteristics of these activities, particularly between the sale of motor vehicles (which concerns the sale of expensive capital goods) and the maintenance and repair of motor vehicles (which provides labour-intensive services).

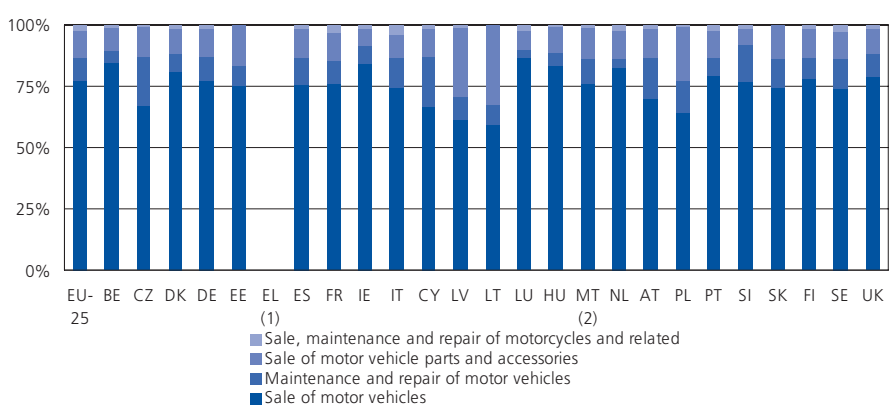
Figure 16.6 shows the relative importance of the four subsectors in the Member States ⁽⁹⁾. Motorcycles distribution only exceeded 3 % of sectoral turnover in Italy (3.8 %) and France (3.2 %). The sale of motor vehicle parts and accessories subsector accounted for a high share of turnover in the three Baltic Member States and in Poland, reaching a high of 32.6 % in Lithuania. Comparing turnover from the sale of motor vehicles (which includes new and used vehicles) with turnover from maintenance and repair of motor vehicles, the later was particularly significant in Cyprus and the Czech Republic, and to a lesser extent, in Austria. In contrast, the sale of motor vehicles was particularly important in the Benelux Member States, Hungary and Ireland.

COSTS, PRODUCTIVITY AND PROFITABILITY

Apparent labour productivity per person employed in the EU-25's motor vehicles and motorcycles distribution sector was EUR 38 400 in 2003, some EUR 1 400 higher than for motor trades as a whole. Among the subsectors, apparent labour productivity in 2003 was highest for the sale of motor vehicles subsector at EUR 51 300 per person employed, reflecting the relatively low employment share of this subsector compared with its high share of output. In contrast, the lowest apparent labour productivity ratio was recorded for the maintenance and repair of motor vehicles subsector, at EUR 24 100 per person employed, reflecting its relatively high employment share.

⁽⁹⁾ Malta, 2002; Greece, not available.

Figure 16.6 Motor vehicles and motorcycles distribution (NACE Groups 50.1 to 50.4) Breakdown of sectoral turnover, 2003 (%)



(1) Not available.
(2) 2002.
Source: Eurostat (SBS)

Average personnel costs were EUR 24 700 per employee in 2002 in the motor vehicles and motorcycles distribution sector, some EUR 1 100 above the motor trades average. Value added represented 155.4 % of personnel costs (adjusted for the ratio of persons employed to employees) in the EU-25's motor vehicles and motorcycles distribution sector in 2002, a ratio that was marginally below the motor trades average, but above the distributive trades (NACE Section G) and non-financial services (NACE Sections G to I and K) averages. The gross operating rate averaged 6.6 % in 2002 for the motor vehicles and motorcycles distribution sector as a whole, ranging from 5.6 % for the sale of motor vehicles, through 7.0 % and 7.3 % respectively for the sale of motor vehicle parts and accessories and motorcycle distribution subsectors, to a high of 14.0 % for the maintenance and repair of motor vehicles subsector.

16.2: RETAIL SALE OF AUTOMOTIVE FUEL

This subsector covers the retail sale of automotive fuel, lubricating and cooling products for motor vehicles and motorcycles (NACE Group 50.5). It does not include the wholesale trade of automotive fuel.

Various business models are found in this sector, the most important being: dealer owned and operated service stations, supplier owned and dealer operated service stations (through exclusive purchasing or agency contracts), supplier owned and operated service stations (which are owned and operated by the petroleum supplier whose brand they bear).

The price of crude oil (see Subchapter 13.1), the extent of spare capacity in refineries, the level of stocks, and the extent of taxes on fuel all have an important impact on the price paid by retailers and consumers for petrol and diesel. Table 16.7 provides information on the retail (pump) price of unleaded petrol and automotive diesel. The price of a litre of diesel (including VAT and other taxes) varied considerably between the Member States during the second half of 2005, from a high of EUR 1.35 in the United Kingdom to EUR 0.83 in Estonia and EUR 0.84 in Latvia. The range of prices for unleaded petrol (95 RON) was slightly wider, with the highest price per litre in the Netherlands (EUR 1.40) and the lowest prices again recorded in Latvia (EUR 0.83) and Estonia (EUR 0.84). A large part of these price differences are explained by the differences in VAT and other taxes between Member States. Note that the tax and VAT levied on diesel was lower (as a proportion of the final price) than for unleaded petrol in each of the Member States except for Lithuania; this explains why diesel prices were lower than unleaded petrol prices in all Member States (except Latvia and Slovakia, where they were nearly the same, and the United Kingdom where diesel was 4.7 % higher).

Other factors influencing the retail sale of automotive fuel include competition in the petroleum retailing market (both among fuel retailers and from other retailers, such as supermarkets), social changes (for example, in terms of the demand for shopping outside of traditional hours), legal requirements relating to environmental protection, and health and safety issues. Some of these have resulted in an expansion of the variety of goods and services retailed alongside automotive fuels, automated payments outside of normal opening hours, and longer opening hours.

Table 16.7
At the pump prices of petroleum products, second half of 2005

	Premium unleaded gasoline, 95 Ron		Automotive diesel oil	
	EUR/litre	of which, taxes (%)	EUR/litre	of which, taxes (%)
BE	1.29	63.2	1.05	52.2
CZ	0.98	55.9	0.98	49.7
DK	1.25	63.3	1.05	54.8
DE	1.26	65.7	1.11	56.2
EE	0.84	49.3	0.83	44.8
EL	0.94	48.2	0.93	43.2
ES	1.00	54.1	0.93	45.9
FR	1.20	65.5	1.07	55.5
IE	1.05	59.4	1.05	52.3
IT	1.25	61.9	1.13	53.1
CY	0.89	47.4	0.87	41.7
LV	0.83	48.3	0.84	43.4
LT	0.88	48.0	0.87	53.2
LU	1.08	54.2	0.88	43.4
HU	1.10	59.1	1.07	53.4
MT	0.89	50.1	0.85	44.0
NL	1.40	63.6	1.05	52.2
AT	1.07	56.4	0.99	48.1
PL	1.02	57.3	0.93	49.1
PT	1.20	61.9	0.98	49.3
SI	0.94	55.1	0.93	49.4
SK	0.98	56.7	0.99	53.6
FI	1.20	66.9	0.97	51.0
SE	1.23	62.9	1.10	55.1
UK	1.29	68.1	1.35	65.7

Source: Eurostat (Energy)

The retailing of automotive fuel will be influenced by developments in the use of alternative fuels, which the European Commission has encouraged. The three main types of alternative fuels considered are biofuels, natural gas and hydrogen - see Chapter 10 for more information. As with the introduction of any new fuel, the acceptance of vehicles running alternative fuels depends not just on the availability of appropriate vehicles but the extent of the distribution network offering such fuels. Unlike vehicles powered by petrol and diesel, some newer vehicles have the possibility to be refuelled at home (relatively simply in the case of electric powered vehicles), reducing the reliance on the automotive fuels retail network.

STRUCTURAL PROFILE

Value added from the retail sale of automotive fuel in the EU-25 was EUR 11.6 billion in 2003, derived from EUR 141.0 billion of turnover; this equated to 8.2 % of motor trades value added and 12.8 % of turnover. There were 440 900 persons employed in the EU-25's automotive fuel retail sector in 2003, some 11.6 % of the motor trades total.

Table 16.8

Retail sale of automotive fuel (NACE Group 50.5)**Turnover, value added and employment: ranking of the top 5 Member States, 2003**

Rank	Highest turnover (EUR million) (1)	Share in EU-25 turnover (%) (1)	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	Italy (31 745.8)	22.5	Germany (2 221.9)	19.2	United Kingdom (63.3)	14.3	Lithuania (2.8)	Lithuania (2.2)
2	United Kingdom (28 934.4)	20.5	United Kingdom (2 074.2)	17.9	Italy (60.5)	13.7	Latvia (2.2)	Latvia (1.7)
3	Spain (16 186.3)	11.5	Spain (1 568.8)	13.5	Germany (52.6)	11.9	Slovenia (1.8)	Ireland (1.6)
4	Germany (8 773.7)	6.2	Italy (1 497.2)	12.9	Spain (50.8)	11.5	Luxembourg (1.1)	Estonia (1.4)
5	Netherlands (7 009.1)	5.0	France (757.3)	6.5	Poland (38.8)	8.8	Poland (1.0)	Luxembourg (1.4)

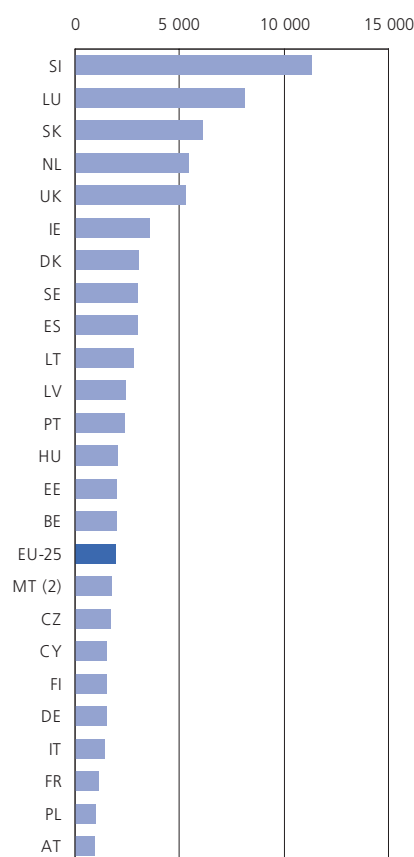
(1) Malta, 2002; Greece, not available.

(2) Lithuania and Malta, 2002; Greece and Cyprus, not available.

Source: Eurostat (SBS)

Italy and the United Kingdom recorded the highest shares of EU-25 turnover and employment in this sector, whereas Germany generated the largest amount of value added ahead of the United Kingdom; Spanish value added was also higher than that recorded in Italy. The low position of Germany and absence of France from the top five Member States in turnover terms reflects the structure of automotive fuel retailing in these two Member States: in Germany and some other Member States a significant proportion of enterprises that retail automotive fuel do so on a commission basis, and as such their turnover only reflects the commission they receive on sales, and not the value of the fuel itself; whereas in France (and a number of other Member States) a large proportion of fuel is sold through service stations that belong to major retailers (particularly in out-of-town shopping locations), and these are classified within retail trade (NACE Division 52) rather than the retailing of automotive fuels. These structural characteristics impact on any turnover analysis that is made of the relative importance of Member States for this sector. This can also be seen in Figure 16.7 where an analysis of enterprise size is obtained by analysing the average turnover per enterprise. Slovenia and Luxembourg stood out from the rest of the Member States as having the highest average turnover per enterprise, in excess of EUR 11 million and EUR 8 million per enterprise respectively, while unsurprisingly Germany and France were among the Member States with the lowest average turnover per enterprise.

Figure 16.7
Retail sale of automotive fuel
(NACE Group 50.5)
Turnover per enterprise, 2003
(EUR thousand) (1)



(1) Greece, not available.

(2) 2002.

Source: Eurostat (SBS)

As noted in the overview to this chapter, the development of the EU-25 turnover index for the retail sale of automotive fuels was more volatile than the other parts of motor trades, growing strongly in 2000, contracting slightly in 2001 and 2002, and then accelerating in the three years to 2005 - see Figure 16.2 in the overview to this chapter. Note that the turnover index can only be provided in current prices and therefore reflects price changes. As such, recent huge increases in oil prices have to be considered when analysing this data.

COSTS, PRODUCTIVITY AND PROFITABILITY

Apparent labour productivity for the EU-25's automotive fuel retail sector was EUR 26 300 per person employed in 2003, well below the motor trades (NACE Division 50) average of EUR 37 000. Average personnel costs were also low, at EUR 15 400 per employee in 2002. These two low values reflect to some extent the high incidence of part-time work associated with this retail activity. The wage adjusted labour productivity ratio is less influenced by this characteristic of the workforce, and shows that value added per person employed was equivalent to 161.8 % of average personnel costs in 2002, a level comparable with the rest of the motor trades sector. Nevertheless, the gross operating rate (the ratio of gross operating surplus to turnover) in the EU-25's retail sale of automotive fuel sector was 3.7 % in 2002, which was well below the motor trades average (6.2 %); this low rate for automotive fuel retailing reflects the relatively high turnover inherent in this retail sector.

Table 16.9

Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel (NACE Division 50)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million)	1 100 657	54 690	10 627	29 280	168 452	1 458	:	95 650	143 692	14 667	152 403	1 331	1 190	1 939	4 202	12 030	533
Production (EUR million)	:	8 464	2 714	18 554	52 825	301	:	22 070	34 572	2 144	56 300	331	306	466	582	2 323	115
Value added at factor cost (EUR million)	141 175	3 715	957	2 408	35 738	140	:	11 432	16 911	1 345	13 567	191	171	215	353	952	90
Gross operating surplus (EUR million) (2)	65 362	1 445	448	685	19 585	63	:	4 604	3 259	540	7 241	68	115	108	120	520	64
Purchases of goods and services (EUR million)	:	51 170	9 735	15 215	132 079	1 344	:	85 909	127 014	13 349	143 886	1 115	1 056	1 743	3 866	11 194	453
Gross inv. in tangible goods (EUR million)	:	721	254	583	2 523	49	:	2 368	1 758	231	2 193	20	63	73	37	495	8
Number of persons employed (thousands)	3 812	80	92	62	668	11	:	364	462	37	467	8	19	39	7	79	4
Personnel costs (EUR million) (2)	70 366	2 271	509	1 724	16 153	77	:	6 828	13 652	794	6 326	123	56	107	233	432	26
App. labour product. (EUR thous./pers. emp.)	37.0	46.3	10.4	38.7	53.5	12.2	:	31.4	36.6	36.0	29.0	23.2	9.1	5.5	47.1	12.0	23.9
Average pers. costs (EUR thous./employee) (2)	23.6	38.1	8.3	30.4	27.9	6.9	:	22.4	31.5	24.6	25.2	19.1	3.0	2.9	33.6	6.2	11.4
Wage adjusted labour productivity (%) (2)	156.0	121.7	124.3	127.5	191.6	177.8	:	140.3	116.5	146.5	115.2	121.6	302.8	188.4	140.1	193.5	209.5
Gross operating rate (%) (2)	6.2	2.6	4.2	2.3	11.6	4.3	:	4.8	2.3	3.7	4.8	5.1	9.7	5.6	2.9	4.3	12.0
Investment per person empl. (EUR thousand)	:	9.0	2.8	9.4	3.8	4.3	:	6.5	3.8	6.2	4.7	2.4	3.4	1.9	4.9	6.2	2.1
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million)	62 381	23 672	20 094	23 568	4 586	2 425	15 881	31 792	219 209	2 048	:	4 280	:	:	:	17 946	:
Production (EUR million)	14 956	6 460	8 086	4 245	864	392	3 021	6 997	58 254	450	:	1 158	:	:	:	5 428	:
Value added at factor cost (EUR million)	6 160	3 174	2 101	2 200	417	122	1 943	3 874	32 093	195	:	478	:	:	:	2 473	:
Gross operating surplus (EUR million)	2 397	859	1 320	697	202	48	828	1 320	17 620	120	:	294	:	:	:	621	:
Purchases of goods and services (EUR million)	51 370	20 475	69 210	21 453	4 195	2 304	14 331	28 140	187 614	1 925	:	3 939	:	:	:	15 311	:
Gross inv. in tangible goods (EUR million)	763	373	423	689	144	91	265	721	3 288	128	:	406	:	:	:	464	:
Number of persons employed (thousands)	148	83	231	125	15	12	37	83	609	46	:	81	:	:	:	54	:
Personnel costs (EUR million)	3 763	2 314	781	1 503	215	74	1 115	2 628	14 473	76	:	184	:	:	:	1 852	:
App. labour product. (EUR thous./pers. emp.)	41.5	38.1	9.1	17.6	27.0	10.5	52.0	46.9	52.7	4.2	:	5.9	:	:	:	45.6	:
Average pers. costs (EUR thous./employee)	29.2	31.0	6.0	13.1	16.5	6.5	33.2	37.0	26.5	1.9	:	2.4	:	:	:	36.7	:
Wage adjusted labour productivity (%)	141.8	122.9	152.1	133.9	163.8	162.8	157.0	126.7	198.7	219.1	:	249.4	:	:	:	124.1	:
Gross operating rate (%)	3.8	3.6	6.6	3.0	4.4	2.0	5.2	4.2	8.0	5.9	:	6.9	:	:	:	3.5	:
Investment per person empl. (EUR thousand)	5.1	4.5	1.8	5.5	9.3	7.9	7.1	8.7	5.4	2.8	:	5.0	:	:	:	8.5	:

(1) Malta, 2002.

(2) EU-25, 2002.

Source: Eurostat (SBS)

Wholesale trade



The wholesaling activity consists of selling to retailers or to industrial, commercial, institutional and professional users. Wholesalers can act on a fee or contract basis as agents (which are covered in Subchapter 17.1) or for their own-account, buying and selling goods (as covered by Subchapters 17.2 to 17.6). The own-account wholesale subchapters distinguish the types of product in which the wholesaler is specialised: agricultural products, consumer goods, intermediate goods, machinery and equipment (as covered by Subchapters 17.2 to 17.5), while specialised wholesalers of other products are included in the final subchapter (Subchapter 17.6) along with non-specialised wholesalers.

In the supply chain, wholesalers are located between producers and users, providing know-how and knowledge in markets for which they have expertise. Competition within the wholesale trade activity is often centred on providing more efficient or more sophisticated value added services. Wholesalers can provide a range of services from basic storage and break of bulk, sorting, grading and logistics to pre- and post-production operations.

STRUCTURAL PROFILE

Value added in the EU-25's wholesale trade sector (NACE Division 51) was EUR 423.8 billion in 2003, 45.5 % of the value added generated within the whole of distributive trades (NACE Section G), and 16.0 % of the total for non-financial services (NACE Sections G to I and K). There were 8.8 million persons employed in the EU-25's wholesale trade sector in 2003, which equated to 30.7 % of the EU-25's total distributive trades workforce and 12.7 % of the non-financial services workforce. As such, this sector's contribution to distributive trades and non-financial services was much higher in value added terms than in employment terms.

Among the activities that compose the wholesale trade sector, own-account wholesale trade (NACE Groups 51.2 to 51.9) accounted for 91.6 % of the EU-25's wholesale trade value added in 2003, and wholesale on a fee or contract basis (NACE Group 51.1) for the remainder. The largest wholesale trade subsector in value added and employment terms was the wholesale trade of consumer goods (NACE Groups 51.3 and 51.4) - see Figure 17.1 - followed by the wholesale of non-agricultural intermediate products, waste and scrap (NACE Group 51.5) and machinery, equipment and supplies (NACE Group 51.8), both of which made a larger contribution to sectoral value added than employment.

The activities in NACE Division 51 cover all wholesale trade except that concerning motor trade (see the previous chapter). This chapter covers resale (sale without transformation) of new and used products, as well as wholesale activities carried out on a fee or contract basis.

NACE

- 51: wholesale trade and commission trade, except of motor vehicles and motorcycles;
- 51.1: wholesale on a fee or contract basis;
- 51.2: wholesale of agricultural raw materials and live animals;
- 51.3: wholesale of food, beverages and tobacco;
- 51.4: wholesale of household goods;
- 51.5: wholesale of non-agricultural intermediate products, waste and scrap;
- 51.8: wholesale of machinery, equipment and supplies;
- 51.9: other wholesale.

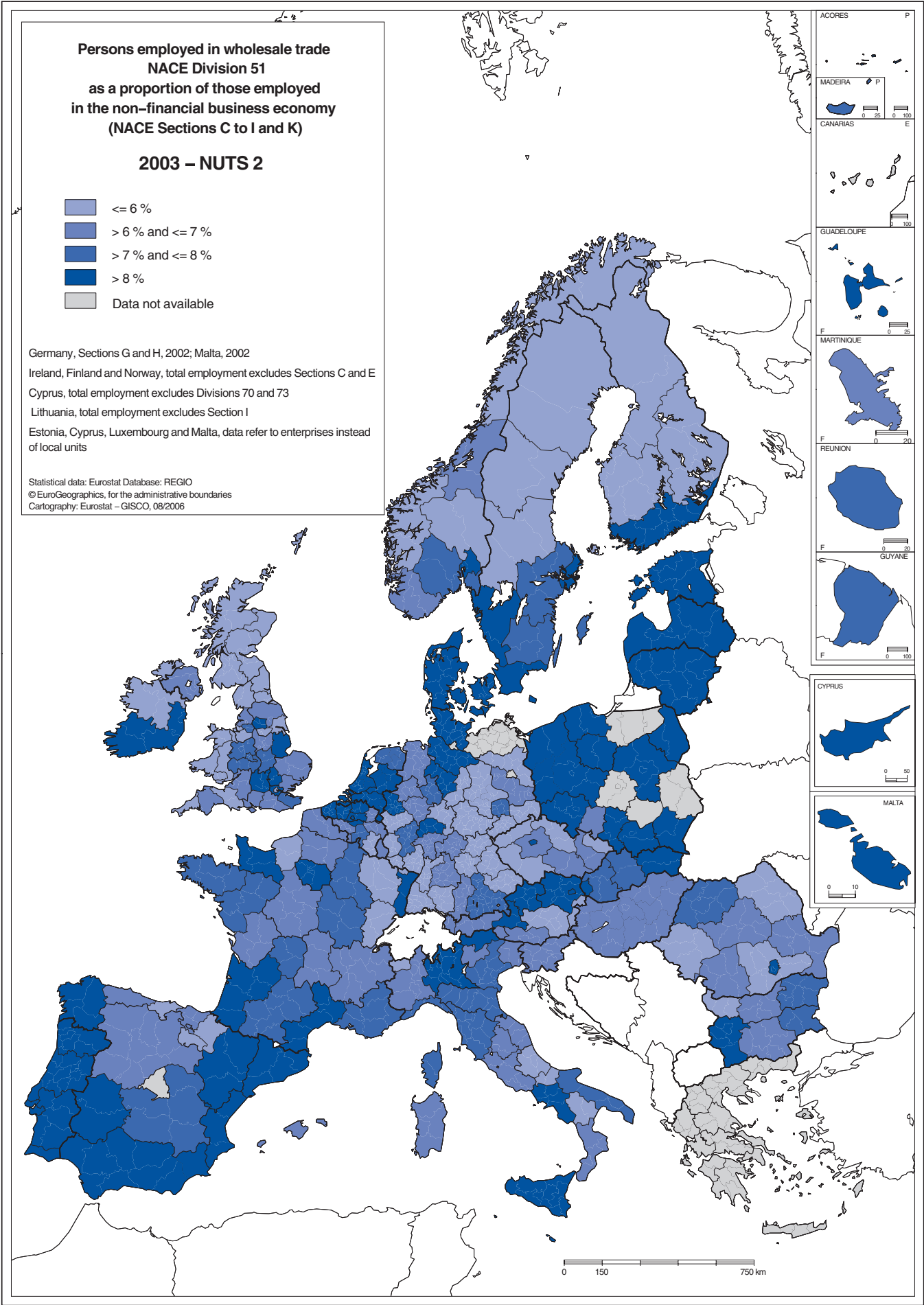


Table 17.1

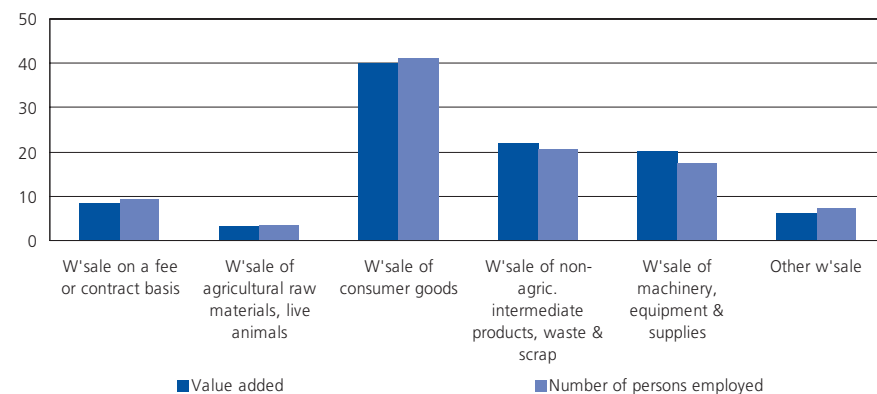
Wholesale trade and commission trade (NACE Division 51)
Structural profile, EU-25, 2003

	Turnover (EUR million)	Value added (EUR million)	Share of non-financial services value added (%)	Number of persons employed (thousands)	Share of non-financial services employment (%)
Wholesale trade and commission trade	3 585 010	423 792	16.0	8 788	12.7
Wholesale on a fee or contract basis	185 971	35 568	1.3	832	1.2
Wholesale of agricultural raw materials, live animals	174 961	13 645	0.5	320	0.5
Wholesale of consumer goods	1 446 718	170 195	6.4	3 626	5.3
Wholesale of food, beverages and tobacco	693 709	62 792	2.4	1 627	2.4
Wholesale of household goods	753 009	107 403	4.1	1 999	2.9
Wholesale of non-agricultural intermediate products, waste and scrap	1 044 642	93 206	3.5	1 820	2.6
Wholesale of machinery, equipment and supplies	553 235	85 474	3.2	1 537	2.2
Other wholesale	179 482	25 705	1.0	654	1.0

Source: Eurostat (SBS)

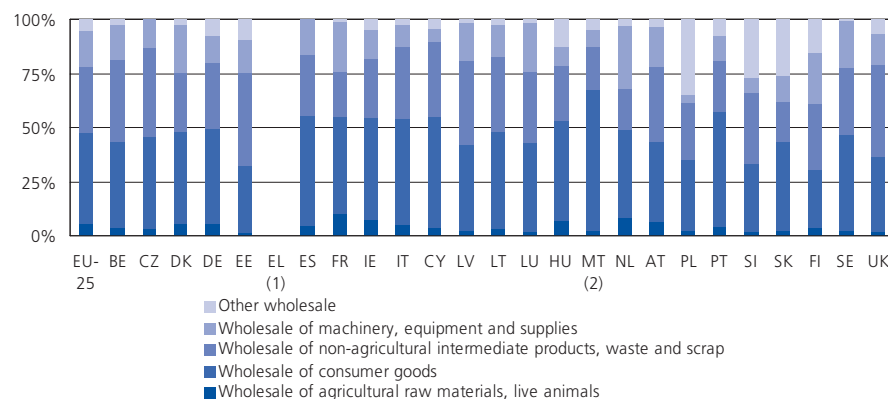
Own-account wholesale trade generated EUR 3 399 billion of turnover in the EU-25 in 2003 - Figure 17.2 shows an activity breakdown. The wholesaling of consumer goods was the largest activity and accounted for 64.8 % of own-account wholesale turnover in Malta (2002), and also exceeded 50 % in Portugal, Cyprus and Spain, while the average share of consumer goods wholesaling for the EU-25 was 42.6 %. The wholesale of non-agricultural intermediate products, waste and scrap was the second largest of the own-account wholesale trade subsectors in three quarters of the Member States with data available, averaging 30.7 % of own-account wholesale trade turnover in the EU-25. The importance of the wholesale trade of machinery, equipment and supplies varied greatly between Member States, from just 3.7 % in Poland to 28.8 % in the Netherlands. The wholesale trade of agricultural raw materials and live animals (NACE Group 51.2) accounted for one tenth of own-account wholesale trade turnover in France (10.1 %), nearly double the EU-25 average (5.1 %). Other wholesale trade (NACE Group 51.9) accounted for 5.3 % of own-account wholesale trade turnover in the EU-25, although this share rose to more than one quarter of the total in Slovenia and Slovakia and exceeded one third in Poland.

Figure 17.1

Wholesale trade and commission trade (NACE Division 51)
Breakdown of sectoral value added and employment, EU-25, 2003 (%)


Source: Eurostat (SBS)

Figure 17.2

Wholesale trade (NACE Groups 51.2 to 51.9)
Breakdown of own account wholesale turnover, 2003 (%)


(1) Not available.

(2) 2002.

Source: Eurostat (SBS)

Table 17.2

Wholesale trade and commission trade (NACE Division 51)**Turnover, value added and employment: ranking of the top 5 Member States, 2003**

Rank	Highest turnover (EUR million) (1)	Share in EU-25 turnover (%) (1)	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	Germany (633 122.5)	17.7	Germany (81 046.3)	19.1	Germany (1 228.2)	14.0	Slovakia (24.7)	Slovakia (21.0)
2	United Kingdom (605 487.6)	16.9	United Kingdom (72 403.3)	17.1	United Kingdom (1 196.4)	13.6	Poland (24.3)	Estonia (18.6)
3	France (554 852.2)	15.5	France (58 741.8)	13.9	Spain (1 073.3)	12.2	Latvia (23.8)	Portugal (17.9)
4	Italy (366 276.2)	10.2	Italy (47 152.4)	11.1	Italy (1 067.5)	12.1	Portugal (23.3)	Slovenia (17.1)
5	Spain (323 513.4)	9.0	Spain (40 192.0)	9.5	France (1 039.9)	11.8	Lithuania (22.3)	Poland (16.8)

(1) Malta, 2002; Greece, not available.

(2) Lithuania and Malta, 2002; Greece and Cyprus, not available.

Source: Eurostat (SBS)

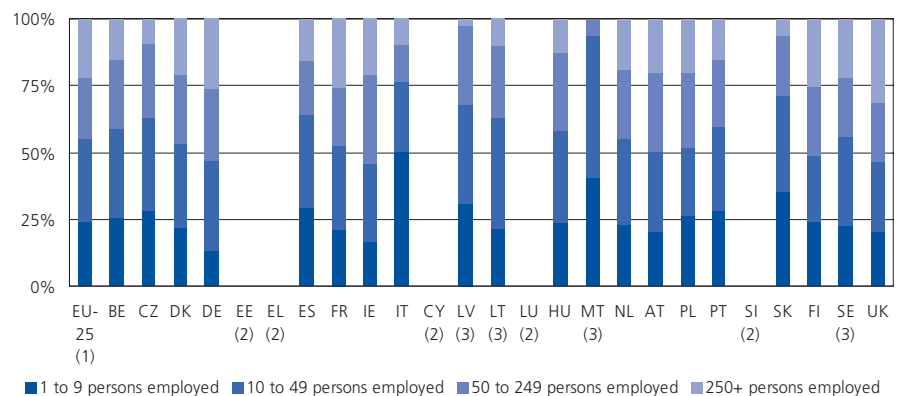
Among the Member States, Germany and the United Kingdom had the largest wholesale trade sectors in turnover, value added and employment terms - see Table 17.2. Relative to all non-financial services, Slovakia and Poland were the most specialised ⁽¹⁾ in wholesale trade in value added terms, generating close to one quarter of their non-financial services value added in this sector in 2003.

Regional employment specialisation (in some cases the whole country is treated as one region) can be seen from the map on page 284 which is based on the non-financial business economy employment share of the wholesale trade sector. Given the essential nature of many parts of wholesale trade, providing services directly to retailers and to industrial consumers, it is unsurprising that most regions tended towards the average. In the regions where the wholesale trade workforce accounted for its highest share of the non-financial business economy workforce (just over 14 % in one Dutch and one Belgian region), the relative specialisation was around five times higher than in the least specialised regions (just under 3 % in one Italian and one Finnish region); this was the second lowest ratio between highest and lowest specialisation across all of the activities shown in the maps in Chapters 1 to 23 (higher only than for retail trade and repair - see the next chapter).

The size class structure of the wholesale trade sector was quite similar to that of motor trades (NACE Division 50 - see Chapter 16), in that all four of the size classes shown in Figure 17.3 contributed between one fifth and one third of the EU-25's wholesale trade sector's value added in 2003. Small enterprises (with between 10 and 49 persons employed) accounted for more of the sector's value added than any other

⁽¹⁾ Lithuania and Malta, 2002; Greece and Cyprus, not available.

Figure 17.3

Wholesale trade and commission trade (NACE Division 51)**Share of value added by enterprise size class, 2003 (%) (1)**

(1) Rounded estimates based on non-confidential data for 1 to 9 and for 10 to 49 persons employed.

(2) Not available.

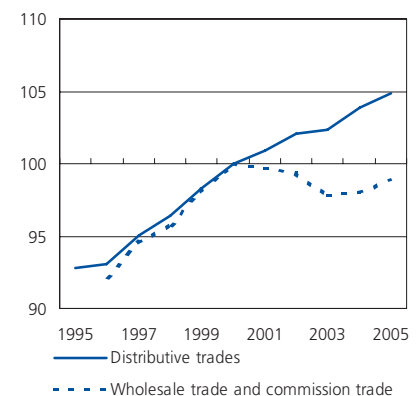
(3) 2002.

Source: Eurostat (SBS)

enterprise size class. This size class structure was in contrast to that of the retail trade and repair sector (NACE Division 52), where the vast majority of sectoral value added was generated by large enterprises (with more than 250 persons employed) or micro enterprises (with less than 10 persons employed).

Annualised short-term statistics for the EU-25's wholesale trade sector showed that the index of turnover grew by 7.3 % in 2005, and as such marked the third consecutive year that the rate of growth had increased. In 2005 the EU-25's employment index for wholesale trade also increased, up 0.9 % compared with growth of 0.2 % in 2004. Nevertheless, the level of the EU-25's employment index in 2005 was still more than 1 % below its peak of 2000, in contrast to the uninterrupted growth of the employment index for the whole of distributive trades - see Figure 17.4.

Figure 17.4

Wholesale trade and commission trade (NACE Division 51)**Evolution of employment index, EU-25 (2000=100)**

Source: Eurostat (STS)

Looking at the turnover indices for the subsectors within own-account wholesale trade ⁽²⁾ a wide range of developments can be seen since 2000 - see Figure 17.5. After growth of 3.1 % in 2000, the EU-25's agricultural wholesaling sector maintained a relatively stable level of turnover through to 2005, with the 2004 growth rate of 1.5 % the highest rate of change (either positive or negative) during this period. The two consumer oriented activities, namely the wholesale of food, beverages and tobacco (NACE Group 51.3) and household goods (NACE Group 51.4), recorded growth in each of the years for which data are available, averaging growth of 2.6 % and 3.4 % per annum respectively between 2000 and 2005. Meanwhile, the development of the turnover index for the wholesaling of machinery, equipment and supplies, as well as the wholesaling of intermediate goods, reflected more closely the development of many industrial activities which are often the clients of these subsectors, with a fall in turnover after 2000 through to 2002 or 2003, followed by strong growth in 2004 and 2005. The fall in activity after 2000 was strongest and longest in the wholesaling of machinery, equipment and supplies. The remaining subsector, namely other wholesale trade, recorded a period of relative stagnation between 2000 and 2003 with its highest growth rate being a 1.1 % increase in 2002. Turnover then jumped 8.5 % in 2004 before declining by 0.8 % in 2005.

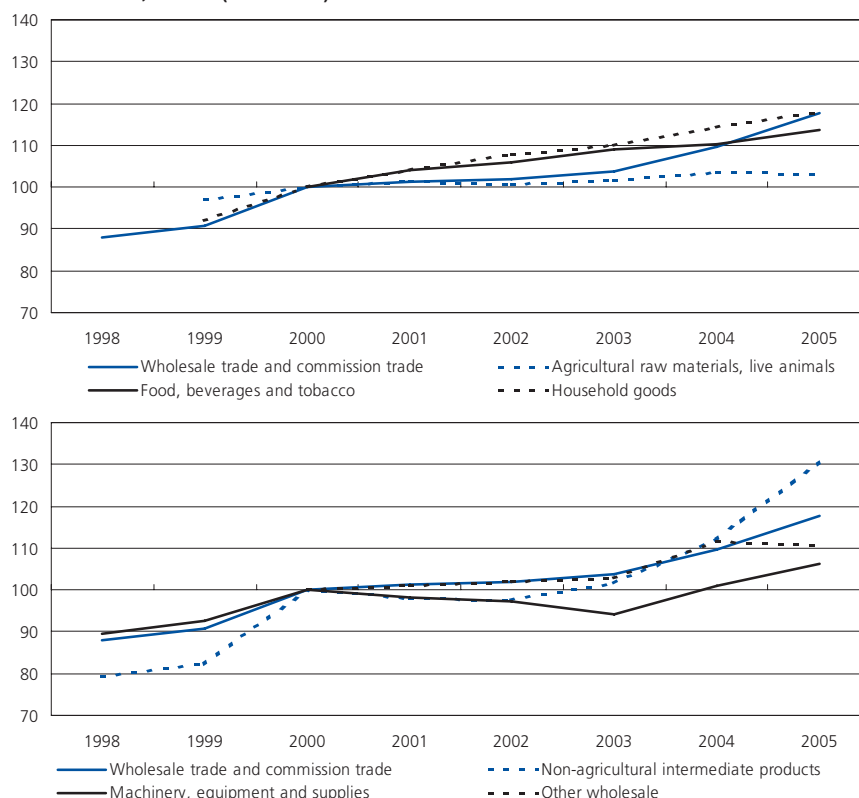
LABOUR FORCE CHARACTERISTICS

According to structural business statistics the share of paid employees in total employment in the EU-25's wholesale trade sector in 2002 was 84.7 %, which was higher than the equivalent share observed for the two other distributive trade sectors. In 2003 this pattern was repeated in around three quarters of the Member States ⁽³⁾, the most notable exception being Estonia where the share of paid employees in wholesale trade was lower than in either of the other two distributive trades sectors.

⁽²⁾ Wholesale on a fee or contract basis (NACE Group 51.1), not available.

⁽³⁾ Malta, 2002; Greece, not available.

Figure 17.5
Wholesale trade and commission trade (NACE Division 51)
Turnover index, EU-25 (2000=100)



Source: Eurostat (STS)

According to Labour Force Survey data, there were some prominent differences in the employment characteristics of the wholesale trade sector when compared with the characteristics observed for the whole of distributive trades sectors or non-financial services. Men accounted for two thirds (66.5 %) of the persons employed in the EU-25's wholesale trade sector in 2005, and in none of the Member States was there a majority of women working in this sector; the nearest being Slovenia where the levels of female and male employment were almost equal. The proportion of men working in the EU-25's wholesale trade workforce was considerably higher than for retail trade and repair, but lower than in motor trades, and was 10.5 percentage points (equivalent to 18.7 %) above the non-financial services average - see Table 17.3.

In 2005 the full-time employment rate in the EU-25's wholesale trade sector (88.7 %) was also lower than in motor trades (90.5 %), higher than in retail trade and repair (69.8 %) and above the non-financial services average (79.2 %). Full-time employment rates were higher for wholesale trade than the non-financial services average in all of the Member States in 2005, although there was little difference in these rates in all the Member States that joined the EU in 2004, nor in Greece, Luxembourg or Belgium.

Of the three distributive trades sectors, wholesale trade had the smallest proportion of younger workers (aged less than 30) in its workforce, just 21.5 %, while it had the highest proportion of workers aged 30 to 49 and aged 50 or more. The proportions of the two older age groups in the wholesale trade workforce were high not just in comparison with the other distributive trades sectors, but also in comparison with the non-financial services average.

Table 17.3

Wholesale trade and commission trade (NACE Division 51)
Labour force characteristics, 2005

	Male		Full-time		Breakdown by age (% share of total)		
	Proportion of those employed (%)	Index (non-financial services=100)	Proportion of those employed (%)	Index (non-financial services=100)	< 30 years	30-49 years	50+ years
EU-25	66.5	118.7	88.7	111.9	21.5	56.9	21.6
BE	64.3	109.1	82.7	105.9	20.2	59.0	20.8
CZ	58.7	107.5	96.1	102.2	25.5	53.6	20.9
DK	68.7	115.5	89.7	121.2	14.8	57.4	27.8
DE	64.3	121.6	82.6	115.6	17.8	56.0	26.2
EE	55.7	109.5	92.3	100.7	26.5	54.8	18.8
EL	67.8	111.0	98.0	102.4	25.1	59.2	15.8
ES	69.8	126.8	93.0	109.2	23.4	58.4	18.3
FR	65.0	114.2	91.5	109.1	21.0	59.7	19.3
IE	70.6	130.1	92.3	114.2	25.9	52.4	21.7
IT	70.1	116.8	90.9	108.7	17.1	62.9	20.0
CY	67.3	124.1	94.7	104.3	20.6	55.9	23.5
LV	56.3	117.8	97.1	103.1	34.8	47.7	17.5
LT	63.8	122.1	95.6	101.5	28.8	58.1	13.1
LU	68.0	117.5	89.3	105.1	15.9	60.1	24.0
HU	54.1	100.4	97.3	102.2	26.5	54.8	18.8
MT	74.7	106.6	90.8	104.9	31.1	53.3	:
NL	68.9	118.6	73.0	135.9	23.5	56.8	19.7
AT	62.9	126.1	82.2	111.4	21.6	61.4	17.0
PL	67.6	122.0	92.2	102.8	35.2	50.4	14.5
PT	67.1	121.4	97.2	104.8	23.9	54.6	21.5
SI	51.2	94.9	93.2	102.1	27.2	58.1	14.7
SK	61.7	116.8	98.1	101.1	26.8	57.4	15.8
FI	67.0	122.2	90.9	111.7	18.3	55.8	25.9
SE	71.0	116.8	87.5	113.9	17.0	54.4	28.6
UK	66.5	117.9	84.6	120.3	21.1	50.1	28.8

Source: Eurostat (LFS)

COSTS, PRODUCTIVITY AND PROFITABILITY

The level of gross tangible investment relative to operating expenditure was low in the wholesale trade sector, just 1.3 % in the EU ⁽⁴⁾. Not only was this much lower than the non-financial services average, it was also low compared with the other two distributive trades sectors (which were both also low), less than half the level registered for retail trade and repair (2.7 %). This particularly low ratio in wholesale trade reflects the high level of operating expenditure associated with wholesale trade (and the other distributive trades as well), boosted by high expenditure on goods purchased for resale in the same condition. An analysis of operating expenditure confirms that purchases of goods and services accounted for 92.9 % of total operating expenditure in the wholesale trade sector, the same as for motor trades but higher than for retail trade and repair (87.7 %); indeed, this was the highest proportion among all non-financial services NACE divisions.

Apparent labour productivity was EUR 48 200 per person employed in the EU-25's wholesale trade sector in 2003, higher than in the other distributive trades sectors and more than double the level for retail trade and repair, reflecting at least in part the higher full-time employment rate in wholesale trade. All of the wholesale trade NACE groups recorded apparent labour productivity ratios that were above the non-financial services average (EUR 38 200 per person employed), ranging from EUR 38 600 for the wholesale of food, beverages and tobacco and EUR 39 300 for other wholesale trade, up to more than EUR 50 000 per person employed for the wholesale of machinery, equipment and supplies (EUR 55 600), of household products (EUR 53 700), and of intermediate goods (EUR 51 200).

Average personnel costs in the wholesale trade sector were EUR 30 200 per employee in the EU-25 in 2002 which, as with apparent labour productivity, was higher than in the other two distributive trades sectors and also above the non-financial services average. The wage adjusted

labour productivity ratio was 156.4 % in 2002, comparable with that for motor trades (156.0 %) and notably higher than for retail trade and repair (132.5 %). In 2003 the wage adjusted labour productivity of the Member States ⁽⁵⁾ ranged from 119.8 % in Sweden to 375.6 % in Latvia.

The gross operating surplus (value added minus personnel costs) in the EU-25's wholesale trade sector was equivalent to 5.4 % of turnover in 2002, lower than in the two other distributive trades sectors, reflecting the high turnover and purchases (mainly for resale in the same condition as purchased) and relatively low margins typically associated with wholesale trade. Wholesale trade gross operating rates among the Member States ⁽⁶⁾ did not vary greatly as all were situated within the range of 3.0 % (France) to 9.1 % (Malta, 2002), narrower than for both of the other distributive trades sectors.

⁽⁵⁾ Malta, 2002; Greece, not available.

⁽⁶⁾ Malta, 2002; Greece, not available.

⁽⁴⁾ EU average, 2003; Malta, 2002; excluding Greece.

Table 17.4

Wholesale trade and commission trade (NACE Division 51)**Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003 (1)**

Rank	Investment in tangible goods relative to total operating costs (%) (2)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	1.3	92.9	7.1	48.2	30.2	156.4	5.4
1	Latvia (2.8)	Latvia (96.7)	Sweden (10.3)	Finland (67.8)	Belgium (48.7)	Latvia (375.6)	Malta (9.1)
2	Estonia (2.6)	Poland (96.2)	Cyprus (9.9)	Belgium (67.6)	Sweden (47.7)	Lithuania (205.5)	Latvia (8.4)
3	Lithuania (2.5)	Czech Republic (95.5)	Denmark (9.3)	Netherlands (67.4)	Denmark (45.8)	Estonia (204.3)	Italy (7.8)
4	Portugal (2.2)	Hungary (95.5)	Austria (8.7)	Ireland (66.9)	Finland (42.1)	Slovakia (200.5)	Ireland (6.6)
5	Cyprus (2.2)	Estonia (95.4)	Slovenia (8.1)	Germany (66.0)	Austria (42.1)	Hungary (198.1)	Cyprus (6.3)

(1) Malta, 2002; Greece, not available.

(2) EU-25 is an EU average based on available data for 2002 and 2003.

(3) EU-25, 2002.

Source: Eurostat (SBS)

17.1: WHOLESALE ON A FEE OR CONTRACT BASIS

This wholesale sector covers agents trading on behalf and on account of others, those involved in bringing sellers and buyers together and those undertaking commercial transactions on behalf of a principal (NACE Group 51.1). It does not include financial intermediaries such as insurance or real estate agents, nor retail sale by agents.

Wholesalers acting as agents provide a service, acting to bring together the two parties to a transaction, namely the buyer and the seller. In doing so, their turnover is mainly composed of the fees and commissions they charge for their services; unlike own-account wholesalers their turnover does not reflect the value of the goods that they trade.

STRUCTURAL PROFILE

In 2003 value added for wholesale on a fee or contract basis (NACE Group 51.1) was EUR 35.6 billion in the EU-25 and represented 8.4 % of total value added in the wholesale trade sector (NACE Division 51). Using this measure, wholesale on a fee or contract basis was the third smallest wholesale trade activity (NACE group), ahead of the agricultural wholesaling sector and the residual sector of other wholesale. There were 831 900 persons employed in the wholesale on a fee or contract basis sector in the EU-25 in 2003, equivalent to 9.5 % of the total wholesale trade workforce.

Among the Member States, Italy had by far the largest wholesale on a fee or contract basis sector, with EUR 12.3 billion of value added in 2003, slightly more than one third of the EU-25's value added - see Table 17.5. Unsurprisingly, with such a large contribution to the EU-25 total, Italian wholesaling was very concentrated in this form of wholesaling, as this sector generated 26.0 % of Italian wholesale value added in 2003. The only Member State ⁽⁷⁾ more concentrated in this form of wholesaling was Slovenia, where wholesale on a fee or contract basis accounted for 28.6 % of wholesale trade value added, while this share was also very high in Slovakia (22.2 %). By the same measure, Lithuania's wholesale trade was least concentrated in this particular form, as wholesale on a fee or contract basis accounted for just 1.8 % of total value added.

⁽⁷⁾ Malta, 2002; Greece, not available.**COSTS, PRODUCTIVITY AND PROFITABILITY**

Apparent labour productivity was EUR 42 800 per person employed in the EU-25's wholesale trade on a fee or contract basis sector in 2003, somewhat below the wholesale trade average (EUR 48 200). It is likely that a high proportion of persons working part-time in this activity could account, in part, for the relatively low levels of apparent labour productivity.

Average personnel costs in 2003 were EUR 31 500 per employee in the EU ⁽⁸⁾, only slightly below the wholesale trade average, leading to a wage adjusted labour productivity ratio of 136.6 %, well below the wholesale trade average. In contrast, in 2003 the highest gross operating rate among the EU's ⁽⁹⁾ wholesale trade activities (NACE groups) was recorded in this sector, with a gross operating surplus equivalent to 12.9 % of turnover.

⁽⁸⁾ EU average, 2003; Malta, 2002; excluding Greece.⁽⁹⁾ EU average, 2003; Malta, 2002; excluding Greece.

Table 17.5

Wholesale on a fee or contract basis (NACE Group 51.1)**Value added and employment: ranking of the top 5 Member States, 2003**

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	Italy (12 258.1)	34.5	Italy (312.0)	37.5	Slovenia (6.0)	Slovenia (6.4)
2	United Kingdom (5 329.3)	15.0	France (76.2)	9.2	Slovakia (5.5)	Slovakia (4.7)
3	France (5 288.7)	14.9	Spain (72.4)	8.7	Italy (4.6)	Italy (4.0)
4	Germany (3 872.2)	10.9	United Kingdom (72.2)	8.7	Czech Republic (1.8)	Czech Republic (2.1)
5	Spain (2 532.7)	7.1	Germany (57.5)	6.9	Hungary (1.8)	Portugal (1.5)

(1) Malta, 2002; Greece, not available.

(2) Lithuania and Malta, 2002; Greece and Cyprus, not available.

Source: Eurostat (SBS)

17.2: AGRICULTURAL WHOLESALING

This subchapter covers the wholesaling of raw materials for agricultural activities (such as seeds and animal feed), as well as live animals. It does not cover the wholesaling of outputs from farming other than hides, skins and leather, and unmanufactured tobacco (NACE Group 51.2).

STRUCTURAL PROFILE

Agricultural wholesaling (NACE Group 51.2) was the smallest own-account wholesale trade subsector at the NACE group level, whether measured in terms of turnover, value added or employment. Indeed, the turnover generated by agricultural wholesaling was EUR 175.0 billion and value added EUR 13.6 billion in the EU-25 in 2003, which represented around 5.1 % of own-account wholesale (NACE Groups 51.2 to 51.9) turnover and 3.2 % of wholesale trade (NACE Division 51) value added. There were 319 800 persons employed in this sector in the EU-25 in 2003, some 3.6 % of the total number of persons employed in the wholesale trade sector.

Among the Member States, France recorded the highest turnover and number of persons employed in the agricultural wholesale sector, while Germany generated the highest level of value added - see Table 17.6. France's high shares made it one of the most specialised Member States ⁽¹⁰⁾ in this sector in terms of the sector's contribution to non-financial services (NACE Sections G to I and K) value added and employment, however the Netherlands and Austria were the most specialised.

⁽¹⁰⁾ Lithuania and Malta, 2002; Greece and Cyprus, not available.

The average size of agricultural wholesalers in the EU-25, as measured by turnover, was EUR 2.8 million per enterprise - see Figure 17.6 - some EUR 0.4 million below the own-account wholesale trade average in 2003. An analysis of this sector's turnover by activity for the EU ⁽¹¹⁾ - see Figure 17.7, shows that the wholesale trade of grain, seeds and animal feeds (NACE Class 51.21) dominated with more than three fifths (63.0 %) of sectoral turnover. The wholesale of live animals (NACE Class 51.23) contributed one fifth (20.6 %) of sectoral turnover, and the wholesale of flowers and plants (NACE Class 51.22) just over one tenth (11.9 %). The wholesale of hides, skins and leather (NACE Class 51.24) and the wholesale of unmanufactured tobacco (NACE Class 51.25) combined to contribute 4.5 % of sectoral turnover.

According to annualised short-term statistics, after a 3.1 % increase in the turnover index in 2000, the evolution of sales for the agricultural wholesaling sector recorded a series of small increases and decreases in turnover, ranging from -0.6 % in 2002 to 1.5 % in 2004. Between 2000 and 2005 the agricultural wholesaling sector generally recorded a slower rate of expansion for turnover than the wholesale trade average - see Figure 17.8.

⁽¹¹⁾ EU average, 2003; Hungary, 2002; excluding the Czech Republic, Greece, Ireland, Luxembourg, Malta and Slovakia.

COSTS, PRODUCTIVITY AND PROFITABILITY

In 2003 the apparent labour productivity of the agricultural wholesaling sector was EUR 42 700 per person employed in the EU-25, some EUR 5 500 below the wholesale trade average. At EUR 26 600 per employee in 2002, average personnel costs in this sector were also below the wholesale trade average (by EUR 3 600). The wage adjusted labour productivity ratio was 148.7 %, some 7.7 percentage points below the average for wholesale trade. The gross operating rate of the agricultural wholesaling sector was relatively low, as the gross operating surplus was equivalent to just 3.2 % of turnover in the EU-25 in 2002, the lowest rate among all of the wholesale trade activities (NACE groups). The gross operating rate was below the wholesale trade average in all Member States ⁽¹²⁾ in 2003 except for Estonia, Slovakia and the United Kingdom.

⁽¹²⁾ Malta, 2002; Greece, not available.

Table 17.6

Wholesale of agricultural raw materials, live animals (NACE Group 51.2)**Turnover, value added and employment: ranking of the top 5 Member States, 2003**

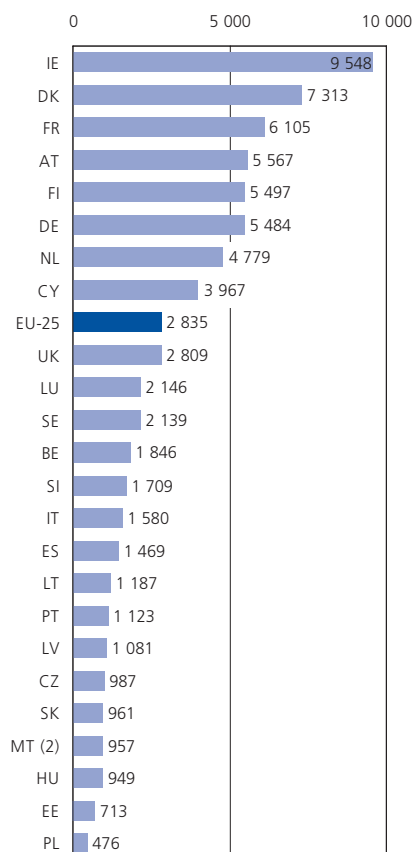
Rank	Highest turnover (EUR million) (1)	Share in EU-25 turnover (%) (1)	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	France (46 043.4)	26.3	Germany (3 064.0)	22.5	France (55.0)	17.2	Netherlands (1.4)	Austria (1.2)
2	Germany (33 458.8)	19.1	France (2 882.0)	21.1	Germany (52.4)	16.4	Austria (1.0)	Netherlands (1.0)
3	Netherlands (23 323.1)	13.3	Netherlands (1 952.2)	14.3	Spain (35.7)	11.2	Hungary (0.8)	Ireland (0.8)
4	Spain (15 641.0)	8.9	Italy (1 133.7)	8.3	Netherlands (31.8)	9.9	France (0.7)	Slovakia (0.7)
5	Italy (15 489.7)	8.9	United Kingdom (1 056.0)	7.7	Italy (27.6)	8.6	Slovakia (0.6)	France (0.7)

(1) Malta, 2002; Greece, not available.

(2) Lithuania and Malta, 2002; Greece and Cyprus, not available.

Source: Eurostat (SBS)

Figure 17.6

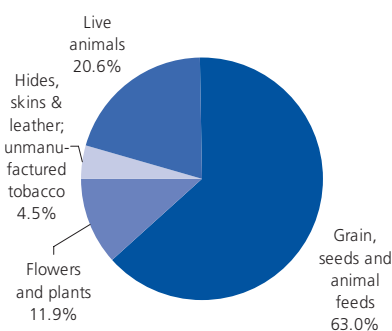
Wholesale of agricultural raw materials, live animals (NACE Group 51.2)
Turnover per enterprise, 2003
(EUR thousand) (1)


(1) Greece, not available.

(2) 2002.

Source: Eurostat (SBS)

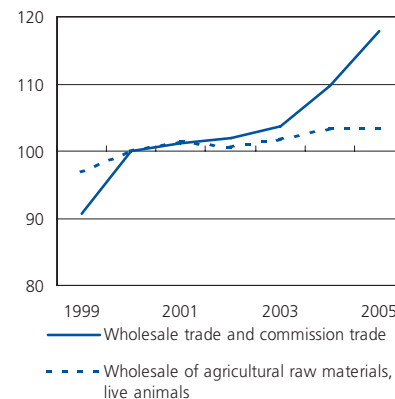
Figure 17.7

Wholesale of agricultural raw materials, live animals (NACE Group 51.2)
Breakdown of sectoral turnover, EU, 2003 (%) (1)


(1) EU average, 2003; Hungary, 2002; excluding the Czech Republic, Greece, Ireland, Luxembourg, Malta and Slovakia.

Source: Eurostat (SBS)

Figure 17.8

Wholesale of agricultural raw materials, live animals (NACE Group 51.2)
Evolution of turnover index, EU-25 (2000=100)


Source: Eurostat (STS)

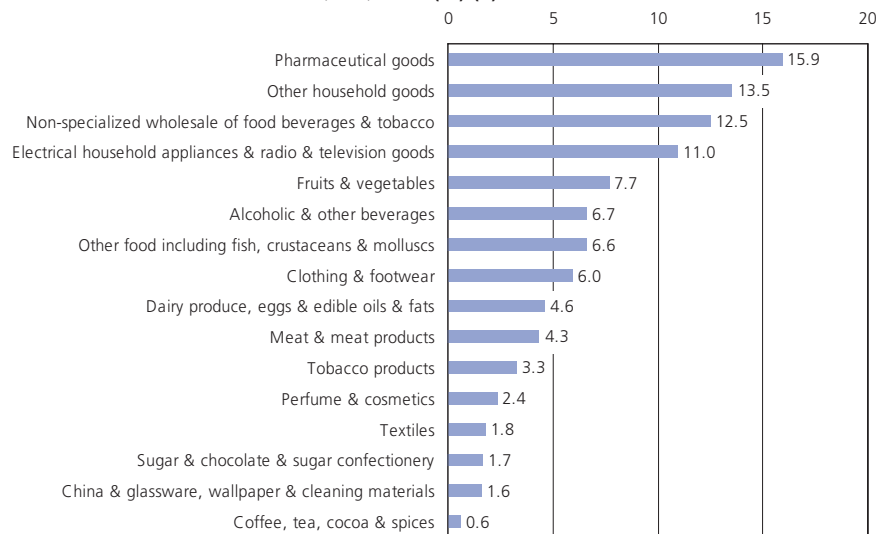
17.3: WHOLESALING OF CONSUMER GOODS

The wholesaling of consumer goods covers NACE Groups 51.3 and 51.4. The first of these groups includes the wholesaling of food, beverages and tobacco, while the latter includes household products, such as textiles, clothing, electrical appliances, games, toys, tableware, furniture and furnishings, as well as cleaning products and personal products. It should be noted that although these two categories are grouped together here as consumer goods, these activities also include the wholesaling of food and beverage products as inputs for further processing.

STRUCTURAL PROFILE

The wholesaling of consumer goods (defined as the aggregate of NACE Groups 51.3 and 51.4) generated EUR 170.2 billion of value added in 2003 in the EU-25 from a turnover of EUR 1 447 billion. These figures were equivalent to 40.2 % of EU-25 wholesale trade (NACE Division 51) value added and 42.6 % of own-account wholesale trade (NACE Groups 51.2 to 51.9) turnover. In terms of the number of persons employed, this sector provided employment to 3.6 million persons in the EU-25, equivalent to 41.3 % of the wholesale trade workforce.

Figure 17.9
Wholesale of consumer goods (NACE Groups 51.3 and 51.4)
Breakdown of sectoral turnover, EU, 2003 (%) (1)



(1) EU average, 2003; Malta, 2002; excluding the Czech Republic, Greece and Ireland.
Source: Eurostat (SBS)

Germany was to some extent the dominant Member State in the wholesale of consumer goods, with close to one fifth of EU-25 value added and turnover, although Spain had a slightly larger workforce. Portugal, the Baltic Member States, Belgium, the Netherlands and Hungary were the most specialised Member States ⁽¹³⁾ in terms of this sector's contribution to non-financial services (NACE Sections G to I and K) value added, while Malta (2002) and Spain were also relatively specialised in employment terms.

In the EU-25, turnover was quite evenly split between the wholesale of household goods (NACE Group 51.4) which had a 52.0 % share and the wholesale of food, beverages and tobacco (NACE Group 51.3) with the remaining 48.0 %. Figure 17.9 provides a more detailed breakdown of the turnover of consumer goods wholesaling.

⁽¹³⁾ Lithuania and Malta, 2002; Greece and Cyprus, not available.

Table 17.7

Wholesale of consumer goods (NACE Groups 51.3 and 51.4)

Turnover, value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest turnover (EUR million) (1)	Share in EU-25 turnover (%) (1)	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	Germany (275 216.7)	19.0	Germany (32 839.5)	19.3	Spain (573.3)	15.8	Portugal (11.4)	Portugal (8.7)
2	United Kingdom (205 893.8)	14.2	United Kingdom (28 984.9)	17.0	Germany (545.7)	15.0	Lithuania (9.9)	Malta (7.9)
3	France (203 424.5)	14.1	France (22 315.8)	13.1	United Kingdom (498.6)	13.8	Latvia (9.1)	Spain (7.9)
4	Italy (170 700.1)	11.8	Spain (18 926.6)	11.1	Italy (417.0)	11.5	Belgium (8.9)	Lithuania (7.7)
5	Spain (161 765.9)	11.2	Italy (18 167.2)	10.7	France (388.7)	10.7	Netherlands (8.8)	Latvia (6.8)

(1) Malta, 2002; Greece, not available.

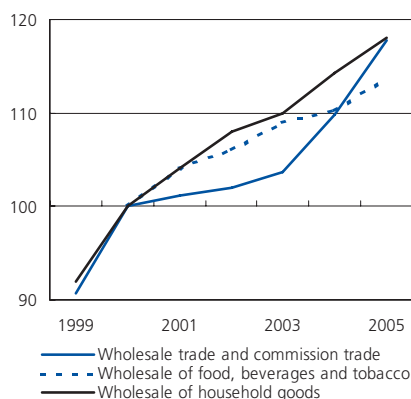
(2) Lithuania and Malta, 2002; Greece and Cyprus, not available.

Source: Eurostat (SBS)

Figure 17.10 shows the average turnover per enterprise of the consumer goods wholesaling sector. In 2003 this was EUR 2.9 million in the EU-25, ranging from EUR 2.6 million per enterprise for the household goods wholesaling subsector, to EUR 3.6 million per enterprise for the food, beverages and tobacco wholesaling subsector.

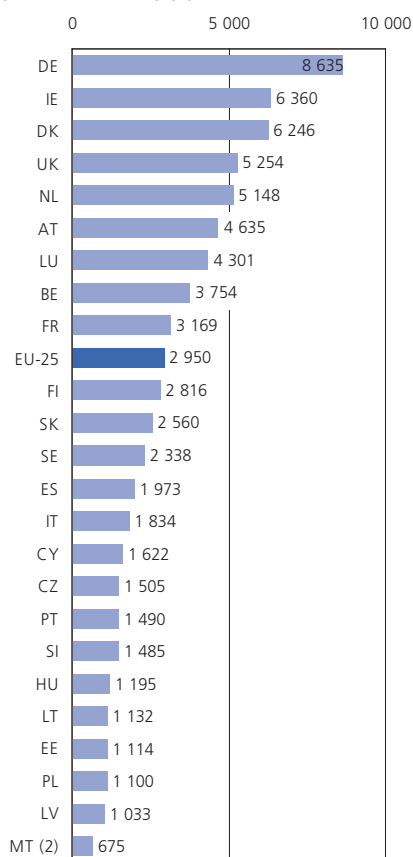
An analysis of the evolution of turnover indices for consumer goods wholesaling can be made for each of the two NACE groups that compose this sector - see Figure 17.11. The turnover index registered gains for both of these activities in all of the last five years (2001 to 2005 inclusive), a feat matched by none of the other own-account wholesale activities (NACE groups). Between 2000 and 2004 both of these activities recorded more pronounced growth than wholesale trade as a whole. However in 2005 the wholesale of food, beverages and tobacco and the wholesale of household goods both recorded growth of just over 3 %, less than half the 7.3 % growth recorded for wholesale trade as a whole.

Figure 17.11
Wholesale of consumer goods
(NACE Groups 51.3 and 51.4)
Evolution of turnover index,
EU-25 (2000=100)



Source: Eurostat (STS)

Figure 17.10
Wholesale of consumer goods
(NACE Groups 51.3 and 51.4)
Turnover per enterprise, 2003
(EUR thousand) (1)



(1) Greece, not available.
(2) 2002.

Source: Eurostat (SBS)

COSTS, PRODUCTIVITY AND PROFITABILITY

Apparent labour productivity for consumer goods wholesaling was EUR 46 900 per person employed in the EU-25 in 2003, slightly below the wholesale trade average (EUR 48 200). By this measure of productivity there was a large difference between the two NACE groups that compose this sector, as apparent labour productivity for the wholesale trade of food, beverages and tobacco was EUR 38 600 per person employed, while for the wholesale trade of household products the level was EUR 53 700; this latter figure was the second highest apparent labour productivity ratio among all wholesale trade activities in 2003, lower only than for the wholesale trade of machinery, equipment and supplies (NACE Group 51.8).

Average personnel costs were EUR 28 300 per employee in 2002 in the EU-25's consumer goods wholesaling sector, once again slightly less than the wholesale trade average. As with apparent labour productivity, this ratio was higher for the wholesale trade of household products (EUR 31 300) than for the wholesale trade of food, beverages and tobacco (EUR 24 700).

The result of these slightly lower than average productivity and personnel costs for consumer goods wholesaling was a wage adjusted labour productivity ratio of 161.8 % in the EU-25 in 2002, some 5.4 percentage points above the wholesale trade average.

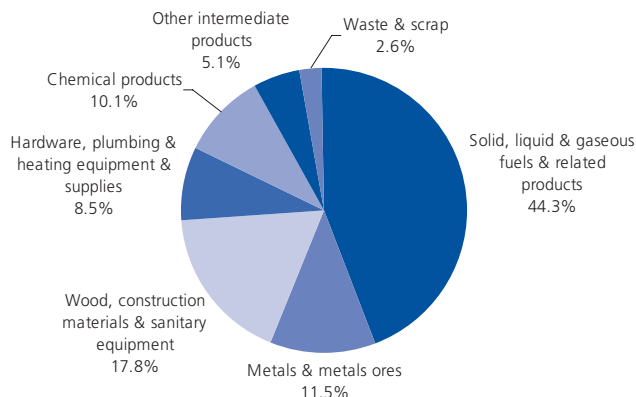
The gross operating rate was 5.2 % in the EU-25's consumer goods wholesaling sector in 2002, marginally below the wholesale trade average of 5.4 %. According to this measure of profitability the two subsectors performed differently, as the wholesale of food, beverages and tobacco subsector recorded a rate of 4.1 %, while that for the wholesale of household products was 1.5 times as high at 6.2 %.

17.4: WHOLESALING OF INTERMEDIATE GOODS

The wholesaling of non-agricultural intermediate products (NACE Group 51.5) (hereafter referred to as wholesaling of intermediate goods) covers the wholesale of all products used as production materials, fuel or other consumables, except for agricultural products (which are treated in Subchapter 17.2). It includes, for example, the wholesaling of fuels, construction materials, hardware and chemical products, as well as the wholesaling of scrap.

Figure 17.12

Wholesale of non-agricultural intermediate products, waste and scrap (NACE Group 51.5)
Breakdown of sectoral turnover, EU, 2003 (%) (1)



(1) EU average, 2003; Malta, 2002; excluding the Czech Republic, Greece and Ireland.
Source: Eurostat (SBS)

Table 17.8

Wholesale of non-agricultural intermediate products, waste and scrap (NACE Group 51.5)
Turnover, value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest turnover (EUR million) (1)	Share in EU-25 turnover (%) (1)	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	United Kingdom (250 041.4)	23.9	Germany (19 342.4)	20.8	Germany (300.1)	16.5	Latvia (9.2)	Lithuania (4.7)
2	Germany (195 409.3)	18.7	United Kingdom (16 040.0)	17.2	United Kingdom (258.5)	14.2	Estonia (7.3)	Estonia (4.7)
3	Italy (112 358.6)	10.8	France (11 654.2)	12.5	France (216.9)	11.9	Lithuania (7.1)	Latvia (4.5)
4	France (98 890.7)	9.5	Spain (9 365.0)	10.0	Spain (208.5)	11.5	Poland (5.8)	Denmark (3.7)
5	Spain (89 671.9)	8.6	Italy (9 305.6)	10.0	Italy (180.9)	9.9	Czech Republic (4.9)	Sweden (3.6)

(1) Malta, 2002; Greece, not available.

(2) Lithuania and Malta, 2002; Greece and Cyprus, not available.

Source: Eurostat (SBS)

STRUCTURAL PROFILE

Turnover in the EU-25's wholesaling of intermediate goods sector (NACE Group 51.5) was EUR 1 045 billion in 2003, and from these sales EUR 93.2 billion of value added was generated. This level of activity corresponded to 30.7 % of own-account wholesale trade (NACE Groups 51.2 to 51.9) turnover and 22.0 % of wholesale trade (NACE Division 51) value added. The intermediate goods wholesaling sector employed 1.8 million persons in the EU-25 in 2003, one fifth (20.7 %) of the wholesale trade workforce. As such, this sector was the second largest of the wholesale trade activities (NACE groups) in value added and employment terms and the largest in turnover terms.

Germany accounted for around one fifth of the EU-25's value added in intermediate goods wholesaling, ahead of the United Kingdom (see Table 17.8), and these two Member States also recorded the largest workforces and the highest levels of turnover. The Baltic States were the most specialised Member States ⁽¹⁴⁾ in this activity in terms its contribution to non-financial services (NACE Sections G to I and K) employment and value added. In value added terms, the United Kingdom and France were the least specialised in this activity, each generating less than 3 % of their non-financial services value added in this sector.

⁽¹⁴⁾ Lithuania and Malta, 2002; Greece and Cyprus, not available.

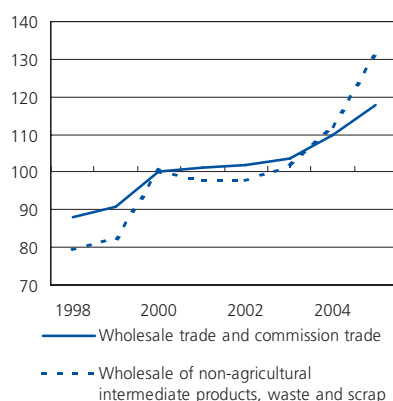
The wholesale of intermediate goods is made up of seven NACE classes, for which a turnover analysis is available for the EU ⁽¹⁵⁾. The wholesale of solid, liquid and gaseous fuels and related products (NACE Class 51.51) was by far the largest subsector with 44.3 % of intermediate goods wholesale trade turnover in 2003 - see Figure 17.12. The wholesale of wood, construction materials and sanitary equipment (NACE Class 51.53) represented the second largest share of turnover with 17.8 % of the total.

⁽¹⁵⁾ EU average, 2003; Malta, 2002; excluding the Czech Republic, Greece and Ireland.

Figure 17.13 shows the average enterprise size in terms of turnover. Enterprises in the intermediate goods wholesale trade sector were relatively large, with an average turnover of EUR 4.9 million in the EU-25 in 2003, the highest among the own-account wholesale trade activities. The two Member States with the largest intermediate goods wholesaling sectors, the United Kingdom and Germany, also had the largest enterprises by this measure.

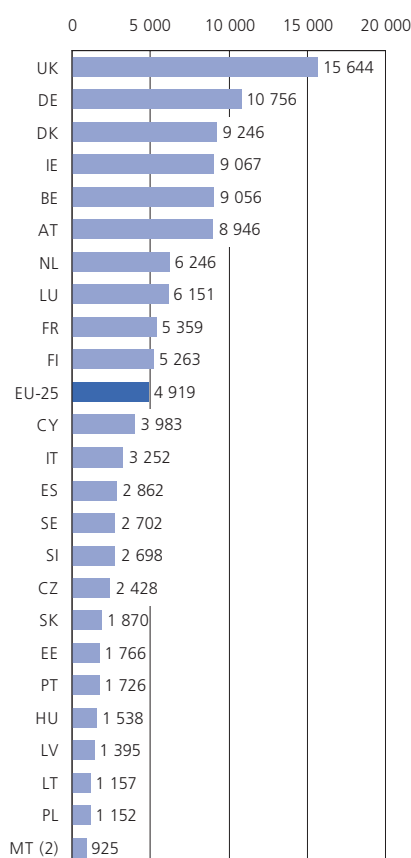
Annualised short-term statistics provide information on the evolution of the turnover index for the wholesale trade of intermediate goods - see Figure 17.14. This sector experienced very strong turnover growth in 2000, with an increase of 21.3 % registered for the EU-25. There was a sharp change in fortunes as turnover contracted by 2.2 % in 2001 followed by stagnation in 2002 (-0.1 %). In 2003 the EU-25's index of turnover increased by 4.1 %, and this upward development was reinforced in 2004 and 2005 as growth of 10.2 % and 16.7 % respectively was recorded (the highest growth rates among own-account wholesale trade NACE groups in both years). The contraction and relative stagnation experienced in 2001 and 2002 reflected in part the development of output among clients of this sector, namely industrial activities, while the strong growth in the latter years may well reflect in part price increases, notably those concerning the wholesaling of fuel which makes up a large part of this sector.

Figure 17.14.
Wholesale of non-agricultural intermediate products, waste and scrap
(NACE Group 51.5)
Evolution of turnover index, EU-25
(2000=100)



Source: Eurostat (STS)

Figure 17.13.
Wholesale of non-agricultural intermediate products, waste and scrap
(NACE Group 51.5)
Turnover per enterprise, 2003
(EUR thousand) (1)



(1) Greece, not available.

(2) 2002.

Source: Eurostat (SBS)

COSTS, PRODUCTIVITY AND PROFITABILITY

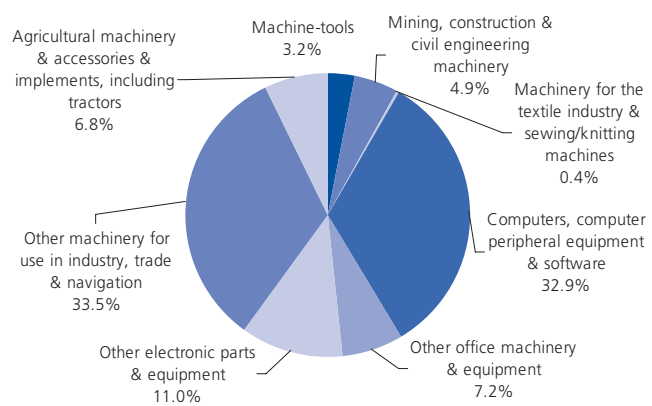
Apparent labour productivity in the EU-25 was EUR 51 200 per person employed in the wholesaling of intermediate goods sector in 2003, the third highest level among the NACE groups that make-up the wholesale trade sector, and EUR 3 000 above the wholesale trade average. Average personnel costs were EUR 30 200 per employee in the EU-25 in 2002, the same as the wholesale trade average. The slightly higher apparent labour productivity combined with a standard level of average personnel costs resulted in this sector having a relatively high wage adjusted labour productivity ratio of 177.3 % in 2002. In 2003 only in Germany was the wage adjusted labour productivity ratio in this sector below the national average for wholesale trade ⁽¹⁶⁾. The gross operating rate for the wholesale trade of intermediate goods in the EU-25 was 4.5 % in 2002, nearly one percentage point below the wholesale trade average.

⁽¹⁶⁾ Malta, 2002; Greece, not available.

17.5: WHOLESALING OF MACHINERY AND EQUIPMENT

The wholesaling of machinery, equipment and supplies concerns the wholesaling of capital goods and other final durable goods for industrial use, except those covered by motor trade. Wholesaling of installation equipment, as well as electrical and electronic products for industrial use and the wholesaling of office furniture are all included. In NACE these activities are covered by Group 51.8.

Figure 17.15 Wholesale of machinery, equipment and supplies (NACE Group 51.8) Breakdown of sectoral turnover, EU, 2003 (%) (1)



(1) EU average, 2003; excluding the Czech Republic, Greece, Ireland, Luxembourg, Malta and Slovenia. Source: Eurostat (SBS)

Table 17.9 Wholesale of machinery, equipment and supplies (NACE Group 51.8) Turnover, value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest turnover (EUR million) (1)	Share in EU-25 turnover (%) (1)	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	France (104 647.2)	18.9	France (16 129.9)	18.9	France (293.2)	19.1	Netherlands (6.0)	Denmark (5.1)
2	United Kingdom (85 387.4)	15.4	United Kingdom (15 654.3)	18.3	United Kingdom (234.8)	15.3	Denmark (5.9)	Finland (4.1)
3	Netherlands (79 711.4)	14.4	Germany (12 013.8)	14.1	Germany (198.0)	12.9	Finland (5.7)	Belgium (4.1)
4	Germany (76 133.5)	13.8	Netherlands (8 649.5)	10.1	Spain (180.1)	11.7	Belgium (5.6)	Netherlands (4.0)
5	Spain (51 139.0)	9.2	Spain (8 234.4)	9.6	Netherlands (127.3)	8.3	Austria (4.4)	Sweden (3.8)

(1) Malta, 2002; Greece, not available.
(2) Lithuania and Malta, 2002; Greece and Cyprus, not available.
Source: Eurostat (SBS)

STRUCTURAL PROFILE

Turnover in the EU-25's wholesaling of machinery and equipment sector (NACE Group 51.8) was EUR 553.2 billion in 2003, and value added EUR 85.5 billion. As such, the wholesaling of machinery and equipment represented 16.3 % of own-account wholesale trade (NACE Groups 51.2 to 51.9) turnover and 20.2 % of wholesale trade (NACE Division 51) value added. The number of persons employed by the wholesaling of machinery and equipment sector reached 1.5 million persons in the EU-25 in 2003, corresponding to 17.5 % of the wholesale trade workforce.

France had the largest wholesale trade of machinery and equipment sector among the Member States (see Table 17.9) in turnover, value added and employment terms, followed by the United Kingdom. In value added terms, the Nordic Member States, as well as Belgium, the Netherlands and Austria were all relatively specialised in the wholesaling of machinery and equipment (17), while in Slovenia and Poland these activities contributed less than 1.5 % to non-financial services (NACE Sections G to I and K) value added.

(17) Lithuania and Malta, 2002; Greece and Cyprus, not available.

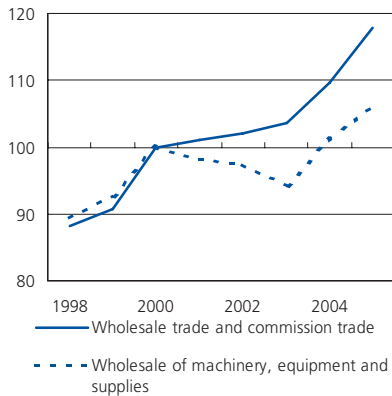
An analysis of sectoral turnover for the EU (18) is shown in Figure 17.15. Two activities dominated with around one third of sectoral turnover each, namely the wholesale trade of computers, their peripherals and software (NACE Class 51.84) with a 32.9 % share, and the miscellaneous category of wholesale trade of other machinery for use in industry, trade and navigation (NACE Class 51.87) with a 33.5 % share. The wholesale of other electronic parts and equipment was the only other activity at the NACE class level to contribute more than 10 % to sectoral turnover.

(18) EU average, 2003; excluding the Czech Republic, Greece, Ireland, Luxembourg, Malta and Slovenia.

Figure 17.16 provides information on the average size of enterprises in the machinery and equipment wholesaling sector in terms of their turnover. In 2003 the average turnover per enterprise in the EU-25 was EUR 3.1 million, marginally lower than the own-account wholesale trade average of EUR 3.2 million.

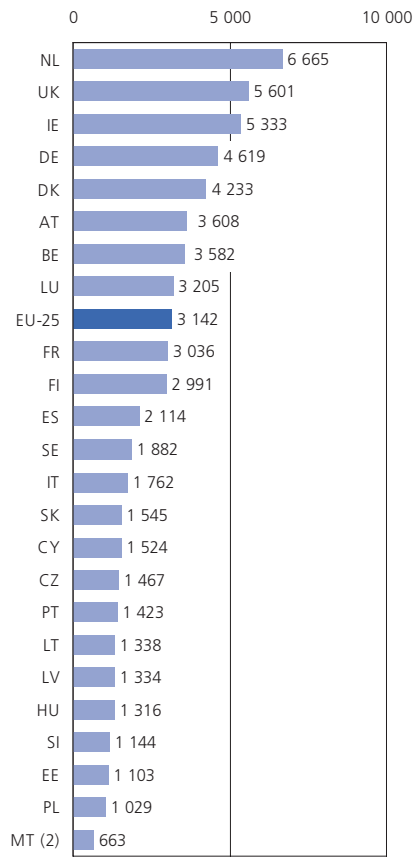
In the EU-25 the turnover index for the machinery and equipment wholesaling sector rose by 3.6 % and 7.9 % in 1999 and 2000, after which the sector experienced three years of contraction with sales falling on average by 2.0 % per annum - see Figure 17.17. In 2004 and 2005 there was renewed turnover growth, as the index increased by 7.3 % and 5.0 % respectively.

Figure 17.17
Wholesale of machinery, equipment and supplies (NACE Group 51.8)
Evolution of turnover index, EU-25
(2000=100)



Source: Eurostat (STS)

Figure 17.16
Wholesale of machinery, equipment and supplies (NACE Group 51.8)
Turnover per enterprise, 2003
(EUR thousand) (1)



(1) Greece, not available.

(2) 2002.

Source: Eurostat (SBS)

COSTS, PRODUCTIVITY AND PROFITABILITY

Machinery and equipment wholesaling had the highest apparent labour productivity (EUR 55 600 per person employed in 2003) among the NACE groups that make-up the EU-25's wholesale trade sector, some EUR 7 400 more than the wholesale trade average. At EUR 41 400 per employee, average personnel costs in the EU's ⁽¹⁹⁾ machinery and equipment wholesaling sector were also well above the wholesale trade average resulting in a wage adjusted labour productivity of 135.1 %, the lowest among wholesale trade NACE groups. Several Member States did however record a wage adjusted labour productivity ratio above the wholesale trade average, most notably Slovenia, Slovakia and Poland.

⁽¹⁹⁾ EU average, 2003; Malta, 2002; excluding Greece.

17.6: OTHER WHOLESALE TRADE

The other wholesale trade sector covers specialised own-account wholesaling of products not covered in Subchapters 17.2 to 17.5, as well as non-specialised wholesaling, where enterprises resell a variety of products. These activities are covered by NACE Group 51.9.

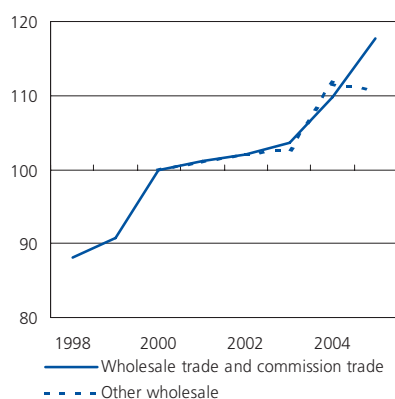
STRUCTURAL PROFILE

Turnover in the EU-25's other wholesale trade (NACE Group 51.9) sector in 2003 was EUR 179.5 billion from which EUR 25.7 billion of value added was generated. By both of these output measures this was the second smallest wholesale trade (NACE Division 51) activity at the NACE group level, larger only than agricultural wholesaling (NACE Group 51.2). There were 653 500 persons employed in other wholesale trade activities in the EU-25 in 2003, equivalent to 7.4 % of the wholesale trade workforce. Germany, Poland and the United Kingdom had the largest other wholesale trade sectors in turnover, value added and employment terms. Given its position in these rankings, Poland was unsurprisingly the most specialised Member State in terms of the contribution of these activities to non-financial services (NACE Sections G to I and K) value added and employment - see Table 17.10. Polish own-account wholesaling (NACE Groups 51.2 to 51.9) was highly concentrated in the other wholesale trade sector, which accounted for one third (34.8 %) of all Polish own-account wholesale turnover, compared with an EU-25 average of 5.3 %; in Slovakia and Slovenia more than one quarter of own-account wholesale trade turnover was generated in this sector.

Figure 17.18 shows average turnover per enterprise within the other wholesale trade sector. The EU-25 average for this ratio was particularly influenced by the high values reported in Germany and to a lesser extent Finland. Nevertheless, despite the very high averages in these two Member States, the average size of enterprises in the EU-25 within this sector (EUR 1.5 million in 2003) was less than half the own-account wholesale trade average, and the smallest across own-account wholesale trade NACE groups.

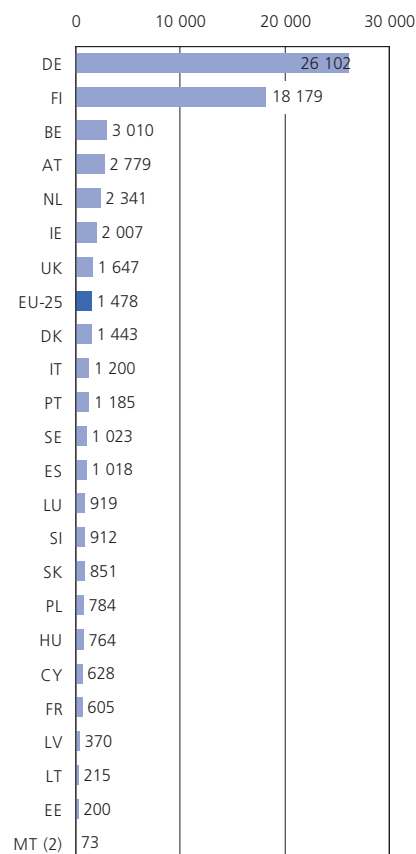
The other wholesale trade sector recorded a period of relative stagnation between 2000 and 2003 in turnover terms according to annualised short-term statistics - see Figure 17.19. Turnover then jumped 8.5 % in 2004 before declining by 0.8 % in 2005, the latter the result mainly of a slight fall in turnover in Germany (-1.2 %) and Poland (-0.1 %) combined with a much larger fall in the United Kingdom (-13.2 %).

Figure 17.19
Other wholesale (NACE Group 51.9)
Evolution of main indicators, EU-25
(2000=100)



Source: Eurostat (STS)

Figure 17.18
Other wholesale (NACE Group 51.9)
Turnover per enterprise, 2003
(EUR thousand) (1)



(1) The Czech Republic and Greece, not available.
(2) 2002.
Source: Eurostat (SBS)

Table 17.10

Other wholesale (NACE Group 51.9)

Turnover, value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest turnover (EUR million) (1)	Share in EU-25 turnover (%) (1)	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	Germany (47 506.4)	26.5	Germany (9 914.3)	38.6	Poland (245.8)	37.6	Poland (8.9)	Poland (6.3)
2	United Kingdom (37 341.8)	20.8	United Kingdom (5 338.8)	20.8	United Kingdom (108.6)	16.6	Slovakia (5.1)	Slovakia (4.8)
3	Poland (33 802.4)	18.8	Poland (3 352.9)	13.0	Germany (74.5)	11.4	Slovenia (4.1)	Estonia (3.7)
4	Netherlands (8 742.9)	4.9	Netherlands (1 346.0)	5.2	Netherlands (26.3)	4.0	Hungary (3.1)	Slovenia (3.3)
5	Italy (7 658.8)	4.3	Italy (908.3)	3.5	Hungary (23.2)	3.6	Estonia (2.4)	Hungary (1.7)

(1) Malta, 2002; the Czech Republic and Greece, not available.

(2) Malta and Lithuania, 2002; the Czech Republic, Greece and Cyprus, not available.

Source: Eurostat (SBS)

COSTS, PRODUCTIVITY AND PROFITABILITY

Apparent labour productivity was EUR 39 300 per person employed in the EU-25's other wholesale trade sector in 2003, the second lowest among the wholesale trade NACE groups. Average personnel costs in the other wholesale trade sector were EUR 22 500 per employee in the EU-25 in 2002, equivalent to around three quarters of the wholesale trade average. The wage adjusted labour productivity ratio was 131.5 % in 2002 in the EU-25's other wholesale trade sector, while the gross operating rate was 4.6 %; both of these ratios were below wholesale trade averages.

Table 17.11

Wholesale trade and commission trade, except of motor vehicles and motorcycles (NACE Division 51)**Main indicators, 2003 (1)**

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million)	3 585 010	159 381	43 231	92 231	633 123	5 532	:	323 513	554 852	36 851	366 276	3 573	6 106	6 566	10 827	33 190	1 445
Production (EUR million)	:	44 570	9 735	50 321	136 661	1 174	:	74 615	149 930	8 241	222 363	798 1	222 1	387	1 699	6 766	344
Value added at factor cost (EUR million)	423 792	15 388	4 226	10 598	81 046	537	:	40 192	58 742	4 931	47 152	566	699	629	915	3 010	223
Gross operating surplus (EUR million) (2)	188 282	6 253	2 368	3 330	37 305	293	:	17 092	16 695	2 424	28 718	225	514	333	395	1 580	132
Purch. of goods and serv. (EUR million)	:	141 773	39 570	71 191	552 571	5 065	:	286 863	493 229	31 997	315 087	3 113	5 504	6 014	9 931	30 453	1 224
Gross inv. in tang. goods (EUR million)	:	1 841	694	1 170	4 146	137	:	5 985	5 215	495	6 638	77	162	159	85	692	24
Number of pers. employed (thousands)	8 788	228	237	163	1 228	36	:	1 073	1 040	74	1 067	18	45	66	14	164	10
Personnel costs (EUR million) (2)	222 383	9 135	1 858	7 268	43 741	245	:	23 100	42 047	2 476	18 434	341	186	296	520	1 430	91
App. lab. prod. (EUR thous./pers. emp.)	48.2	67.6	17.8	65.0	66.0	14.9	:	37.4	56.5	66.9	44.2	31.3	15.5	9.5	65.9	18.3	22.6
Av. pers. costs (EUR thous./empl.) (2)	30.2	48.7	10.1	45.8	38.4	7.3	:	24.8	41.0	35.7	32.2	19.2	4.1	4.6	40.8	9.2	11.7
Wage adj. labour productivity (%) (2)	156.4	138.7	176.7	142.0	171.7	204.3	:	151.2	137.9	187.3	137.0	162.9	375.6	205.5	161.5	198.1	192.7
Gross operating rate (%) (2)	5.4	3.9	5.5	3.6	5.9	5.3	:	5.3	3.0	6.6	7.8	6.3	8.4	5.1	3.7	4.8	9.1
Inv. per pers. empl. (EUR thousand)	:	8.1	2.9	7.2	3.4	3.8	:	5.6	5.0	6.7	6.2	4.2	3.6	2.4	6.1	4.2	2.4
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million)	281 019	90 810	100 051	64 683	8 128	11 088	48 434	91 966	605 488	14 311	:	22 177	:	:	:	61 083	:
Production (EUR million)	61 332	26 314	44 083	15 354	2 294	2 692	11 908	23 811	152 719	2 065	:	5 039	:	:	:	19 031	:
Value added at factor cost (EUR million)	31 032	11 639	9 095	7 379	1 122	1 018	5 606	12 396	72 403	598	:	1 795	:	:	:	7 493	:
Gross operating surplus (EUR million)	13 200	4 350	5 472	3 047	503	517	2 238	3 679	33 102	363	:	1 110	:	:	:	2 443	:
Purch. of goods and serv. (EUR million)	250 232	76 159	90 701	57 829	7 049	10 116	44 031	80 500	512 702	14 084	:	21 125	:	:	:	51 309	:
Gross inv. in tang. goods (EUR million)	2 581	1 075	1 354	1 383	155	193	558	1 078	6 175	430	:	1 100	:	:	:	745	:
Number of pers. employed (thousands)	460	192	660	270	42	76	83	217	1 196	135	:	291	:	:	:	104	:
Personnel costs (EUR million)	17 832	7 289	3 623	4 332	619	501	3 367	9 231	39 302	236	:	686	:	:	:	5 050	:
App. lab. prod. (EUR thous./pers. emp.)	67.4	60.6	13.8	27.3	26.6	13.4	67.8	57.1	60.5	4.4	:	6.2	:	:	:	72.2	:
Av. pers. costs (EUR thous./empl.)	41.7	42.1	7.7	17.5	16.5	6.7	42.1	47.7	35.4	2.1	:	2.5	:	:	:	51.0	:
Wage adj. labour productivity (%)	161.5	144.0	179.8	156.0	161.6	200.5	161.2	119.8	170.9	214.7	:	247.1	:	:	:	141.5	:
Gross operating rate (%)	4.7	4.8	5.5	4.7	6.2	4.7	4.6	4.0	5.5	2.5	:	5.0	:	:	:	4.0	:
Inv. per pers. empl. (EUR thousand)	5.6	5.6	2.1	5.1	3.7	2.5	6.7	5.0	5.2	3.2	:	3.8	:	:	:	7.2	:

(1) Malta, 2002.

(2) EU-25, 2002.

Source: Eurostat (SBS)

Retail trade



Compared with the previous edition of this publication this chapter on retail trade and repair has been restructured to follow more closely the structure of Division 52 within the NACE classification, in particular concerning in-store retail trade. Whereas previously in-store retailers were split between food and non-food in-store retailers, in this edition a first distinction is made between non-specialised in-store retailers (Subchapter 18.1) and specialised in-store retailers; with the latter further split between food (Subchapter 18.2) and non-food retailers (Subchapter 18.3). In addition, this edition also separates the activity of second-hand goods retailing (Subchapter 18.4), while as in the previous editions the analysis of retailing is completed by a separate analysis of retailing not in stores (Subchapter 18.5), and an analysis of the repair of personal and household goods (Subchapter 18.6).

While the structure of in-store retailing follows more closely the NACE classification, the distinction between food and non-food retailing remains of analytical interest, and for this reason Subchapter 18.2 contains a special analysis (see Box 18.2) focused on food retailing, contrasting specialised and non-specialised food retailers, while in Subchapter 18.3 there is a similar analysis (see Box 18.3) for non-food items.

Retail trade services are covered by the European Commission's proposal for a Directive on services in the internal market. The objective of the proposal is to achieve a genuine internal market in services by removing legal and administrative barriers to the development of service activities between Member States, facilitating the provision and use of cross-border services in the EU. At the time of writing, it is expected that this Directive will be adopted in the near future - see Chapter 22 for more information.

Retail trade provides an interface between producers and consumers. Typically, one or

Table 18.1
Top global retailers originating from within the EU-25, 2004 (1)

Retailer	World rank	Country of origin	Retail sales (EUR billion)
Carrefour	2	FR	72 006
Metro	4	DE	56 099
Tesco	5	UK	50 249
Ahold	9	NL	36 010
Aldi Einkauf (2)	10	DE	34 493
Schwarz Group (2)	11	DE	34 402
Rewe (2)	12	DE	34 393
Intermarché (2)	13	FR	33 540
Auchan	16	FR	25 221
E. Leclerc (2)	21	FR	27 999

(1) Retail sales values converted from USD.

(2) Estimates.

Source: Deloitte, 2006 Global Powers of Retailing, Stores, January 2006, www.deloitte.com and www.stores.org

several distributors intervene before a product which leaves the factory gate reaches the final consumer, the last of which is a retailer. Retailers represent the largest proportion of enterprises within distributive trades (NACE Section G) activities, accounting for slightly over 60 % of all distribution enterprises in the EU-25 in 2003.

According to a ranking made by Deloitte and Stores for 2004 ⁽¹⁾ - see Table 18.1 - among the top retailers in the EU-25 were four German groups, four French, and one each from the Netherlands and the United Kingdom. These large retailers generally operate in a wide range of countries inside the EU-25, in other areas of Europe, as well as in the Americas and Asia. Most of the large EU-25 retailers were principally retailers of food and beverages.

⁽¹⁾ Deloitte, 2005 Global Powers of Retailing, Stores, January 2005, more information at: <http://www.deloitte.com> or <http://www.stores.org>.

Division 52 of NACE covers retail trade as well as the repair of personal and household goods (hereafter referred to as retail trade and repair); the retail trade of motor vehicles and motorcycles is covered by NACE Division 50 (see Chapter 15). The activity of retailing covers the resale without transformation of new and used goods to the general public for personal or household use and consumption; note that the renting and hiring of personal and household goods to the public is excluded.

NACE

- 52: retail trade, except of motor vehicles and motorcycles; repair of personal and household goods;
- 52.1: retail sale in non-specialised stores;
- 52.2: retail sale of food, beverages and tobacco in specialised stores;
- 52.3: retail sale of pharmaceuticals and medical goods, cosmetic and toilet articles;
- 52.4: other retail sale of new goods in specialised stores;
- 52.5: retail sale of second-hand goods in stores;
- 52.6: retail sale not in stores;
- 52.7: repair of personal and household goods.

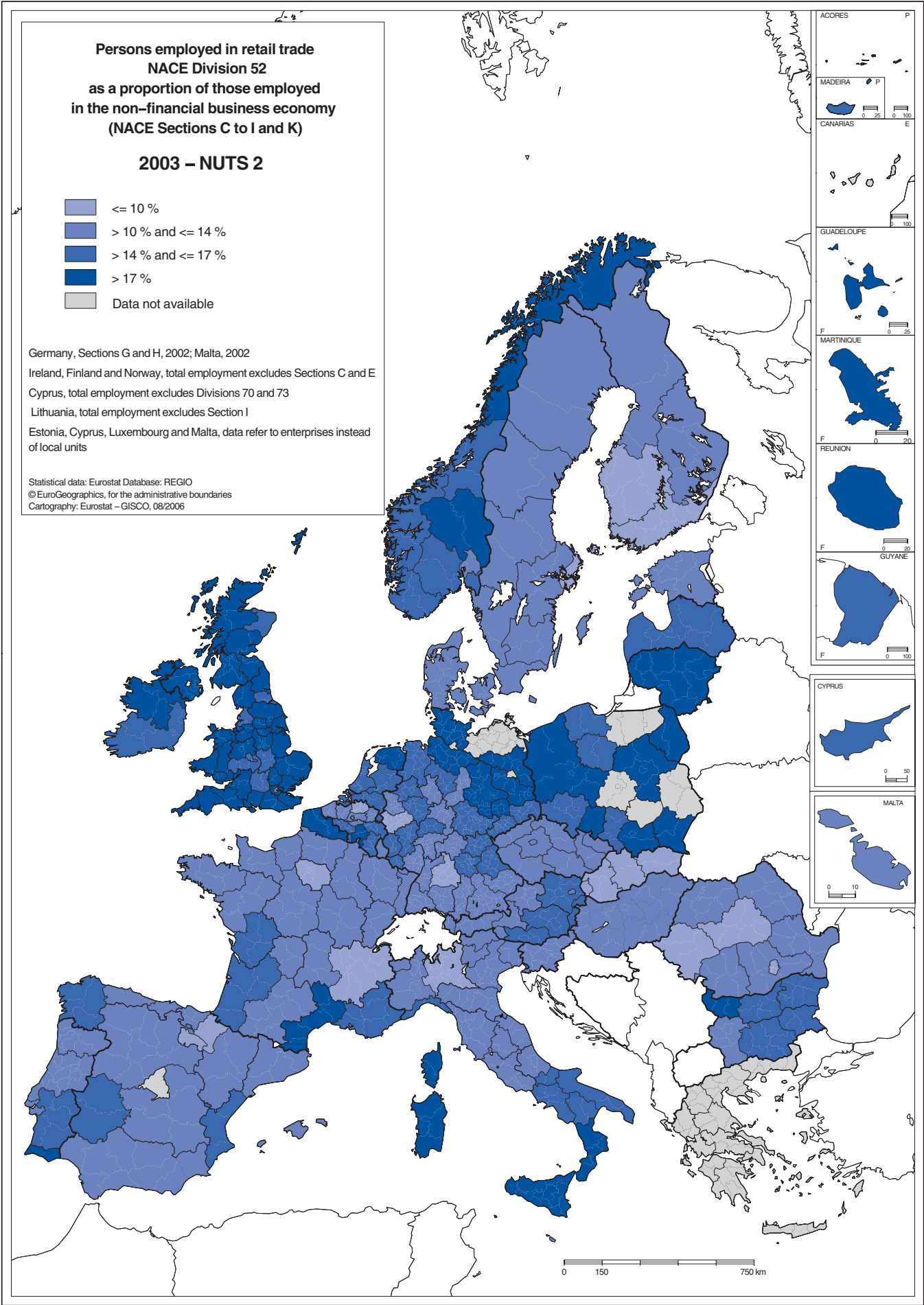


Table 18.2

Retail trade and repair of personal and household goods (NACE Division 52)
Structural profile, EU-25, 2003

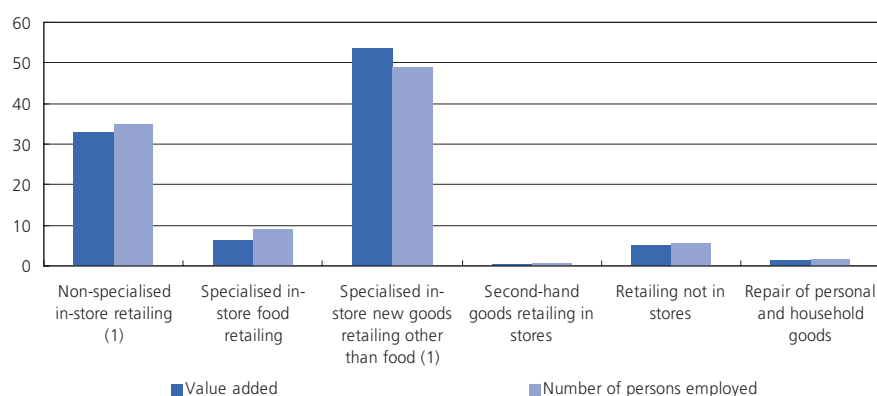
	Turnover (EUR million)	Value added (EUR million)	Share of non-financial services value added (%)	Number of persons employed (thousands)	Share of non-financial services employment (%)
Retail trade and repair of personal and household goods	1 940 227	366 852	13.8	16 021	23.2
Non-specialised in-store retailing (1)	800 000	120 000	4.5	5 561	8.1
Specialised in-store food retailing	120 435	23 765	0.9	1 436	2.1
Specialised in-store new goods retailing other than food (1)	869 387	195 768	7.4	7 803	11.3
Pharmaceutical & medical goods, cosmetics & toiletries	169 387	35 768	1.3	1 120	1.6
Other specialised in-store new goods retailing	700 000	160 000	6.0	6 683	9.7
Second-hand goods retailing in stores	7 173	1 718	0.1	106	0.2
Retailing not in stores	87 473	18 646	0.7	864	1.3
Repair of personal and household goods	10 401	4 463	0.2	251	0.4

(1) Value added and related share, rounded estimates based on non-confidential data.

Source: Eurostat (SBS)

E-commerce has in recent years played an increasing role in the shopping patterns of consumers, who may prefer to order goods from their home for convenience, or alternatively purchase items from afar that are not on offer locally. According to Eurostat's information society statistics, some 8 % of the turnover of distributive trades (including motor trades (NACE Division 50) and wholesale trades (NACE Division 51), as well as retail trade and repair) enterprises with ten or more persons employed was derived from e-commerce in 2005. According to the same source 18 % of the EU-25's population ordered or bought goods or services for private use through the Internet in 2005 (during the three months preceding the survey). When restricting the reference population to only those individuals living in a household with Internet access the proportion increased to 24 %, and when limited further to those living in a household with broadband Internet access the proportion increased to 39 %. Note that these figures refer to goods and services supplied to individuals by all sectors of the economy, not just enterprises that are specialised in retail sales.

Figure 18.1

Retail trade and repair of personal and household goods (NACE Division 52)
Breakdown of sectoral value added and employment, EU-25, 2003 (%)


(1) Value added, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

STRUCTURAL PROFILE

In 2003, the retail trade and repair sector (NACE Division 52) employed some 16.0 million persons in the EU-25, while value added was EUR 366.9 billion. The relative size of the retail trade and repair sector varies considerably according to which economic indicator is used to measure its importance: in value added terms it accounted for 39.4 % of the distributive trades (NACE Section G) total, while in terms of employment it was the largest of the distributive trades sectors with 56.0 % of the workforce. Its contribution to non-financial services (NACE Sections G to I and K) was 13.8 % in value added terms and 23.2 % in employment terms. These relatively high employment shares indicate that retail trade and repair had a lower apparent labour productivity (value added per person employed) than the distributive trades or the non-financial services average. Figure 18.1 provides a breakdown of the retail trade and repair sector's value added and employment,

structured according to the activities presented in Subchapters 18.1 to 18.6. Using either of these measures specialised in-store new goods retailing other than food (NACE Groups 52.3 and 52.4) and non-specialised in-store retailing (NACE Group 52.1) were the largest activities.

Box 18.1: focus on retail trade turnover

In 2003, retail trade activities (NACE Groups 52.1 to 52.6, excluding Repair of personnel and household goods) generated EUR 1 930 billion of turnover in the EU-25. A breakdown of turnover for retail trade highlights the split between specialised (NACE Groups 52.2 to 52.5) and non-specialised (NACE Group 52.1) in-store retailing - see Figure 18.2 - as well as the importance of retailing not in-stores (NACE Group 52.6).

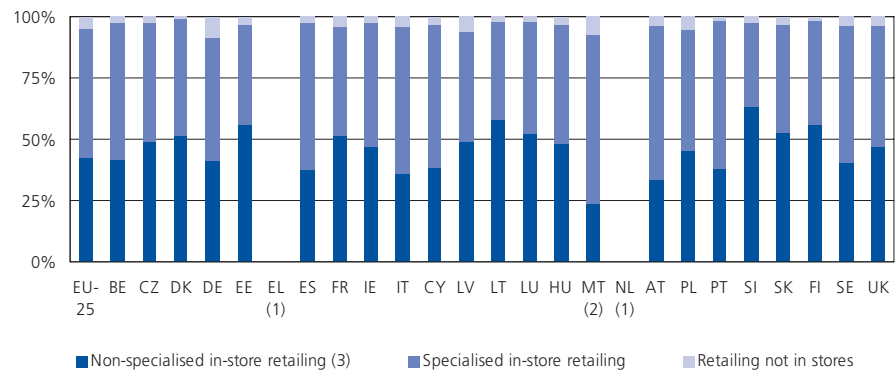
Specialised in-store retailing was predominant in the EU-25's retail trade sector in 2003, generating 52.9 % of turnover, some 10.5 percentage points more than the share of non-specialised in-store retailing. In 10 of the 23 Member States ⁽²⁾ with data available at least 50 % of their retail trade turnover was generated by specialised in-store retailers, while non-specialised in-store retailers generated 50 % or more of retail trade turnover in eight Member States. The highest share for specialised in-store retailers was 68.8 % in Malta, while many other southern Member States, as well as Austria, also had a majority of their turnover accounted for by specialised in-store retailers. The highest proportion of turnover generated by non-specialised in-store retailers was recorded in Slovenia (63.4 %).

Some 4.6 % of retail trade turnover was generated by retailing not in-stores (NACE Group 52.6) in the EU-25, a proportion that ranged from as much as 8.4 % in Germany (where mail order sales were particularly high) to a low of 1.3 % in Denmark.

⁽²⁾ Malta, 2002; Greece and the Netherlands, not available.

Figure 18.2

Retail trade (NACE Groups 52.1 to 52.6)
Breakdown of sectoral turnover, 2003 (%) (1)



(1) 2002.

(2) Not available.

(3) EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

In terms of value added and employment the United Kingdom and Germany accounted for the largest shares of the EU-25's retail trade and repair sector in 2003, each generating around one fifth of the value added, while their employment shares were lower (19.6 % and 16.4 % respectively). Given the essential nature of retail trade, providing services directly to consumers, it is unsurprising that there was little difference in specialisation between the Member States ⁽³⁾: the share of retail trade and repair in non-financial services value added ranged from 10.2 % in Denmark to 15.8 % in Portugal. The specialisation in each region (in some cases the whole country is treated as one region) can be seen from the map on page 302 which is based on the non-financial business economy employment share of the retail trade and repair sector. Even in the regions with the highest share of non-financial business economy employment concentrated in the retail trade and repair sector

(around 22 % to 24 % in several regions of the United Kingdom), this share was only around 4 times higher than in the regions with the lowest share (around 6 % to 8 %, mainly in Slovakia); this was the smallest difference in regional employment specialisation of the activities shown in the maps in Chapters 2 to 23.

Short-term statistics for retail trade and repair provide information on the volume of sales, turnover and employment. The volume of sales index is an indicator of final domestic demand which can be used as part of a business cycle analysis - it is generally calculated as the turnover index deflated by appropriate subindices of the harmonised index of consumer prices. The EU-25's volume of sales index for retail trade and repair rose every year between 1995 and 2005, with a modest rate of development up until 1997, after which the pace of growth quickened, with growth averaging 2.5 % per annum from 1997 to 2005. At a more detailed level it can be noted that from 1998 the volume of sales index rose for three of the four activities (NACE groups) for which an EU-25 index is

⁽³⁾ Lithuania and Malta, 2002; Greece and Cyprus, not available.

Table 18.3

Retail trade and repair of personal and household goods (NACE Division 52)
Turnover, value added and employment: ranking of the top 5 Member States, 2003

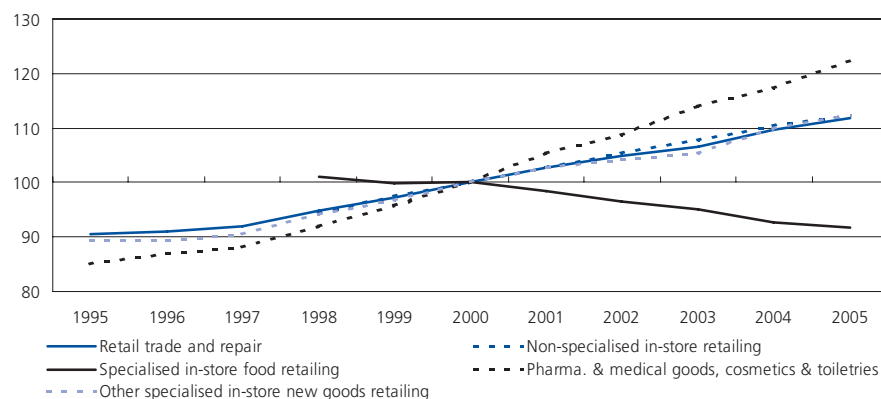
Rank	Highest turnover (EUR million) (1)	Share in EU-25 turnover (%) (1)	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	United Kingdom (363 500.4)	18.7	United Kingdom (76 391.5)	20.8	United Kingdom (3 135.6)	19.6	Portugal (15.8)	Poland (31.1)
2	France (347 472.4)	17.9	Germany (73 289.0)	20.0	Germany (2 622.7)	16.4	Poland (15.6)	Latvia (28.3)
3	Germany (346 329.7)	17.8	France (61 149.9)	16.7	Italy (1 757.9)	11.0	Slovenia (15.5)	Lithuania (27.6)
4	Italy (244 584.1)	12.6	Italy (38 663.7)	10.5	France (1 703.4)	10.6	Ireland (15.4)	Portugal (25.0)
5	Spain (168 759.7)	8.7	Spain (33 764.3)	9.2	Spain (1 613.2)	10.1	France (15.4)	Hungary (24.6)

(1) Malta, 2002; Greece, not available.

(2) Lithuania and Malta, 2002; Greece and Cyprus, not available.

Source: Eurostat (SBS)

Figure 18.3
Retail trade and repair of personal and household goods (NACE Division 52)
Volume of sales index, EU-25 (2000=100)



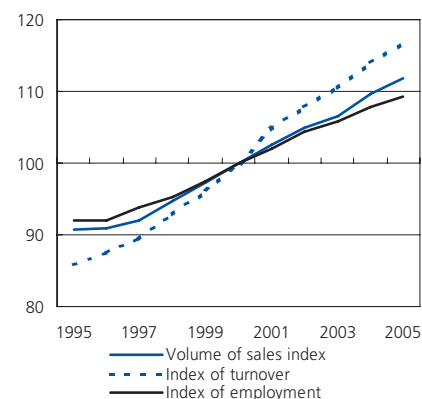
Source: Eurostat (STS)

available - see Figure 18.3 - with the most rapid gains recorded for specialised in-store retailing of pharmaceutical and medical goods, cosmetic and toilet articles (NACE Group 52.3). In contrast, there was a contraction in the volume of sales index for specialised in-store food retailing (NACE Group 52.2), which might be explained by consumers opting to shop through other retail formats, for example, non-specialised stores, markets, on-line, or via mail order.

The index of employment (see Figure 18.4) followed a similar path to that for the volume of sales, with EU-25 growth rates for retail trade and repair between 1.0 % and 2.6 % each year during the period 1997 to 2005. The fastest annual employment increase was recorded in the middle of this period as annual growth was 2.0 % or more between 1999 and 2002.

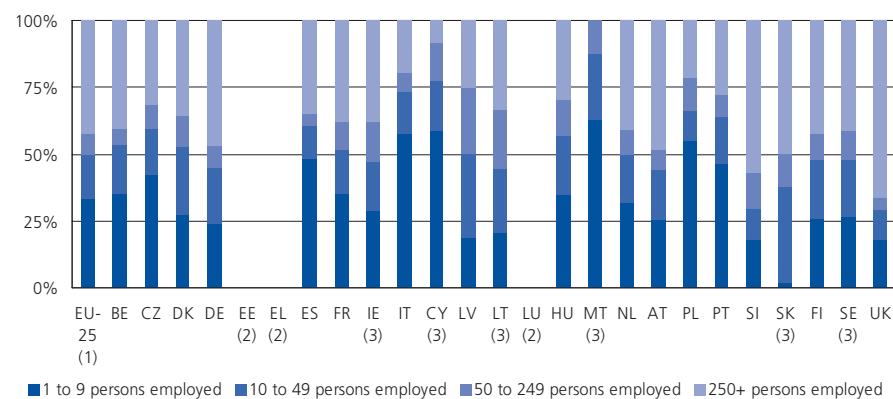
A size class analysis for the EU-25's retail trade and repair sector is available for 2003 - see Figure 18.5. It shows that large enterprises (with 250 or more persons employed) generated the highest proportion of retail trade and repair value added (42.4 %). This share was not only higher for retail trade and repair than the average for distributive trades (12.8 percentage points higher), but also higher than the average for non-financial services (5.5 percentage points higher). At the other end of the size scale, the contribution of micro enterprises (with less than 10 persons employed) to retail trade and repair value added (33.3 %) was also above the non-financial services and distributive trades averages. As a result, the contribution of small enterprises (with 10 to 49 persons employed) and medium-sized enterprises (with 50 to 249 persons employed) to retail trade and repair value added was particularly low; in the case of medium-sized enterprises it was less than half the average for non-financial services.

Figure 18.4
Retail trade and repair of personal and household goods (NACE Division 52)
Evolution of main indicators, EU-25 (2000=100)



Source: Eurostat (STS)

Figure 18.5
Retail trade and repair of personal and household goods (NACE Division 52)
Share of value added by enterprise size class, 2003 (%)



(1) Rounded estimates based on non-confidential data for 1 to 9 and for 10 to 49 persons employed.
 (2) Not available.
 (3) 2002.

Source: Eurostat (SBS)

Table 18.4

Retail trade and repair of personal and household goods (NACE Division 52)
Labour force characteristics, 2005

	Female		Part-time		Breakdown by age (% share of total)		
	Proportion of those employed (%)	Index (non-financial services=100)	Proportion of those employed (%)	Index (non-financial services=100)	< 30 years	30-49 years	50+ years
EU-25	61.2	139.2	30.2	145.2	31.3	48.8	20.0
BE	58.7	142.8	32.0	145.9	25.3	55.3	19.4
CZ	66.5	146.4	8.8	146.3	25.5	52.4	22.1
DK	56.3	139.0	44.1	169.7	51.7	32.9	15.3
DE	66.6	141.3	41.6	145.5	22.8	52.5	24.8
EE	73.9	150.5	7.6	90.3	24.4	51.6	24.0
EL	49.5	127.0	5.2	120.2	25.9	54.0	20.1
ES	61.3	136.4	18.3	122.9	33.6	49.3	17.1
FR	61.0	141.5	24.8	153.0	28.7	53.2	18.1
IE	63.6	139.0	32.6	170.3	45.4	39.1	15.4
IT	51.3	128.2	18.1	110.6	23.1	57.0	19.9
CY	57.6	125.7	9.6	104.3	27.5	48.0	24.6
LV	72.4	138.8	7.0	118.6	29.1	52.3	18.6
LT	69.4	145.4	6.4	110.1	23.7	60.4	15.9
LU	68.6	162.8	23.2	154.2	20.0	61.6	18.4
HU	64.8	140.3	6.6	134.7	27.4	54.7	17.9
MT	40.6	135.6	14.7	109.8	37.8	48.1	14.1
NL	58.1	138.5	64.4	139.3	48.0	36.2	15.8
AT	69.4	138.5	38.5	147.1	29.4	54.8	15.8
PL	68.1	152.8	14.0	134.9	37.5	48.7	13.9
PT	55.7	124.6	9.3	127.7	30.9	43.9	25.2
SI	62.4	135.6	6.7	77.1	27.9	59.3	12.8
SK	70.1	148.8	3.9	132.9	26.1	59.6	14.3
FI	68.5	151.8	34.3	183.9	37.2	41.0	21.8
SE	62.0	158.2	44.7	192.8	38.7	38.2	23.1
UK	59.4	136.2	48.8	164.6	39.5	38.3	22.1

Source: Eurostat (LFS)

LABOUR FORCE CHARACTERISTICS

According to results from the Labour Force Survey, the EU-25's retail trade and repair workforce had a relatively high proportion of women, 61.2 % in 2005, which was 17.3 percentage points above the average for non-financial services (NACE Sections G to I and K), and considerably higher than in the other distributive trades sectors. Indeed, the retail trade and repair workforce had the highest proportion of women in its workforce among all of the NACE divisions that make up the non-financial services economy, and one of the highest proportions within the business economy (NACE Sections C to K) as a whole. The female share of retail trade and repair employment was systematically higher than the average recorded for non-financial services in each of the Member States, ranging from around 25 to 30 % higher in Greece, Italy, Cyprus and Portugal to more than 50 % higher in Luxembourg, Poland, Finland and Sweden.

The EU-25's retail trade and repair sector was also characterised by a higher recourse to part-time work (30.2 % of the workforce in 2005) when compared with the non-financial services average (20.8 %), and as much as three times as high as in the other two distributive trades sectors. The proportion of part-time employment in retail trade and repair activities was the highest among all of the NACE divisions ⁽⁴⁾ that constitute the business economy. In relative terms, high part-time employment in this sector was particularly evident in the Nordic Member States, Ireland and the United Kingdom, where the part-time employment rate was 65 % or more above the national, non-financial services average.

⁽⁴⁾ NACE Divisions 12, 13 and 16 not available.

The EU-25's retail trade and repair workforce employed a relatively high number of young persons, as 31.3 % of those employed in 2005 were aged between 15 and 29, compared with 26.2 % for the non-financial services sector as a whole; again this share was higher than the corresponding proportions recorded for the other two distributive trades sectors. The retail trade and repair sector reported the second highest share of younger workers among the non-financial services NACE divisions ⁽⁵⁾, just below the share recorded for hotels and restaurants.

⁽⁵⁾ NACE Divisions 61 and 62 not available.

Table 18.5

Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods (NACE Division 52)
Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003 (1)

Rank	Investment in tangible goods relative to total operating costs (%) (2)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	2.7	87.7	12.3	22.9	17.1	132.5	7.8
1	Slovenia (6.1)	Poland (95.1)	Austria (15.3)	Luxembourg (41.4)	Sweden (29.7)	Latvia (184.4)	Malta (12.6)
2	Ireland (5.6)	Malta (94.0)	Germany (15.3)	France (35.9)	France (26.7)	Ireland (165.7)	Ireland (10.0)
3	Latvia (5.1)	Slovakia (92.5)	Sweden (14.6)	Finland (35.1)	Luxembourg (26.4)	Malta (163.6)	Spain (9.1)
4	Slovakia (4.7)	Hungary (92.4)	United Kingdom (13.9)	Sweden (33.1)	Finland (25.0)	Slovakia (159.9)	Netherlands (8.7)
5	Lithuania (4.7)	Czech Republic (92.3)	Denmark (13.8)	Belgium (31.2)	Belgium (24.7)	Luxembourg (156.6)	United Kingdom (8.4)

(1) Malta, 2002; Greece, not available.

(2) EU-25 is an EU average based on available data for 2002 and 2003.

(3) EU-25, 2002.

Source: Eurostat (SBS)

COSTS, PRODUCTIVITY AND PROFITABILITY

Typically for a distributive trades activity, the level of gross tangible investment relative to operating expenditure was low in the retail trade and repair sector, at just 2.7 % in the EU ⁽⁶⁾, which was around half the average recorded for non-financial services, although higher than the equivalent ratios for motor trades or wholesale trade. This low ratio reflects the high level of operating expenditure associated with distributive trades activities, boosted by high expenditure on goods purchased for resale in the same condition. An analysis of operating expenditure confirms that purchases of goods and services accounted for 87.7 % of total operating expenditure in the EU's ⁽⁷⁾ retail trade and repair sector (again somewhat below the corresponding ratios for motor trades or wholesale trade).

⁽⁶⁾ EU average, 2003; Malta, 2002; excluding Greece.

⁽⁷⁾ EU average, 2003; Malta, 2002; excluding Greece.

EU-25 apparent labour productivity in the retail trade and repair sector was EUR 22 900 in 2003 and average personnel costs were EUR 17 100 per employee in 2002. Because of the high incidence of part-time employment in the retail trade and repair sector care should be taken when comparing these ratios based on simple head counts across Member States or activities. Note also that an analysis of personnel costs only reflects the cost of paid employees, and that the proportion of paid employees in the total number of persons employed within the retail trade and repair sector was relatively low at 77.1 % in 2002, indicating a high proportion of self-employment and unpaid family workers. The wage adjusted labour productivity ratio is less influenced by these two important characteristics of retail trade and repair activities; it stood at 132.5 % for the EU-25's retail trade and repair sector in 2002, compared with averages of 144.4 % for distributive trades and 145.9 % for non-financial services. An analysis of this ratio for the Member States ⁽⁸⁾ shows that in 2003 only Italy (97.5 %) recorded a wage adjusted labour productivity ratio below 100 %, resulting from higher average personnel costs than apparent labour productivity; the highest ratios were recorded in Latvia (184.4 %) and Ireland (165.7 %). The gross operating rate, calculated as the ratio of gross operating surplus to turnover, is an indicator of profitability. In 2002 this rate in the EU-25's retail trade and repair sector was 7.8 %, more than for either motor trades or wholesale trade, but below the non-financial services average of 11.2 %.

⁽⁸⁾ Malta, 2002; Greece, not available.

18.1: NON-SPECIALISED IN-STORE RETAILING

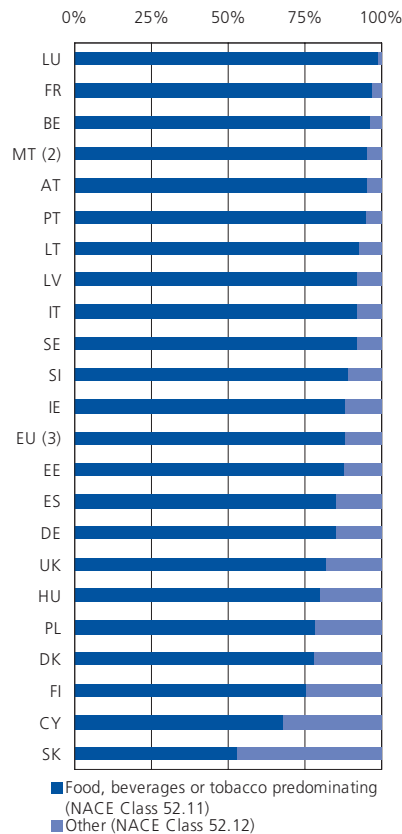
This subchapter covers retail sales in non-specialised stores, with food, beverages and tobacco predominating (NACE Class 52.11) or not (NACE Class 52.12). The latter NACE class principally includes department stores that stock a general line of merchandise. Together, these activities are referred to as non-specialised in-store retailing within this subchapter.

Non-specialised retailers offer consumers the opportunity to buy a broader range of products at a sole point of purchase (for example, supermarkets, hypermarkets or convenience stores). Large, non-specialised food retailers, in particular, may have greater price flexibility, as they are able to accept lower margins on certain products, as well as exerting greater purchasing power on their suppliers; furthermore, they may have their own integrated wholesale activities. While the number of pan-European brands has increased significantly and consumers can find most of them in a wide range of Member States, it is important to bear in mind that food retailers also work with local suppliers, often reflecting local supply as well as social and cultural characteristics, all of which influence the choice of food and beverages that are available within a particular region.

STRUCTURAL PROFILE

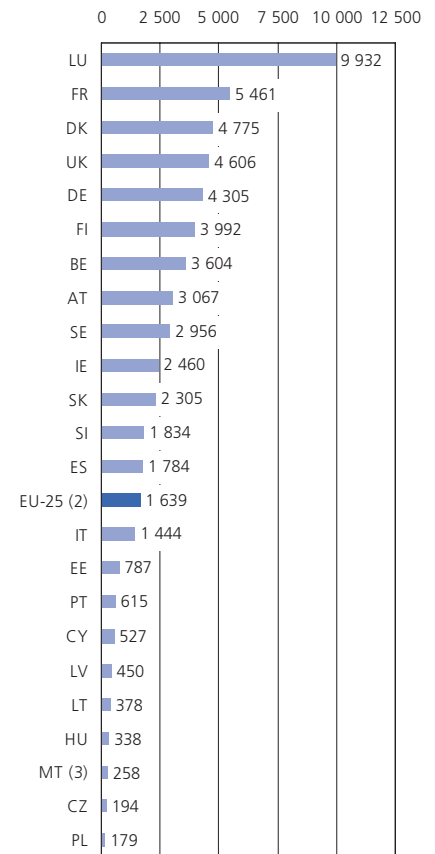
The EU-25's non-specialised in-store retailing sector (NACE Group 52.1) generated EUR 800 billion of turnover in 2003, EUR 120 billion of value added, while employing 5.6 million persons; as such, it accounted for 32.9 % of the value added created by the retail trade and repair sector (NACE Division 52) and a slightly higher proportion (34.7 %) of its workforce.

Figure 18.6
Non-specialised in-store retailing
(NACE Group 52.1)
Breakdown of turnover, 2003 (%) (1)



(1) The Czech Republic, Greece and the Netherlands, not available.
(2) 2002.
(3) EU average, 2003; Malta, 2002; excluding the Czech Republic, Greece and the Netherlands.
Source: Eurostat (SBS)

Figure 18.7
Non-specialised in-store retailing
(NACE Group 52.1)
Turnover per enterprise, 2003
(EUR thousand) (1)



(1) Greece and the Netherlands, not available.
(2) Turnover, rounded estimate based on non-confidential data.
(3) 2002.
Source: Eurostat (SBS)

Table 18.6

Non-specialised in-store retailing (NACE Group 52.1)
Turnover, value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest turnover (EUR million) (1)	Share in EU-25 turnover (%) (1)	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national non-financial services value added (%) (3)	Highest share of national non-financial services employment (%) (4)
1	France (178 140.6)	22.3	United Kingdom (29 254.0)	24.4	United Kingdom (1 344.3)	24.2	Slovenia (9.6)	Lithuania (14.7)
2	United Kingdom (169 412.3)	21.2	Germany (22 868.3)	19.1	Germany (852.9)	15.3	Lithuania (8.3)	Poland (12.6)
3	Germany (140 983.6)	17.6	France (22 508.0)	18.8	France (629.0)	11.3	Ireland (7.4)	Latvia (12.3)
4	Italy (87 453.1)	10.9	Spain (10 798.1)	9.0	Poland (496.7)	8.9	Finland (6.7)	Slovenia (11.5)
5	Spain (63 113.2)	7.9	Italy (10 449.3)	8.7	Italy (423.2)	7.6	Slovakia (6.4)	Slovakia (11.1)

(1) Malta, 2002; Greece and Netherlands, not available.

(2) Malta, 2002; Greece, not available.

(3) Lithuania and Malta, 2002; Greece, Cyprus and the Netherlands, not available.

(4) Lithuania and Malta, 2002; Greece and Cyprus, not available.

Source: Eurostat (SBS)

With EUR 29.3 billion of value added and 1.3 million persons employed in 2003, the United Kingdom was by far the largest contributor to EU-25 value added and employment, although France recorded a higher share of turnover - see Table 18.6. In value added terms, Slovenia and Lithuania (2002) were the most specialised of the Member States⁽⁹⁾, while the non-specialised in-store retailing sector was least developed (in relation to non-financial services value added) in Malta (2002).

The importance of the two subsectors within non-specialised in-store retailing is shown in Figure 18.6. In the EU⁽¹⁰⁾, the subsector with food, beverages or tobacco predominating (NACE Class 52.11) generated 88.1 % of sectoral turnover; it was dominant in all of the Member States for which data are available, frequently generating more than four fifths of sectoral turnover, and only in Slovakia did its share fall below two thirds.

Large enterprises (with more than 250 persons employed) were particularly dominant in the EU's⁽¹¹⁾ non-specialised in-store retailing sector as they contributed 72.8 % of sectoral value added. An alternative indicator that can be used to analyse the size of enterprises is the average turnover generated per enterprise (not the number of outlets) which is presented in Figure 18.7. In 2003, average turnover per enterprise in the EU-25's non-specialised in-store retailing sector was around EUR 1.6 million. The largest average enterprise size (in turnover terms) was recorded in Luxembourg (at just under EUR 10 million), nearly double the next highest value recorded in France. Relatively high turnover per enterprise was also recorded in some of the north-western Member States, notably in Denmark, the United Kingdom and Germany.

Figure 18.8 provides a breakdown of the number of stores for the non-specialised in-store retailing sector, with stores classified according to their sales space. The structure of stores in the United Kingdom, the Netherlands and Denmark stands out from the other countries due to the high proportion of very large stores (with at least 1 000 m² of sales space), which represented more than one in five of all stores in each of these three countries. The same Member States reported a low proportion of small retail stores (with less than 120 m² of sales space), particularly in Denmark.

⁽⁹⁾ Lithuania and Malta, 2002; Greece, Cyprus and Netherlands, not available.

⁽¹⁰⁾ EU average, 2003; Malta, 2002; excluding the Czech Republic, Greece and the Netherlands.

⁽¹¹⁾ EU average, 2003; Sweden, 2002; excluding Greece, Cyprus, Luxembourg, Malta and the Netherlands.

Figure 18.8

Stores in non-specialised in-store retailing (NACE Group 52.1)

Category of sales space for retail stores engaged in retail trade, 2002 (% of total sales space)

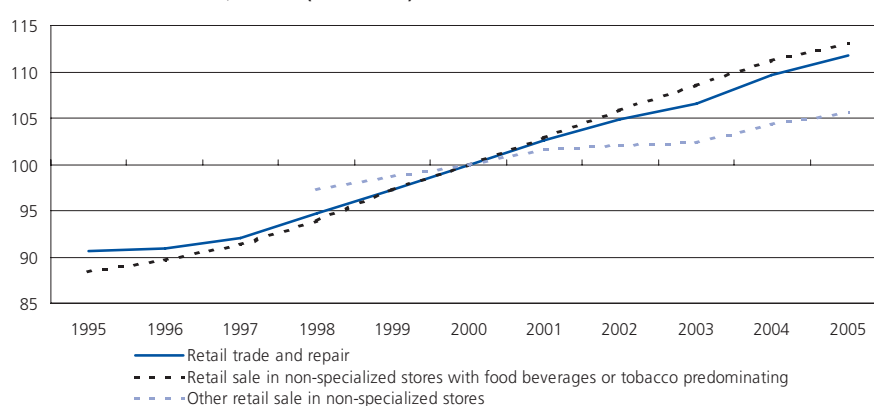


Source: Eurostat (SBS)

Figure 18.9

Non-specialised in-store retailing (NACE Group 52.1)

Volume of sales index, EU-25 (2000=100)



Source: Eurostat (STS)

Short-term statistics show that over the period 1995 to 2005 there was a steady growth in the volume of sales index for EU-25 non-specialised in-store retailing, see Figure 18.9, but large differences between the two subsectors. Comparing over the period 1998 to 2005 (for which both indices are available), non-specialised in-store retailers with food, beverages and tobacco predominating averaged 2.7 % sales growth per annum compared with 1.2 % for other non-specialised in-store retailers.

COSTS, PRODUCTIVITY AND PROFITABILITY

The apparent labour productivity ratio of the EU-25's non-specialised in-store retailing sector was EUR 20 000 per person employed in 2003. The wage adjusted labour productivity ratio for the EU⁽¹²⁾ was 132.4 %, ranging among the Member States from just over 100 % in Italy (102.4 %) and Hungary (105.7 %) to over 180 % in Luxembourg (180.2 %), Ireland (181.2 %) and Malta (183.8 %, 2002). Ireland (11.2 %) and Malta (9.2 %, 2002) also recorded the highest gross operating rates in 2003⁽¹³⁾, while the lowest levels of profitability (using this measure) were registered in Hungary, Estonia and Italy (below 3 %).

⁽¹²⁾ EU average, 2003; Malta, 2002; excluding Greece and the Netherlands.

⁽¹³⁾ Malta, 2002; Greece and the Netherlands, not available.

18.2: SPECIALISED IN-STORE FOOD RETAILING

The activities covered by this subchapter are retail sale in specialised stores of food, beverages or tobacco (NACE Group 52.2).

Table 18.7

Specialised in-store food retailing (NACE Group 52.2)

Turnover, value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest turnover (EUR million) (1)	Share in EU-25 turnover (%) (1)	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	Spain (21 932.8)	18.2	Spain (4 015.3)	16.9	Spain (252.4)	17.6	Spain (1.8)	Spain (3.5)
2	Italy (18 194.8)	15.1	United Kingdom (3 732.8)	15.7	United Kingdom (224.2)	15.6	Malta (1.7)	Portugal (2.8)
3	United Kingdom (16 813.5)	14.0	Italy (3 721.7)	15.7	Italy (219.3)	15.3	Poland (1.4)	Poland (2.8)
4	Germany (14 150.4)	11.7	Germany (3 494.7)	14.7	Germany (170.4)	11.9	Italy (1.4)	Italy (2.8)
5	France (13 459.6)	11.2	France (3 172.4)	13.3	Poland (110.0)	7.7	Portugal (1.0)	Malta (2.3)

(1) Malta, 2002; Greece, not available.

(2) Lithuania and Malta, 2002; Greece and Cyprus, not available.

Source: Eurostat (SBS)

Food retailing specialists are generally small retail outlets that do not belong to national or international chains, for example, fruit and vegetable shops, bakers, butchers and fishmongers. Contrary to many non-food items, food is a typically inelastic good, which means that when prices rise, consumers generally do not cut back as much on the total quantity purchased, although price increases may influence the choice of brand or retailer chosen by individual customers.

Box 18.2: food, beverage and tobacco retailing

In this edition of European business in-store food, beverages and tobacco retailing has been split between Subchapters 18.1 and 18.2, distinguishing specialised (NACE Group 52.2) from non-specialised (NACE Class 52.11) retailers. Data for 2003 ⁽¹⁵⁾ shows that the Baltic States and Slovenia had the lowest proportion of in-store food, beverages and tobacco retailing turnover from specialised retailers (under 6 % of the total). Specialised retailers also generated relatively high shares of turnover in many of the other southern European countries - notably Spain, Cyprus, Portugal and Italy – but they also accounted for more than one fifth of the turnover generated by the in-store retailing of food, beverages and tobacco in Austria and Poland.

⁽¹⁵⁾ Malta, 2002; the Czech Republic and Greece, not available.

STRUCTURAL PROFILE

The EU-25's specialised in-store food retailing sector (NACE Group 52.2) generated EUR 120.4 billion of turnover in 2003. The wealth creation of specialised in-store food retailing was valued at EUR 23.8 billion, equivalent to 6.5 % of the retail trade and repair (NACE Division 52) total, while this activity employed 1.4 million persons, some 9.0 % of the retail trade and repair workforce.

Table 18.7 highlights the importance of this sector in Spain which had the highest turnover, value added and employment among the Member States in 2003. Unsurprisingly, Spain was the most specialised of the Member States ⁽¹⁴⁾ in this sector as regards its contribution to non-financial services (particularly in employment terms), while the Baltic Member States (Lithuania, 2002), along with Finland, were the least specialised (in value added terms).

Figure 18.10 shows that half (49.9 %) the turnover in the specialised in-store food retailing sector in the EU ⁽¹⁶⁾ was generated by enterprises selling fruit, vegetables, meat, fish or bakery products (NACE Classes 52.21 to 52.24). Specialised in-store retailing of beverages (NACE Class 52.25) accounted for its highest proportion of turnover in Sweden where it reached 56.5 %, some 3.7 times as high as the EU average (15.2 %); it should be noted that in Sweden the sale of alcoholic beverages is only allowed in publicly controlled, specialised stores. The specialised in-store retailing of tobacco products (NACE Class 52.26) was particularly high in Austria (58.5 %), 3.2 times as high as the EU average (18.4 %).

⁽¹⁶⁾ EU average, 2003; Ireland, Malta and Sweden, 2002; excluding the Czech Republic, Estonia, Greece, Latvia and Finland.

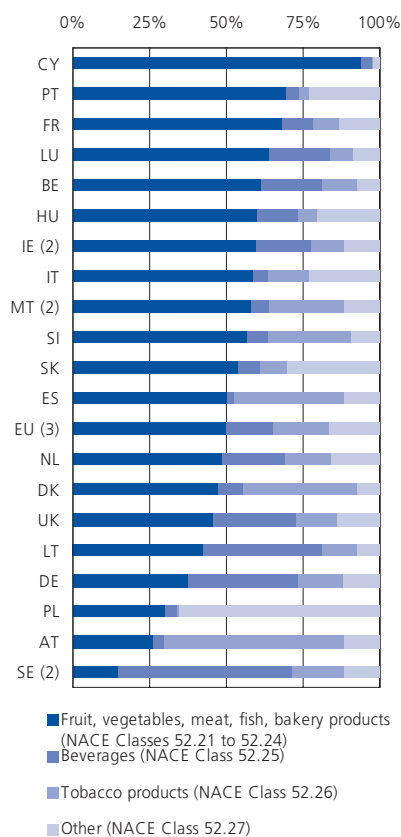
Figure 18.11 shows that average turnover per enterprise in the EU-25's specialised in-store food retailing sector was EUR 227 000 in 2003, considerably smaller than the averages for other forms of in-store retailing. Finland had the largest average enterprise size (in turnover terms), as it was the only Member State where turnover per enterprise was greater than EUR 1 million. Unlike other in-store retailing sectors, one of the Member States that joined the EU in 2004 figured near the top of the ranking, with average turnover per enterprise in Slovakia reaching EUR 715 000. Portugal, Italy and Spain were grouped with several Member States that joined the EU in 2004 with average turnover per enterprise well below the EU-25 average.

Figure 18.12 provides a breakdown of the number of stores within the specialised in-store food retailing sector, according to their sales space. At least 60 % of stores in the United Kingdom and Denmark had less than 120 m² of sales space, and this proportion of small stores rose close to 98 % in Spain and Portugal.

⁽¹⁴⁾ Lithuania and Malta, 2002; Greece and Cyprus, not available.

Figure 18.10

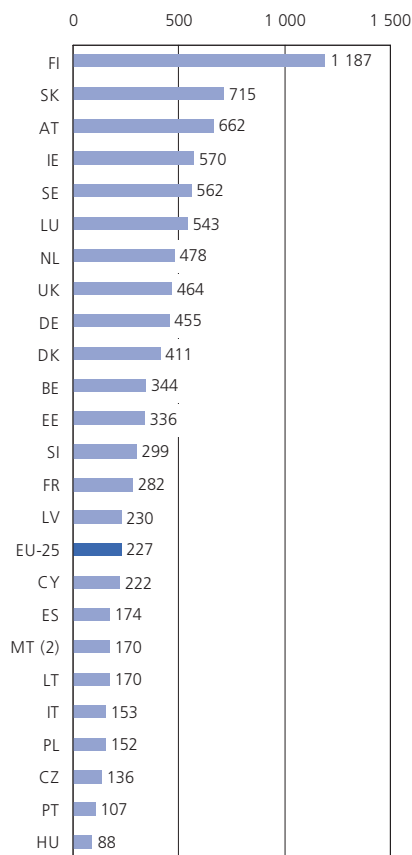
**Specialised in-store food retailing
(NACE Group 52.2)**
Breakdown of turnover, 2003 (%) (1)



(1) The Czech Republic, Estonia, Greece, Latvia and Finland, not available.
(2) 2002.
(3) EU average, 2003; Ireland, Malta and Sweden, 2002; excluding the Czech Republic, Estonia, Greece, Latvia and Finland.
Source: Eurostat (SBS)

Figure 18.11

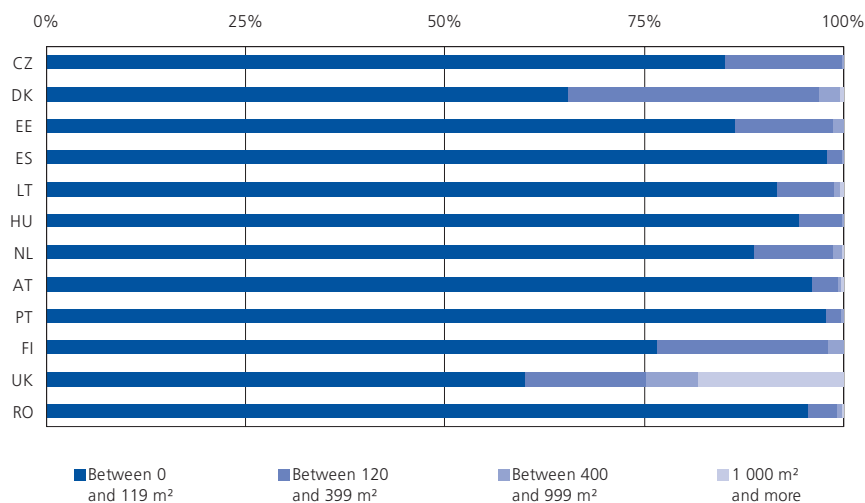
**Specialised in-store food retailing
(NACE Group 52.2)**
**Turnover per enterprise, 2003
(EUR thousand) (1)**



(1) Greece, not available.
(2) 2002.
Source: Eurostat (SBS)

Figure 18.12

Stores in specialised in-store food retailing (NACE Group 52.2)
Category of sales space for retail stores engaged in retail trade, 2002 (% of total sales space)



Source: Eurostat (SBS)

Table 18.8

Specialised in-store food retailing (NACE Group 52.2)
Breakdown of turnover by product, 2002 (% of selected CPA codes)

	DK	EE	ES	CY	LT	HU	MT	AT	FI	SE	BG
Share of retail trade services of food, beverages and tobacco											
Fruit and vegetables	4.7	0.8	8.6	24.7	1.4	15.4	12.0	1.7	1.6	2.7	6.9
Meat (including poultry) & meat products	4.4	13.9	21.4	48.6	33.0	35.1	26.0	22.0	1.3	1.9	13.6
Fish, crustaceans and molluscs	0.6	6.3	9.1	7.9	1.1	0.4	6.9	0.4	2.9	3.3	2.7
Bread, cakes, flour confectionery & sugar confectionery	25.7	3.5	11.7	3.2	4.9	11.7	23.1	5.9	2.4	11.4	16.5
Alcoholic and other beverages	27.0	48.0	3.4	6.0	40.9	14.3	5.5	4.4	83.6	69.0	17.0
Tobacco products	28.9	22.1	38.7	1.7	9.8	7.6	13.6	61.2	0.3	10.9	23.7
Other retail trade services of food	8.6	5.4	7.1	7.9	9.0	15.5	12.8	4.3	7.9	0.8	19.7

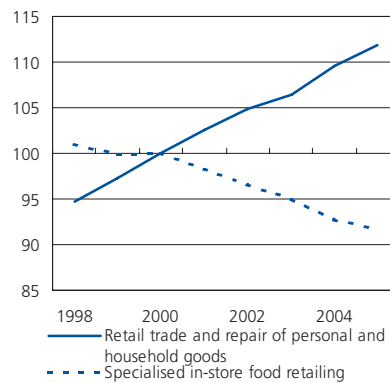
Source: Eurostat (SBS)

Table 18.8 provides a turnover breakdown of food, beverages and tobacco products sold by enterprises operating within the specialised in-store food retailing sector - note that these enterprises may well sell other products, and that these products may well be sold by enterprises in other sectors too, most notably by non-specialised in-store enterprises and enterprises retailing not in-stores (for example, market stalls).

Annualised short-term statistics show that over the period 1998 to 2005 nearly every year there was a contraction in the volume of sales index for EU-25 specialised in-store food retailing. The average decline in the volume of turnover during this period was 1.4 % per annum, with the sharpest reduction in 2004 when the index dropped by 2.4 % - see Figure 18.13.

Figure 18.13

Specialised in-store food retailing
(NACE Group 52.2)
Volume of sales index, EU-25 (2000=100)



Source: Eurostat (SBS)

COSTS, PRODUCTIVITY AND PROFITABILITY

EU-25 apparent labour productivity for the specialised in-store food retailing sector (NACE Group 52.2) in 2003 was EUR 16 500 per person employed, while average personnel costs in 2002 were EUR 13 400 per employee. These values were approximately 25 % below the retail trade and repair (NACE Division 52) average. The wage adjusted labour productivity ratio for this sector was 127.8 % in 2002, compared with a retail trade and repair average of 132.5 %. Wage adjusted labour productivity fell below parity (100 %) in 2003 in Cyprus (89.7 %), Italy (94.4 %) and Slovenia (95.1 %), while this ratio was at its highest among the Member States ⁽¹⁷⁾ in Malta (182.1 %, 2002). The gross operating rate, an indicator of profitability, shows that the gross operating surplus for the EU-25's specialised in-store food retailing sector was equivalent to 10.5 % of turnover in 2002, higher than the retail trade and repair average (7.8 %).

⁽¹⁷⁾ Malta, 2002; Greece, not available.

18.3: SPECIALISED IN-STORE NEW GOODS RETAILING OTHER THAN FOOD

The activities covered by this subchapter are retail sale in specialised stores, other than food, beverages and tobacco. Two activities (NACE groups) are covered: dispensing chemists, retailers of medical, orthopaedic, cosmetic and toilet articles (NACE Group 52.3); and other specialised in-store retailing of new goods (NACE Group 52.4), for example, shops selling clothes, shoes, furniture, books or electrical items.

This subchapter deals with the retailing of consumer non-durable, semi-durable and durable goods, contrary to the previous subchapter that only covered food items that are by definition non-durables. Among the retailing of non-durable goods are pharmaceuticals, cosmetics and toilet articles, while semi-durable goods include items such as clothing and footwear. Electrical household appliances and radio and television equipment are examples of durable goods.

Compared with food retailing, other new goods retailing is more strongly influenced by the general economic cycle. Most non-food items are bought less frequently or at a certain period of the year, although there are examples (such as newspapers) of non-durable non-food products that are purchased on a frequent basis. For the retail sale of clothes and footwear, promotional sales or changes in seasons determine cycles, while the purchase of some other goods (for example, games and toys) may be concentrated around special events (like Christmas).

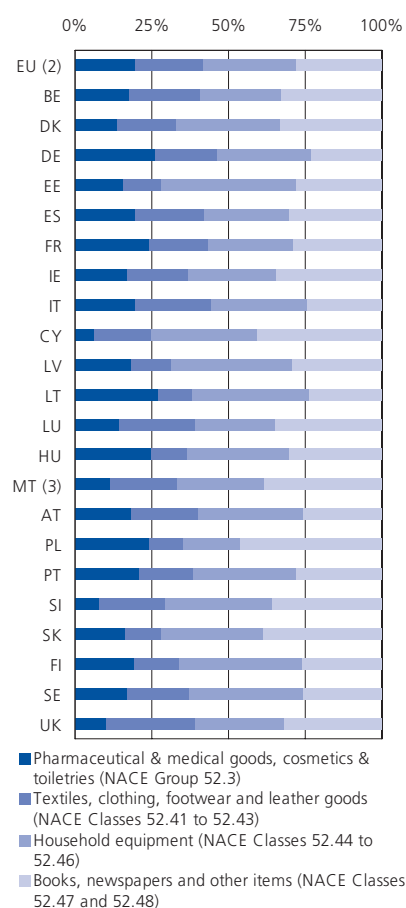
STRUCTURAL PROFILE

Specialised in-store new goods retailing other than food (NACE Groups 52.3 and 52.4) generated EUR 869.4 billion of turnover in 2003 in the EU-25. This sector employed 7.8 million persons and generated EUR 195.8 billion of value added, which equated to 48.7 % of the retail trade and repair (NACE Division 52) workforce and more than half (53.7 %) of the added value for the retail trade and repair sector.

This retail sector was largest in Germany and the United Kingdom in terms of turnover, value added and employment, with both of these Member States contributing a little less than one fifth of the EU-25 total for these three measures – see Table 18.9. In terms of this sector's contribution to non-financial services value added and employment Portugal and Austria were the most specialised Member States⁽¹⁸⁾, while Slovenia, Estonia and Slovakia were the least specialised.

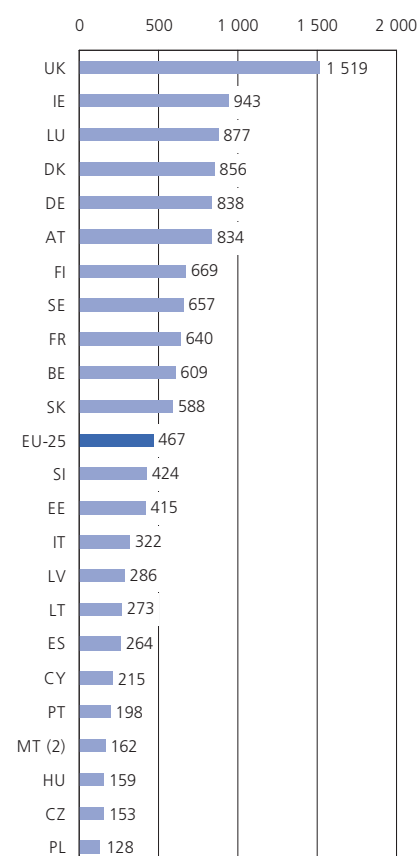
⁽¹⁸⁾ Lithuania and Malta, 2002; Greece and Cyprus, not available; the Netherlands also not available for value added.

Figure 18.14
Specialised in-store new goods retailing other than food (NACE Groups 52.3 and 52.4)
Breakdown of turnover, 2003 (%) (1)



(1) The Czech Republic and the Netherlands, incomplete data; Greece, not available.
(2) EU average, 2003; Malta, 2002; excluding the Czech Republic, Greece and the Netherlands.
(3) 2002.
Source: Eurostat (SBS)

Figure 18.15
Specialised in-store new goods retailing other than food (NACE Groups 52.3 and 52.4)
Turnover per enterprise, 2003
(EUR thousand) (1)



(1) The Netherlands, incomplete data; Greece, not available.
(2) 2002.
Source: Eurostat (SBS)

Box 18.3: in-store retailing of new goods other than food, beverages and tobacco

In this edition of European business in-store retailing of new goods other than food, beverages and tobacco has been split across Subchapters 18.1 and 18.3, distinguishing specialised (NACE Group 52.3 and 52.4) from non-specialised (NACE Class 52.12) retailers. Data for 2003⁽¹⁹⁾ shows that in Luxembourg (1.4 %) and Malta (2.1 %, 2002) non-specialised retailers generated the lowest proportion of turnover from the in-store retailing of new goods other than food, beverages and tobacco; they were followed by non-specialised retailers in Austria (2.9 %), Belgium (3.1 %), Portugal (3.5 %) and France (3.8 %). In the other Member States, the proportion of turnover generated by non-specialised retailers rose above 5 %, with the highest shares for non-specialist retailers being recorded in Finland (27.1 %) and Slovakia (38.4 %).

⁽¹⁹⁾ Malta, 2002, the Czech Republic, Greece and the Netherlands, not available.

Table 18.9

Specialised in-store new goods retailing other than food (NACE Groups 52.3 and 52.4)
Turnover, value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest turnover (EUR million) (1)	Share in EU-25 turnover (%) (1)	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national non-financial services value added (%) (3)	Highest share of national non-financial services employment (%) (4)
1	Germany (159 574.6)	18.4	Germany (39 136.2)	19.6	United Kingdom (1 417.5)	18.2	Portugal (9.1)	Portugal (14.5)
2	United Kingdom (158 718.6)	18.3	United Kingdom (38 887.8)	19.4	Germany (1 407.5)	18.0	Austria (8.1)	Austria (13.6)
3	France (137 792.2)	15.8	France (31 698.4)	15.8	Italy (920.4)	11.8	Italy (8.0)	Germany (12.4)
4	Italy (127 353.0)	14.6	Italy (21 409.3)	10.7	France (837.5)	10.7	France (8.0)	Italy (11.7)
5	Spain (78 166.1)	9.0	Spain (17 372.3)	8.7	Spain (829.4)	10.6	Spain (7.6)	Malta (11.4)

(1) Malta, 2002; Greece and the Netherlands, not available.

(2) Malta, 2002; Greece, not available.

(3) Lithuania and Malta, 2002; Greece, Cyprus and the Netherlands, not available.

(4) Lithuania and Malta, 2002; Greece and Cyprus, not available.

Source: Eurostat (SBS)

Figure 18.14 provides a breakdown of in-store retailing turnover among four non-food subsectors. The specialised in-store retailing of household equipment (NACE Classes 52.44 to 52.46) was the largest activity, generating 30.0 % of this sector's turnover in the EU ⁽²⁰⁾, slightly more than the share accounted for by specialised in-store retailing of books, newspapers and other items (28.2 %, NACE Classes 52.47 and 52.48). The specialised in-store retailing of textiles, clothing, footwear and leather goods (NACE Classes 52.41 to 52.43) generated a little more than one quarter (22.3 %) of sectoral turnover, while the smallest of the subsectors shown was specialised in-store retailing of medical, orthopaedic, cosmetic and toilet articles (NACE Group 52.3) whose share was just under one fifth (19.6 %).

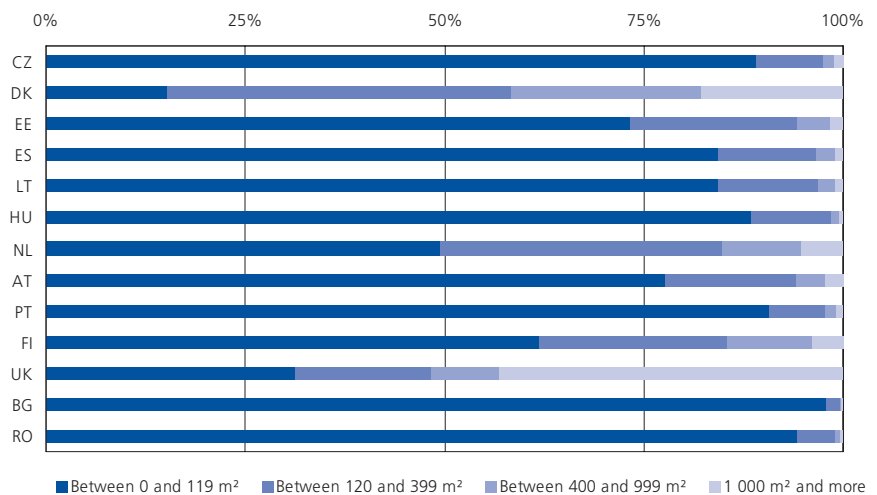
Specialised in-store retailing of household equipment accounted for the highest share of sectoral turnover in Estonia (44.3 %). In contrast, the subsector of specialised in-store retailing of books, newspapers and other items recorded its highest share of sectoral turnover in Poland (46.1 %). Specialised in-store retailing of textiles, clothing, footwear and leather goods accounted for its largest proportion of sectoral turnover in the United Kingdom (29.2 %), followed by Italy (25.0 %). The subsector of specialised in-store retailing of medical, orthopaedic, cosmetic and toilet articles contributed between 6.2 % of sectoral turnover in Cyprus to over 25 % of the total in Lithuania, Germany and Hungary.

⁽²⁰⁾ EU average, 2003; Malta, 2002; excluding Czech Republic, Greece and the Netherlands.

Figure 18.16

Stores in specialised in-store new goods retailing other than food (NACE Groups 52.3 and 52.4)

Category of sales space for retail stores engaged in retail trade, 2002 (% of total sales space)



Source: Eurostat (SBS)

A size class analysis shows that in the EU's ⁽²¹⁾ specialised in-store retailing of medical, orthopaedic, cosmetic and toilet articles (NACE Group 52.3), micro enterprises (with less than 10 persons employed) generated over half (55.8 %) the value added, compared with an average of 38.7 % for micro enterprises within the EU's ⁽²²⁾ specialised in-store retailing of other new goods (NACE Group 52.4). In the latter, large enterprises (with more than 250 persons employed) contributed just over one third (33.7 %) of total value added.

⁽²¹⁾ EU average, 2003; Malta and Portugal, 2002; excluding Greece, Ireland, Latvia, Luxembourg, Slovenia, Slovakia, Finland and Sweden.

⁽²²⁾ EU average, 2003; Malta and Sweden, 2002; excluding Denmark, Estonia, Greece, Latvia, Luxembourg, the Netherlands and Slovenia.

Figure 18.15 shows that average turnover per enterprise in the EU-25's sector of specialised in-store new goods retailing other than food was EUR 467 000 in 2003, just over twice the level for specialised in-store food retailing (see Subchapter 18.2). The average turnover per enterprise within specialised in-store retailing of pharmaceutical and medical goods, cosmetic and toilet articles (NACE Group 52.3) was higher than that recorded for specialised in-store retailing of other new goods (NACE Group 52.4) in every Member State ⁽²³⁾, except Cyprus, where average turnover per enterprise was the same.

⁽²³⁾ Malta, 2002; Greece and the Netherlands, not available.

Table 18.10

Pharmaceutical & medical goods, cosmetics & toiletries (NACE Groups 52.3)
Breakdown of turnover by product, 2002 (% of selected CPA codes)

	EE	ES	CY	LT	HU	MT	AT	PT	SK	FI	SE	BG
Share of retail sale of pharmaceutical, medical goods, cosmetics												
Pharmaceutical goods	83.5	81.0	59.1	81.3	83.7	65.8	57.3	88.0	80.6	89.7	85.1	82.1
Medical and orthopaedic goods	6.9	6.7	10.8	4.5	2.7	10.6	6.9	3.2	4.1	5.9	4.7	4.5
Cosmetic and toilet articles	9.6	12.3	30.1	14.2	13.5	23.6	35.9	8.8	15.2	4.4	10.2	13.4

Source: Eurostat (SBS)

Table 18.11

Other specialised in-store new goods retailing (NACE Groups 52.4)
Breakdown of turnover by product, 2002 (% of selected CPA codes)

	DK	EE	ES	CY	LT	HU	MT	AT	PT	FI	SE	BG
Share of other retail sale of new goods in specialised stores												
Textiles and haberdashery	4.0	1.8	4.0	2.3	1.3	3.7	3.3	2.2	2.7	1.8	0.3	1.7
Clothing	17.4	12.8	19.5	14.7	8.8	7.8	22.4	20.6	17.5	18.1	25.7	7.7
Footwear and leather goods	3.4	7.8	5.0	6.9	5.4	3.1	5.5	5.7	3.8	4.3	6.2	2.4
Household furniture, lighting equipment & household articles n.e.c.	17.1	14.3	15.3	12.2	9.8	14.0	13.1	17.9	11.3	12.7	20.7	8.4
Electrical household appliances	4.8	8.9	4.0	8.1	10.4	10.6	3.8	4.9	10.1	7.1	3.7	10.9
Radio & television equipment, musical instruments & records	9.2	2.0	4.4	2.7	7.8	4.9	4.4	3.3	2.2	5.3	7.0	8.8
Hardware, paints and glass	20.8	6.9	9.9	14.8	18.5	27.7	16.6	11.2	19.3	25.0	7.0	19.6
Books, newspapers and stationery	2.4	5.3	5.8	2.9	10.3	10.3	12.7	4.9	5.1	3.7	3.3	7.2
Office furniture, office supplies & equip., computers & optical & photographic equip.	11.5	6.6	12.5	16.9	15.2	7.7	5.9	10.6	7.7	7.5	9.5	12.1
Watches, clocks & jewellery & of sports goods, games & toys	5.5	3.9	8.5	8.9	3.1	2.9	7.4	7.5	5.4	9.1	10.4	1.3
Non-food products n.e.c.	3.9	29.8	11.1	9.7	9.3	7.2	4.9	11.2	15.0	5.4	6.3	19.8

Source: Eurostat (SBS)

Figure 18.16 provides a breakdown of the number of stores for the specialised in-store new goods retailing other than food sector, with stores classified according to their sales space. Small stores with less than 120 m² of sales space generally dominated this sector, although to a lesser extent than in specialised in-store food retailing, with the United Kingdom, the Netherlands and Denmark the only Member States to report that such stores were not in a majority. Whereas more than two fifths of stores in the United Kingdom were very large stores (with 1 000 m² or more of sales space), in Denmark and the Netherlands the medium-sized category of stores (with between 120 m² and 399 m² of sales space) was particularly important.

Turnover breakdowns by product are shown in Table 18.10 for specialised in-store retailers of pharmaceutical and medical goods, cosmetic and toilet articles, while Table 18.11 shows similar information for specialised in-store retailers of other new goods. Note that these retailers may well sell other products, and that these products may well be sold by enterprises in other sectors, most notably by non-specialised in-store retailers. The importance of pharmaceutical goods for specialist in-store retailers of pharmaceutical and medical goods, cosmetic and toilet articles can clearly be seen in Table 18.10. Looking at specialist in-store retailers of other new goods, in many of the Member States with data available, clothing, hardware, paints and glass were among the most important product groups.

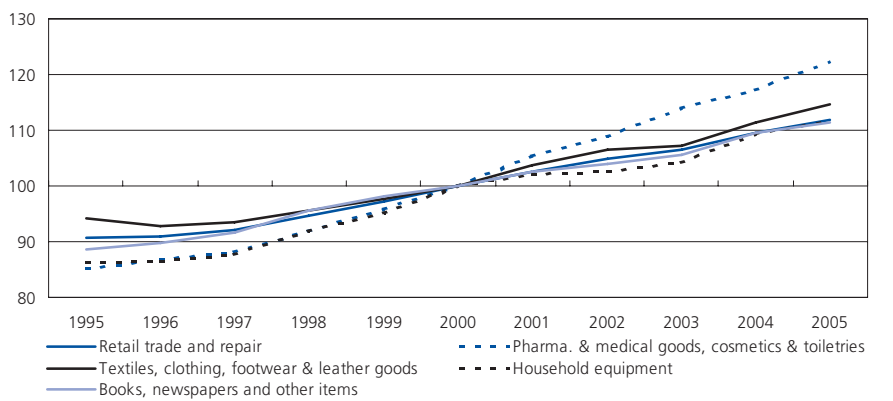
Short-term statistics show the evolution of the volume of sales index in the subsectors of the EU-25's specialised in-store new goods retailing other than food sector - see Figure 18.17. In all activities there was uninterrupted growth over the period for which data are available, with the exception of a reduction at the start of the series (in 1996) for the retail sale of textiles, clothing, footwear and leather goods (NACE Classes 52.41 to 52.43). During the ten years to 2005 the annual average rate of sales growth was highest for the specialised in-store retailing of pharmaceuticals and medical goods, cosmetic and toilet articles (3.7 % per annum), while the specialised in-store retailing of textiles, clothing, footwear and leather goods was the only one of the four subsectors analysed to report slower growth than the retail trade and repair (NACE Division 52) average - at 2.0 % compared with 2.1 % per annum.

COSTS, PRODUCTIVITY AND PROFITABILITY

Apparent labour productivity was generally somewhat higher for specialised in-store new goods retailing other than food than it was for retail trade and repair as a whole. In 2003 apparent labour productivity in this sector was EUR 25 100 per person employed compared with EUR 22 900. The level of this indicator was higher for the specialised in-store retailing of medical, orthopaedic, cosmetic and toilet articles where it reached EUR 31 900 per person employed. Given the high incidence of part-time employment associated with retail trade and repair activities, wage adjusted labour productivity ratios may be considered a more appropriate indicator: in the EU ⁽²⁴⁾ this ratio averaged 151.3 % for specialised in-store retailing of medical, orthopaedic, cosmetic and toilet articles and 124.7 % for specialised in-store retailing of other new goods. For the sector as a whole ⁽²⁵⁾, wage adjusted labour productivity ratios ranged from 105.9 % in Italy, to more than 160 % in the United Kingdom (163.4 %), Malta (167.7 %, 2002) and Slovakia (171.0 %), with the highest rate in Latvia (218.2 %).

⁽²⁴⁾ EU average, 2003; Malta, 2002; excluding Greece and the Netherlands.
⁽²⁵⁾ Malta, 2002; Greece and the Netherlands, not available.

Figure 18.17
Specialised in-store new goods retailing other than food (NACE Groups 52.3 and 52.4)
Volume of sales index, EU-25 (2000=100)



Source: Eurostat (STS)

18.4: SECOND-HAND GOODS RETAILING IN STORES

The retail sale of second hand products (NACE Group 52.5) includes for example, shops selling antiques, or second-hand books or clothes. Note that the retail sale of second-hand motor vehicles is not covered by this subchapter (see Chapter 16). The retailing of second-hand goods deals by definition with the sale of semi-durable and durable items only.

Second-hand goods retailing in stores (NACE Group 52.5) was the smallest of the EU-25's retail trade subsectors in 2003, with turnover of EUR 7.2 billion, value added of EUR 1.7 billion, and a workforce of 106 000 persons. For each of these measures the relative weight of second-hand goods retailing in the retail trade and repair (NACE Division 52) sector was between 0.4 % and 0.7 %.

The United Kingdom and France together generated around 60 % of the EU-25's turnover and value added in this sector, yet employed only around one third of the EU-25's workforce - see Table 18.12. Second-hand goods retailers are generally small, and in 2003 their average turnover per enterprise was EUR 118 300 within the EU-25, the lowest level for this indicator among the retail trade and repair subsectors (NACE groups).

Apparent labour productivity in the EU-25's second-hand goods retailing in stores sector was EUR 16 200 per person employed in 2003 (again the lowest ratio among retail trade and repair subsectors). The EU's ⁽²⁶⁾ wage adjusted labour productivity ratio for second-hand goods retailing in stores was 106.2 % in 2003, compared with a retail trade and repair average of 128.5 %.

⁽²⁶⁾ EU average, 2003; Malta, 2002; excluding Greece.

Table 18.12

Second-hand goods retailing in stores (NACE Group 52.5)

Turnover, value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest turnover (EUR million) (1)	Share in EU-25 turnover (%) (1)	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	United Kingdom (2 530.2)	35.3	United Kingdom (657.7)	38.3	United Kingdom (20.1)	19.0	Lithuania (0.2)	Lithuania (0.8)
2	France (1 909.2)	26.6	France (370.3)	21.6	France (15.0)	14.1	Latvia (0.1)	Latvia (0.6)
3	Germany (824.4)	11.5	Germany (228.0)	13.3	Poland (13.8)	13.0	Hungary (0.1)	Hungary (0.4)
4	Netherlands (414.6)	5.8	Netherlands (127.8)	7.4	Germany (13.0)	12.3	United Kingdom (0.1)	Poland (0.4)
5	Belgium (273.0)	3.8	Belgium (48.2)	2.8	Netherlands (7.5)	7.1	Czech Republic (0.1)	Czech Republic (0.3)

(1) Malta, 2002; Greece, not available.

(2) Lithuania and Malta, 2002; Greece and Cyprus, not available.

Source: Eurostat (SBS)

18.5: RETAIL SALES NOT IN STORES

These activities cover retail sales via stalls, markets, and door to door sales, as well as remote sales made via mail order, mobile sales or through vending machines. Enterprises specialising in retail sales via the Internet and via home shopping channels are also included. All of these activities are classified within NACE Group 52.6 and are collectively referred to as the retail trade not in stores sector.

Note that the retailers covered by this subchapter are those which generate the largest part of their activity outside of stores. As such, this subchapter does not include retail enterprises that also use remote-selling, but not as their principal activity.

STRUCTURAL PROFILE

Retail sales not in-stores (NACE Group 52.6) generated EUR 87.5 billion of turnover in the EU-25 in 2003, which represented 4.6 % of the total for retail trade (NACE Groups 52.1 to 52.6). There were 863 500 persons employed in this sector in 2003, equivalent to around 5.4 % of the retail trade and repair (NACE Division 52) workforce. EU-25 value added was EUR 18.6 billion, or 5.1 % of the retail trade and repair total.

Among the Member States, the highest output in turnover and value added terms was recorded in Germany, with around one third of the EU-25 total using either of these measures, while Italy and Poland had slightly larger workforces. Judged by the share of this sector in non-financial services (NACE Sections G to I and K) employment, the most specialised Member States ⁽²⁷⁾ were Latvia, Poland and Malta (2002), while the least specialised were Denmark and Finland.

⁽²⁷⁾ Lithuania and Malta, 2002; Greece and Cyprus, not available.

Table 18.13

Retailing not in stores (NACE Group 52.6)**Turnover, value added and employment: ranking of the top 5 Member States, 2003**

Rank	Highest turnover (EUR million) (1)	Share in EU-25 turnover (%) (1)	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	Germany (28 983.5)	33.1	Germany (6 828.9)	36.6	Italy (153.1)	17.7	Germany (1.3)	Latvia (4.2)
2	France (14 527.5)	16.6	United Kingdom (2 947.3)	15.8	Poland (150.9)	17.5	Malta (1.1)	Poland (3.8)
3	United Kingdom (14 254.8)	16.3	France (2 667.2)	14.3	Germany (148.8)	17.2	Poland (1.0)	Malta (2.7)
4	Italy (10 019.5)	11.5	Italy (2 522.8)	13.5	United Kingdom (94.8)	11.0	Italy (0.9)	Italy (1.9)
5	Spain (4 422.6)	5.1	Spain (1 056.1)	5.7	France (89.8)	10.4	Latvia (0.8)	Hungary (1.9)

(1) Malta, 2002; Greece, not available.

(2) Lithuania and Malta, 2002; Greece and Cyprus, not available.

Source: Eurostat (SBS)

In 2003, more than half (54.0 %) of the EU's ⁽²⁸⁾ turnover for retail sales not in stores was generated by retail sales via mail order houses (NACE Class 52.61), while slightly more than one quarter (26.5 %) came from other non-store retail sales (NACE Class 52.63), and the remainder (19.5 %) from retail sales via stalls and markets (NACE Class 52.62) - see Figure 18.18. The activity of retail sales via mail order houses was particularly important in turnover terms in several of the larger Member States (France, Germany and the United Kingdom), the Nordic Member States, and most of all in Austria.

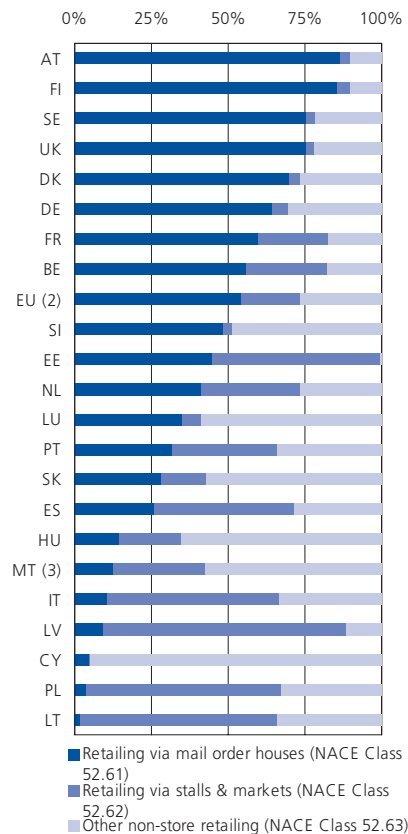
The contribution of large enterprises (with 250 or more persons employed) to the activity of retail sales not in stores was particularly pronounced in Germany, where these enterprises accounted for more than three fifths (62.2 %) of value added in 2003. In contrast, the contribution from micro enterprises (with less than 10 persons employed) was as much as 66.1 % in Spain. Figure 18.19 shows the average turnover per enterprise in this sector: four Member States, namely Poland, Hungary, Latvia and Lithuania recorded average turnover per enterprise below EUR 50 000, in stark contrast to Ireland, where average turnover was EUR 1.6 million per enterprise.

COSTS, PRODUCTIVITY AND PROFITABILITY

Apparent labour productivity for retail sales not in-stores was EUR 21 600 in the EU-25 in 2003, slightly below the retail trade and repair average, while average personnel costs were EUR 20 700 per employee in 2002. The wage adjusted labour productivity ratio in 2002 was 103.0 % for the EU-25, one of the lowest levels for this indicator among retail trade and repair sectors. Nevertheless, the gross operating rate was 10.8 % in 2002, well above the retail trade and repair average (7.8 %).

(28) EU average, 2003; Malta, 2002; excluding the Czech Republic, Greece and Ireland.

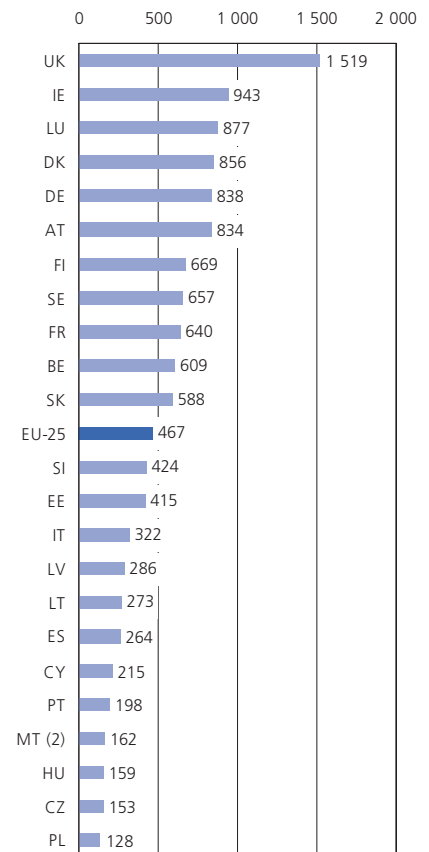
Figure 18.18

**Retailing not in stores (NACE Group 52.6)
Breakdown of turnover, 2003 (%) (1)**

- (1) The Czech Republic, Greece and Ireland, not available.
 (2) EU average, 2003; Malta, 2002; excluding the Czech Republic, Greece and Ireland.
 (3) 2002.

Source: Eurostat (SBS)

Figure 18.19

**Retailing not in stores (NACE Group 52.6)
Turnover per enterprise, 2003
(EUR thousand) (1)**

- (1) Greece, not available.
 (2) 2002.

Source: Eurostat (SBS)

18.6: REPAIR OF PERSONAL AND HOUSEHOLD GOODS

The repair of personal and household goods is quite different from the other activities covered in this chapter as it does not involve the buying and reselling of goods, but covers the provision of repair services. This activity (NACE Group 52.7) covers specialist repairers only, and excludes enterprises that carry out repair as a secondary activity in combination with another activity.

In February 2006 the Council adopted a Directive ⁽²⁹⁾ enabling Member States to apply reduced rates of value added tax for five categories of labour-intensive services until 2010, with one of the categories concerning the repair of bicycles, shoes and leather goods, clothing and household linen. Based on applications by Member States, in July 2006 the European Commission authorised 17 Member States to apply these reduced rates for one or more of the five categories of services, among which were Belgium, Greece, Luxembourg, Hungary, Malta, the Netherlands, Poland and Finland for the repair services specified above.

⁽²⁹⁾ Council Directive 2006/18/EC of 14 February 2006.

The EU-25's repair of personal and household goods sector (NACE Group 52.7) employed 251 300 persons in 2003 and generated EUR 4.5 billion of value added, equivalent to 1.6 % and 1.2 % respectively of the retail trade and repair (NACE Division 52) sector. Hungary was the most specialised in this sector in terms of its contribution to non-financial services (NACE Sections G to I and K) value added and employment - see Table 18.14.

An analysis at the NACE class level shows that the repair of electrical household goods (NACE Class 52.72) often generated the largest proportion of value added and employment, accounting for at least 50 % of sectoral value added in 11 of the 21 Member States for which data are available ⁽³⁰⁾.

The contribution of micro enterprises (with less than 10 persons employed) was particularly high for the repair of personal and household goods. Within the few Member States for which data are available for either 2002 or 2003 ⁽³¹⁾, micro enterprises contributed at least 44 % of sectoral value added.

⁽³⁰⁾ Malta, 2002; Belgium, the Czech Republic, Greece and Ireland, not available.

⁽³¹⁾ Germany, Cyprus, Lithuania, the Netherlands and Poland, 2003; Malta, Sweden and the United Kingdom, 2002.

Apparent labour productivity for the EU-25's repair of personal and household goods sector was EUR 17 800 per person employed in 2003, compared with an average of EUR 22 900 for retail trade and repair as a whole. This was the only retail trade and repair subsector where the wage adjusted labour productivity ratio for the EU ⁽³²⁾ was below parity in 2003, standing at 92.6 %. Indeed, for 17 of the 24 Member States ⁽³³⁾ for which data are available, wage adjusted labour productivity was below 100 %, while only the United Kingdom (164.1 %) and Latvia (120.0 %) recorded ratios above 110 %.

⁽³²⁾ EU average, 2003; Malta, 2002; excluding Greece.

⁽³³⁾ Malta, 2002; Greece, not available.

Table 18.14

Repair of personal and household goods (NACE Group 52.7)

Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	United Kingdom (911.8)	20.4	Italy (38.0)	15.1	Hungary (0.4)	Hungary (0.9)
2	France (733.4)	16.4	United Kingdom (34.7)	13.8	Slovenia (0.3)	Malta (0.6)
3	Germany (732.9)	16.4	Spain (31.8)	12.6	Sweden (0.2)	Latvia (0.5)
4	Italy (520.1)	11.7	Germany (30.1)	12.0	Spain (0.2)	Slovenia (0.5)
5	Spain (489.7)	11.0	France (28.0)	11.1	Czech Republic (0.2)	Czech Republic (0.5)

(1) Malta, 2002; Greece, not available.

(2) Lithuania and Malta, 2002; Greece and Cyprus, not available.

Source: Eurostat (SBS)

Table 18.15

Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods (NACE Division 52)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million)	1 940 227	55 998	20 944	30 624	346 330	2 271	:	168 760	347 472	22 736	244 584	3 423	2 651	3 574	4 353	18 264	1 189
Production (EUR million)	:	16 883	5 338	13 143	123 982	525	:	49 960	111 452	7 493	104 570	918	670	839	1 307	4 517	264
Value added at factor cost (EUR million)	366 852	8 752	2 947	5 767	73 289	248	:	33 764	61 150	5 027	38 664	598	382	439	823	1 838	211
Gross operating surplus (EUR million) (2)	146 973	3 724	1 416	1 682	25 810	70	:	15 370	20 098	2 282	20 153	224	182	163	353	512	150
Purchases of goods and services (EUR million)	:	47 244	18 239	25 443	262 185	2 052	:	138 019	285 638	17 836	211 165	2 842	2 368	3 196	3 548	16 224	973
Gross inv. in tangible goods (EUR million)	:	1 572	608	587	4 615	60	:	5 683	8 332	1 144	5 231	80	132	163	47	592	18
Number of persons employed (thousands)	16 021	281	389	201	2 623	41	:	1 613	1 703	162	1 758	29	90	105	20	340	15
Personnel costs (EUR million) (2)	204 651	5 028	1 531	4 085	47 479	177	:	18 395	41 052	2 665	18 511	374	201	276	471	1 326	62
App. labour product. (EUR thous./pers. emp.)	22.9	31.2	7.6	28.8	27.9	6.0	:	20.9	35.9	31.0	22.0	21.0	4.3	4.2	41.4	5.4	14.3
Average pers. costs (EUR thous./employee) (2)	17.1	24.7	6.3	22.1	20.7	4.4	:	16.7	26.7	18.7	22.6	16.8	2.3	2.9	26.4	5.1	8.7
Wage adjusted labour productivity (%) (2)	132.5	126.4	121.2	130.1	134.8	135.6	:	125.1	134.5	165.7	97.5	125.1	184.4	144.6	156.6	106.0	163.6
Gross operating rate (%) (2)	7.8	6.6	6.8	5.5	7.5	3.1	:	9.1	5.8	10.0	8.2	6.6	6.9	4.6	8.1	2.8	12.6
Investment per person empl. (EUR thousand)	:	5.6	1.6	2.9	1.8	1.5	:	3.5	4.9	7.1	3.0	2.8	1.5	1.5	2.3	1.7	1.2
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million)	78 969	42 611	46 929	32 039	5 066	4 381	26 633	46 959	363 500	2 939	:	9 050	:	:	:	32 356	:
Production (EUR million)	27 193	14 646	32 841	8 658	1 445	1 187	7 959	14 877	132 322	679	:	2 428	:	:	:	10 672	:
Value added at factor cost (EUR million)	16 817	8 487	5 860	5 006	830	512	4 536	8 587	76 392	313	:	1 042	:	:	:	6 019	:
Gross operating surplus (EUR million)	6 864	2 235	3 119	1 880	272	195	1 549	2 127	30 710	138	:	518	:	:	:	1 762	:
Purchases of goods and services (EUR million)	62 336	34 495	53 740	27 981	4 252	3 910	22 518	38 934	282 115	2 799	:	8 687	:	:	:	26 621	:
Gross inv. in tangible goods (EUR million)	1 982	902	910	1 024	292	200	636	1 017	12 738	129	:	536	:	:	:	688	:
Number of persons employed (thousands)	707	317	1 224	377	48	68	129	259	3 136	244	:	414	:	:	:	186	:
Personnel costs (EUR million)	9 818	6 252	2 741	3 126	557	317	2 987	6 646	45 682	175	:	524	:	:	:	4 257	:
App. labour product. (EUR thous./pers. emp.)	23.8	26.8	4.8	13.3	17.3	7.5	35.1	33.1	24.4	1.3	:	2.5	:	:	:	32.4	:
Average pers. costs (EUR thous./employee)	15.7	22.7	4.6	10.5	12.8	4.7	25.0	29.7	15.6	1.2	:	1.4	:	:	:	24.6	:
Wage adjusted labour productivity (%)	151.6	118.3	104.8	126.6	135.1	159.9	140.4	111.5	155.8	106.8	:	179.9	:	:	:	131.6	:
Gross operating rate (%)	8.7	5.2	6.6	5.9	5.4	4.5	5.8	4.5	8.4	4.7	:	5.7	:	:	:	5.4	:
Investment per person empl. (EUR thousand)	2.8	2.9	0.7	2.7	6.1	2.9	4.9	3.9	4.1	0.5	:	1.3	:	:	:	3.7	:

(1) Malta, 2002.

(2) EU-25, 2002.

Source: Eurostat (SBS)

Hotels and restaurants



The services of hotels and restaurants are covered by the European Commission's proposal for a Directive on services in the internal market. The objective of the proposal is to achieve a genuine internal market in services by removing legal and administrative barriers to the development of service activities between Member States, facilitating the provision and use of cross-border services in the EU. At the time of writing, it is expected that this Directive will be adopted in the near future - see Chapter 22 for more information.

Tourism comprises the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year, for leisure, business or other purposes. On the supply side, tourism relies on enterprises from a variety of sectors, which can be summarised as the provision of accommodation, food and drink, transport facilities and services, and entertainment - those providing accommodation, food and drink are covered in this chapter - while transport services and travel agents and tour operator services are covered in Chapter 20. It should be noted that most of these activities may also provide services for purposes other than tourism.

According to figures from the World Tourism Organization in excess of half (55.4 %) of the worldwide international tourist arrivals (of which there were an estimated 760 million in 2004), were recorded in Europe, a total of 420 million international arrivals. A large proportion of these were within EU-25 Member States - Table 19.1 shows that the six Member States with the largest shares of this world total together accounted for just over 30 % of worldwide international tourist arrivals. Table 19.2 shows the origin of arrivals in four European markets. As can be seen, the high share of worldwide international tourists is in part due to the close proximity of the many relatively small European countries, which stimulates intra-European travel. Over 90 % of international arrivals in central/eastern Europe and southern Europe were from within Europe. Only in northern Europe did the share of international arrivals from the Americas exceed 10 %. In terms of receipts in 2004, southern European countries occupied the top three positions (see Figure 19.1). The position of Luxembourg was remarkable given its size, as were the positions of Cyprus, Malta and Austria, all of which are popular holiday destinations in both winter and summer.

This chapter covers activities that make up a significant part of the tourism supply, namely hotels and restaurants (NACE Section H or Division 55). This chapter has replaced the tourism chapter in previous editions of this publication, which covered travel agents and tour operators (now in Subchapter 20.6) alongside hotels and restaurants.

- 55: hotels and restaurants;
- 55.1: hotels;
- 55.2: camping sites and other provision of short-stay accommodation;
- 55.3: restaurants;
- 55.4: bars;
- 55.5: canteens and catering.

Table 19.1
Top tourism destinations in the EU-25, 2004

Member States [world rank]	International tourist arrivals (millions)	World market share (%)
FR [1]	75.1	9.8
ES [2]	52.4	6.9
IT [5]	37.1	4.9
UK [6]	27.8	3.6
DE [9]	20.1	2.6
AT [11]	19.4	2.5

Source: World Tourism Organization (WTO) ©

Table 19.2
Origin of tourist arrivals in Europe, 2004 (millions)

Destination	Origin						Not specified
	World	Europe	Americas	Asia & the Pacific	Africa	Middle East	
Northern Europe	48.4	37.3	6.4	3.3	0.7	0.4	0.3
Western Europe	138.8	119.5	9.6	6.7	1.3	0.5	1.2
Central/Eastern Europe	86.3	79.2	2.9	3.5	0.1	0.2	0.4
Southern Europe	149.4	136.9	6.9	2.8	0.4	0.8	1.6

Source: World Tourism Organization (WTO) ©

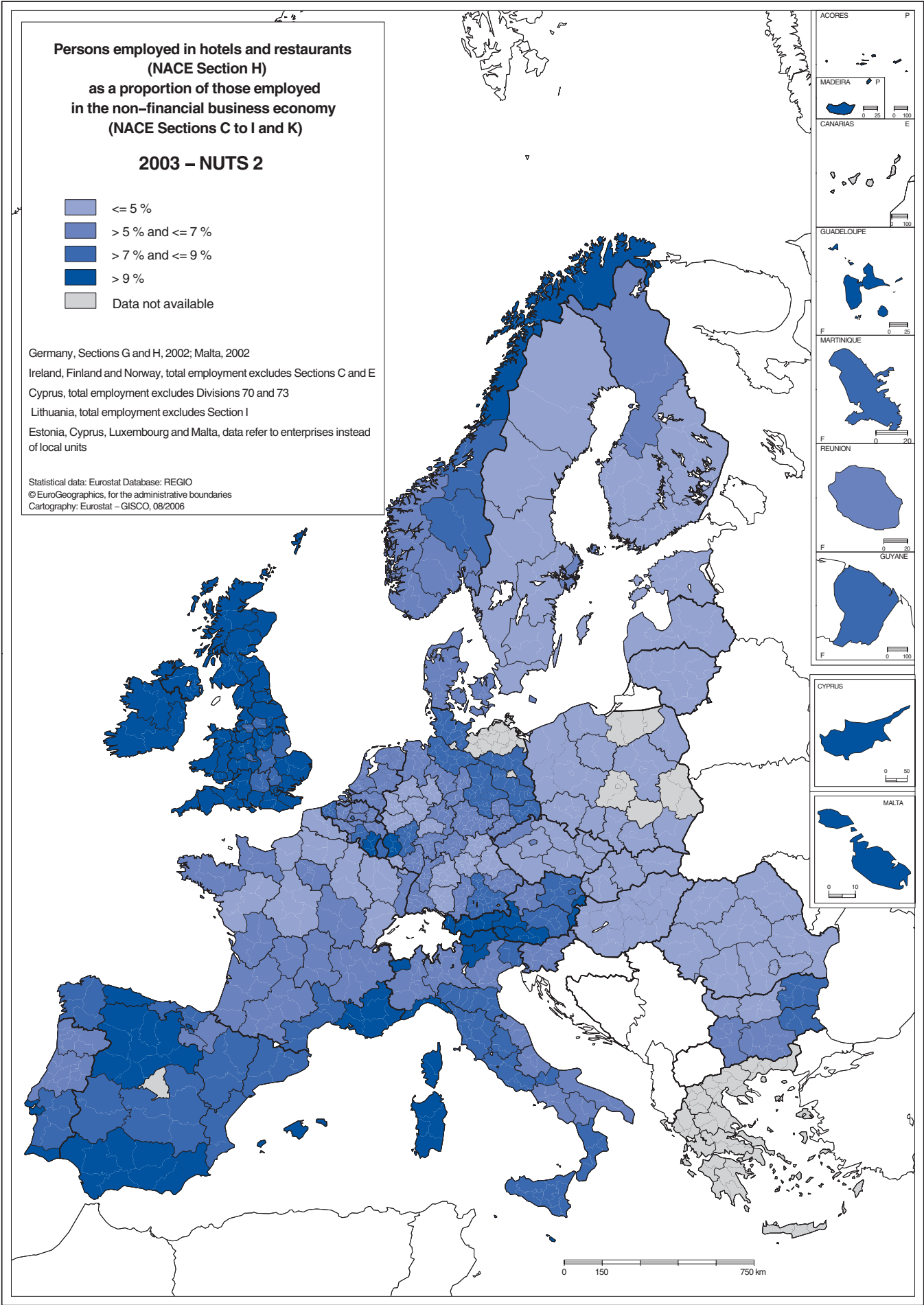
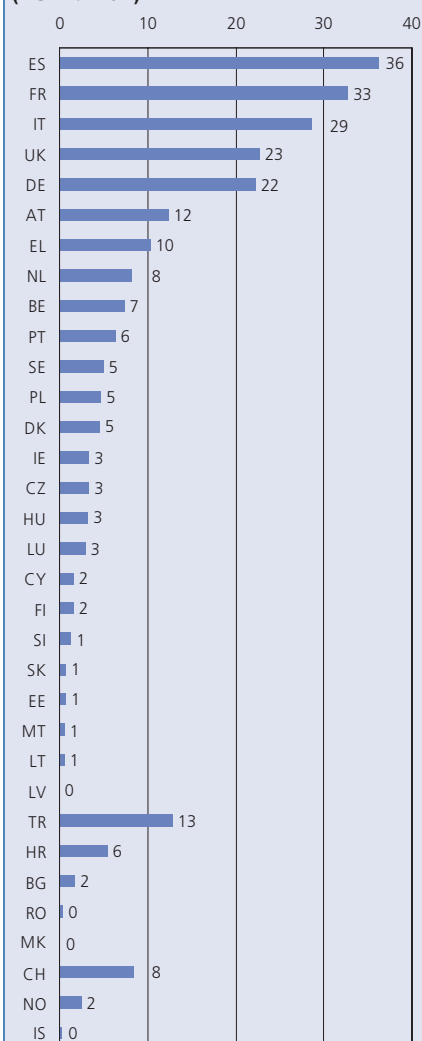


Figure 19.1

International tourist receipts, 2004 (EUR billion)



Source: World Tourism Organization (WTO) ©

STRUCTURAL PROFILE

The hotel and restaurant sector (NACE Section H) accounted for EUR 154.2 billion of value added in the EU-25 in 2003, which represented 5.8 % of the total for the non-financial services (NACE Sections G to I and K) economy. However, in terms of employment, the hotels and restaurants sector emerged as one of the largest employers in non-financial services, accounting for 11.9 % of the total workforce, with 8.2 million persons employed in the EU-25 - see Table 19.3. Restaurants, bars and catering (NACE Groups 55.3 to 55.5) constituted the largest part of the EU-25's hotels and restaurants sector, generating 65.6 % of total value added in 2003 and providing 75.3 % of the total number of persons employed - see Subchapter 19.2. Accommodation services (NACE Groups 55.1 and 55.2) made up the rest of the sector - see Subchapter 19.1.

The United Kingdom was by far the largest Member State in the hotels and restaurants sector as it generated over one fifth (22.2 %) of the EU-25's value added and its 1.9 million strong workforce accounted for a similar share (22.9 %) of the EU-25's employment. While the other large Member States made up the rest of the top 5 ranking in absolute size - see Table 19.4 - of these only Spain figured among the Member States that were most specialised in this sector, accompanied by some of the EU-25's smallest Member States. Malta was by far the most specialised in this sector in terms of its value added contribution (15.0 %) to non-financial services value added. It should be noted that data are not available for either Cyprus or Greece. In 2003, value added generated in the hotels and restaurants sector in Cyprus accounted for 22.4 % of the total for non-financial services excluding real estate and research and development activities (NACE Sections G to I and Divisions 71, 72 and 74).

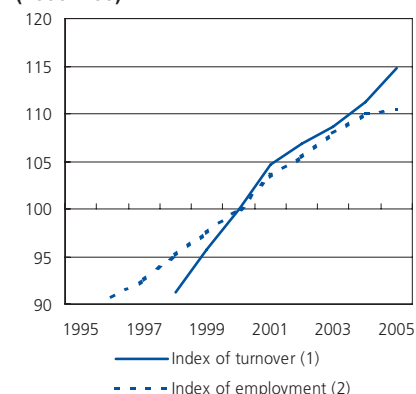
The map on page 322 shows the contribution of the hotels and restaurants sector to employment within the non-financial business economy (NACE Sections C to I and K) of each region. The importance of this activity in several southern Member States is clear, and the highest proportions of non-financial business

economy employment in the hotels and restaurants sector were recorded in the Illes Balears (24.7 %, Spain), the Algarve (23.2 %, Portugal) and the Provincia Autonoma Bolzano-Bozen (21.2 %, Italy). Nevertheless, this sector also provided an important contribution to non-financial business employment in both Irish regions, Cyprus and Malta, as well as several regions in the United Kingdom and Austria; note, in particular, that data is not available for the Greek regions.

The turnover index for hotels and restaurants (NACE Section H) can be observed for the EU-25 over the time period 1998 to 2005 - see Figure 19.2. It grew overall by 25.7 % during this period, corresponding to an average annual growth rate of 3.3 %. The years 1999, 2000 and 2001 were characterised by a faster pace of annual growth, compared with more modest increases registered during the following years: nevertheless, in recent years the rate of growth accelerated steadily from 1.7 % in 2003 to 3.2 % by 2005. The index of employment showed that between 1996 and 2005 there was overall growth of 21.7 % (equivalent to a 2.2 % annual average). Unlike the turnover index, the employment index recorded decreasing rates of growth in recent years, with a 3.4 % reduction in 2001 abating to 0.4 % by 2005.

Figure 19.2

Hotels and restaurants (NACE Section H) Evolution of main indicators, EU-25 (2000=100)



(1) Series starts in 1998.

(2) Series starts in 1996.

Source: Eurostat (STS)

Table 19.3

Hotels and restaurants (NACE Section H) Structural profile, EU-25, 2003

	Value added (EUR million)	Share of non-financial services value added (%)	Number of persons employed (thousands)	Share of non-financial services employment (%)
Hotels and restaurants	154 171	5.8	8 228	11.9
Hotels; camping sites, other provision of short-stay accommodation	53 044	2.0	2 034	3.0
Restaurants; bars; canteens and catering	101 127	3.8	6 194	9.0

Source: Eurostat (SBS)

Table 19.4

Hotels and restaurants (NACE Section H)**Value added and employment: ranking of the top 5 Member States, 2003**

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	United Kingdom (34 229.2)	22.2	United Kingdom (1 880.9)	22.9	Malta (15.0)	Malta (24.4)
2	France (24 200.9)	15.7	Germany (1 166.0)	14.2	Spain (9.0)	Ireland (20.8)
3	Germany (21 606.0)	14.0	Spain (1 096.9)	13.3	Austria (8.8)	Austria (15.7)
4	Spain (20 599.9)	13.4	Italy (1 009.2)	12.3	Ireland (8.7)	Portugal (15.2)
5	Italy (19 303.5)	12.5	France (846.4)	10.3	Portugal (7.7)	Spain (15.0)

(1) Malta, 2002; Greece, not available.

(2) Lithuania and Malta, 2002; Greece and Cyprus, not available.

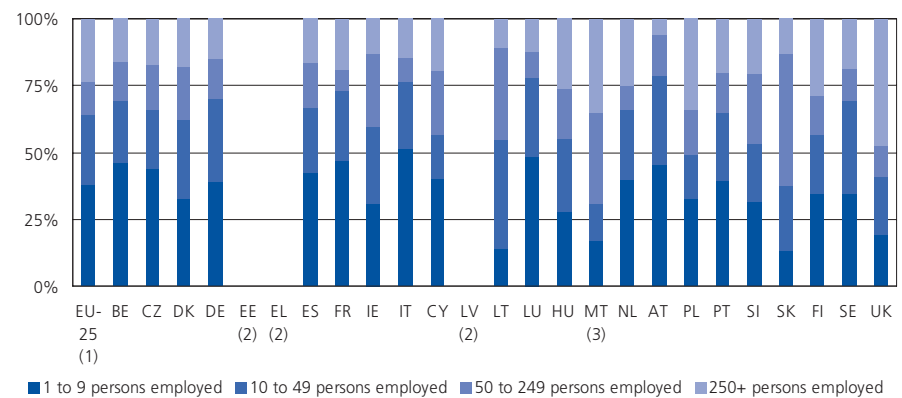
Source: Eurostat (SBS)

The EU-25's hotels and restaurants sector is characterised by a high importance of micro enterprises (with less than 10 persons employed) as these generated 38.1 % of the sector's value added in 2003, the second highest share among the non-financial services NACE divisions. Small enterprises (with between 10 and 49 persons employed) contributed a further 25.9 % of the sector's value added and the resulting combined contribution of micro and small enterprises was 64.1 % compared with a non-financial services average of 47.4 %. The United Kingdom, and to a lesser extent Malta (2002) and Poland, stood out from the other Member States with respect to the relatively high contribution of large enterprises to this sector's value added in 2003 - see Figure 19.3.

LABOUR FORCE CHARACTERISTICS

The hotels and restaurants workforce was mainly female, as in 2005 women represented 54.5 % of those employed in the EU-25. This proportion was 10.5 percentage points higher than the non-financial services (NACE Sections G to I and K) average. Moreover, this pattern was widespread as the proportion of female employment was higher than the national average for the non-financial services sector in every Member State. 28.5 % of the EU-25's hotels and restaurants workforce in 2005 worked on a part-time basis, compared with 20.8 % for the non-financial services sector as a whole. The 71.5 % of persons who worked on a full-time basis in this sector represented the second lowest full-time rate among the non-financial services NACE divisions, higher only than in retail trade (NACE Division 52). This relatively low proportion of full-time employment reflects the need for flexibility in employment, including adaptability to atypical working hours. In all of the Member States the proportion of the persons in employment working full-time in this sector was close to or below the national average for non-financial services.

Figure 19.3

Hotels and restaurants (NACE Section H)**Share of value added by enterprise size class, 2003 (%)**

(1) Rounded estimates based on non-confidential data for 1 to 9 and for 50 to 249 persons employed.

(2) Not available.

(3) 2002.

Source: Eurostat (SBS)

The hotels and restaurants workforce tended to be younger than in the non-financial services sector as a whole, which is linked to the flexibility and irregularity of working hours and the seasonal nature of work in this sector that often peaks during periods when higher education establishments are closed. Indeed, in 2005 those aged 15 to 29 accounted for over one third (36.2 %) of the sector's workforce in the EU-25, while the equivalent share was 10 percentage points lower for the non-financial services sector as a whole. This was the highest share of younger workers in the workforce of all non-financial services NACE divisions ⁽¹⁾. Younger workers accounted for the majority of the workforce in Denmark (60.4 %) and the Netherlands (55.9 %).

⁽¹⁾ NACE Divisions 61 and 62, not available.

In 2003, according to SBS data, the share of employees (paid workers) in persons employed was 80.0 % for hotels and restaurants in the EU-25, which was slightly less than for the non-financial services economy as a whole (81.6 %, 2002) reflecting a higher importance of working proprietors and family workers in this sector.

Table 19.5

Hotels and restaurants (NACE Section H)
Labour force characteristics, 2005

	Male		Full-time		Breakdown by age (% share of total)		
	Proportion of those employed (%)	Index (non-financial services=100)	Proportion of those employed (%)	Index (non-financial services=100)	< 30 years	30-49 years	50+ years
EU-25	45.5	81.2	71.5	90.3	36.2	46.7	17.1
BE	51.4	87.2	67.4	86.2	26.7	55.4	17.8
CZ	46.4	84.9	94.7	100.7	37.0	46.6	16.4
DK	43.0	72.3	48.3	65.3	60.4	27.5	12.1
DE	42.7	80.9	62.5	87.4	33.2	46.6	20.1
EE	21.4	42.1	90.4	98.7	31.7	41.3	27.0
EL	55.1	90.2	92.5	96.7	30.4	51.2	18.4
ES	46.9	85.1	80.7	94.8	31.7	52.1	16.3
FR	52.2	91.8	76.0	90.7	32.3	50.5	17.2
IE	41.9	77.3	69.5	85.9	47.9	37.4	14.7
IT	50.3	83.9	75.7	90.5	29.3	53.8	17.0
CY	45.1	83.2	89.9	99.0	22.0	53.3	24.7
LV	30.5	63.8	94.1	100.0	36.2	45.7	18.1
LT	21.4	41.0	92.6	98.3	39.9	46.1	14.1
LU	51.5	89.1	87.0	102.3	29.7	57.3	13.0
HU	44.7	83.0	93.8	98.6	32.4	48.2	19.5
MT	64.2	91.6	74.5	86.0	46.0	36.2	17.9
NL	47.4	81.6	33.0	61.4	55.9	32.4	11.7
AT	37.2	74.5	74.0	100.2	33.2	51.1	15.7
PL	34.9	63.0	86.0	96.0	40.7	45.8	13.5
PT	39.4	71.3	92.3	99.6	26.7	49.5	23.7
SI	37.9	70.2	85.0	93.2	39.3	48.0	12.7
SK	35.3	66.8	97.0	99.9	42.5	48.0	9.5
FI	28.1	51.3	70.8	87.0	43.2	38.5	18.3
SE	44.8	73.7	63.1	82.1	46.0	40.3	13.6
UK	43.6	77.5	53.2	75.6	48.4	35.2	16.4

Source: Eurostat (LFS)

Table 19.6

Hotels and restaurants (NACE Section H)
Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003

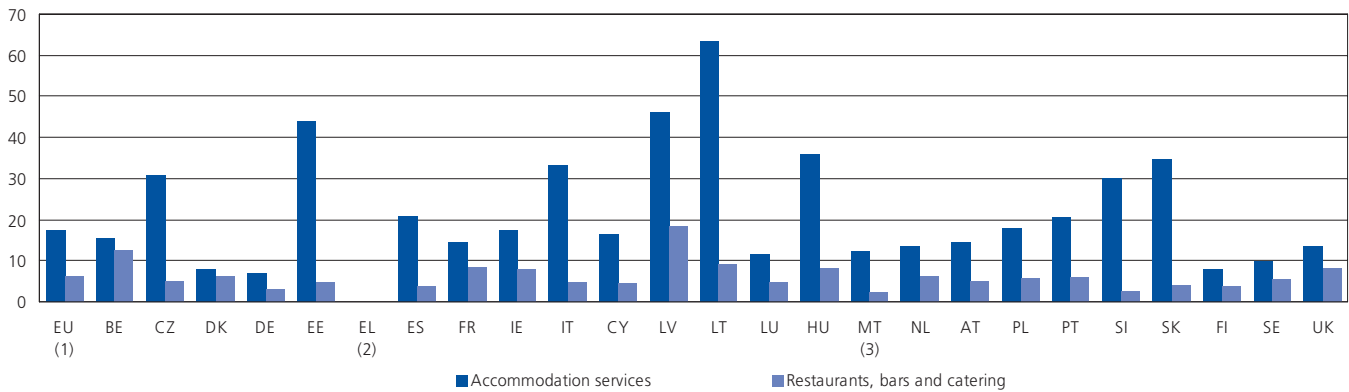
Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (1)	Personnel costs as a share of total operating costs (%) (1)	Apparent labour productivity (EUR thousand) (2)	Average personnel costs (EUR thousand) (2)	Wage adjusted labour productivity (%) (2)	Gross operating rate (%) (2)
EU-25	9.4	67.4	32.6	18.7	14.8	126.2	15.4
1	Latvia (24.0)	Czech Republic (80.3)	Netherlands (46.2)	Luxembourg (32.3)	Luxembourg (26.5)	Malta (206.7)	Malta (30.5)
2	Lithuania (21.9)	Hungary (77.7)	Cyprus (44.9)	Finland (30.0)	Sweden (24.7)	Latvia (193.2)	Cyprus (23.5)
3	Slovakia (20.3)	Poland (77.4)	Luxembourg (42.1)	France (28.6)	France (24.5)	Estonia (156.3)	Germany (20.9)
4	Estonia (18.1)	Latvia (76.3)	Germany (40.2)	Sweden (27.4)	Finland (24.2)	United Kingdom (155.8)	Latvia (18.8)
5	Hungary (16.0)	Lithuania (75.9)	Austria (38.8)	Austria (25.4)	Austria (21.3)	Netherlands (144.6)	United Kingdom (17.5)

(1) Malta, 2002; Greece, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Malta, 2002; Greece, not available.

Source: Eurostat (SBS)

Figure 19.4
Hotels and restaurants (NACE Section H)
Ratio of gross tangible investment to gross operating expenditure, 2003 (%)



(1) EU average based on available data for 2002 and 2003; excluding Greece.
(2) Not available.
(3) 2002.
Source: Eurostat (SBS)

COSTS, PRODUCTIVITY AND PROFITABILITY

An analysis of tangible investment and gross operating expenditure (personnel costs and purchases of goods and services) is possible for the EU's ⁽²⁾ hotels and restaurants sector and its two subsectors. Gross tangible investment was equivalent to 9.4 % of gross operating expenditure in the sector as a whole, but this ratio was much higher (17.2 %) for accommodation services than for restaurants, bars and catering (6.3 %). The ratio was particularly high for accommodation services in the Baltic States (Lithuania 63.3 %, Latvia, 46.0 %, and Estonia 43.9 %), but was less than 10 % in Germany and the Nordic Member States - see Figure 19.4.

⁽²⁾ EU average, 2003; Malta, 2002; excluding Greece.

Apparent labour productivity in the EU-25's hotels and restaurants sector was EUR 18 700 in 2003, less than half the average for non-financial services. This is mainly due to the high use of part-time and seasonal employment and a relatively low or unskilled workforce. Equally, these characteristics of the hotels and restaurants sector have an impact on average personnel costs per employee which were EUR 14 800 in the hotels and restaurants sector, again considerably lower than the non-financial services average (EUR 25 900, 2002). For both of these indicators the hotels and restaurants sector recorded the lowest values among the non-financial services NACE divisions ⁽³⁾ in the EU-25 in 2003.

⁽³⁾ NACE Divisions 50 to 52, 2002.

The wage adjusted labour productivity ratio can be calculated as the ratio of apparent labour productivity to average personnel costs, and is less affected by the incidence of part-time and seasonal employment. In the EU-25's hotels and restaurants sector this ratio was 126.2 % in 2003, well below the non-financial services average (145.9 %, 2002). In terms of profitability, the EU-25's hotels and restaurants sector recorded in 2003 a gross operating surplus (value added less personnel costs) equivalent to 15.4 % of turnover, notably above the non-financial services average (11.2 %) in 2002.

19.1: ACCOMMODATION SERVICES

Accommodation services are covered by two NACE groups: Group 55.1 includes the provision of short-stay lodging in hotels, motels and inns, excluding the rental of long-stay accommodation and timeshare operations; Group 55.2 covers camping sites and other short-stay accommodation, including self-catering holiday chalets or cottages.

SUPPLY AND DEMAND

According to Hotels magazine, the largest hotel chain in the world in 2005, in terms of number of rooms, was the British chain InterContinental Hotels Group, with over half a million rooms worldwide (see Table 19.7).

Table 19.7

Main hotel chains, ranked by number of rooms, EU-25, 31 December 2005

		Number of rooms (units)	Number of sites (units)	World ranking
InterContinental Hotels Group	UK	537 533	3 606	1
Accor	FR	475 433	4 065	6
TUI AG/TUI Hotels & Resorts	DE	82 455	279	11
Sol Meliá SA	ES	81 282	328	12
Société du Louvre (Starwood capital group)	FR	55 538	819	15
Golden Tulip Hospitality/THL	NL	47 661	498	18
Rezidor SAS Hospitality	BE	45 000	263	20
NH Hotels SA	ES	37 643	258	25
Club Méditerranée (1)	FR	36 000	93	27
RIU Hotels Group	ES	35 000	109	28

(1) Number of rooms, estimated.
Source: Hotels Magazine, July 2006.

Table 19.8

Main indicators for hotels and similar establishments, 2005

	Infrastructure (1)			Arrivals (thousands) (2)			Nights spent (thousands) (3)		Nights spent per arrival (2)	
	Establish- ments	Bedrooms	Bed places	Residents	Non- residents	Non-residents share (%)	Residents	Non- residents	Residents	Non- residents
EU-25	201 066	5 450 441	10 783 463	:	:	:	755 186	630 489	:	:
BE	1 899	54 226	120 668	2 364	5 409	69.6	4 313	10 297	1.8	1.9
CZ	4 279	99 966	232 295	3 346	5 346	61.5	9 051	15 881	2.7	3.0
DK	480	35 659	69 932	1 903	1 350	41.5	5 328	4 787	2.8	3.5
DE	52 877	890 153	1 621 118	73 777	18 761	20.3	161 895	38 872	2.2	2.1
EE	317	12 312	25 228	428	1 358	76.0	751	2 791	1.8	2.1
EL	9 036	358 721	682 050	5 933	7 143	54.6	13 942	40 075	2.4	5.6
ES	17 402	766 952	1 511 592	39 211	27 620	41.3	100 044	134 654	2.6	4.9
FR	18 689	633 162	1 266 325	73 066	35 033	32.4	125 216	72 824	1.7	2.1
IE	4 407	63 762	148 653	2 770	:	:	7 395	17 321	2.7	:
IT	33 518	1 011 773	1 999 729	40 767	29 916	42.3	136 845	97 175	3.4	3.2
CY	785	45 209	91 264	449	1 750	79.6	1 040	13 899	2.3	7.9
LV	337	9 219	19 229	354	680	65.8	796	1 507	2.2	2.2
LT	331	10 134	19 940	347	623	64.2	728	1 334	2.1	2.1
LU	292	7 508	14 411	29	667	95.8	85	1 273	2.9	1.9
HU	1 983	64 214	157 346	2 717	3 113	53.4	6 476	9 029	2.4	2.9
MT	178	18 050	37 577	111	1 024	90.2	281	7 194	2.5	7.0
NL	3 135	94 364	192 215	8 301	8 081	49.3	14 375	15 143	1.7	1.9
AT	14 267	289 879	571 377	6 896	14 542	67.8	19 383	56 690	2.8	3.9
PL	2 200	84 865	169 609	6 805	3 723	35.4	12 464	7 869	1.8	2.1
PT	1 954	112 659	253 927	4 934	5 201	51.3	11 139	23 002	2.3	4.4
SI	344	15 811	29 971	459	1 192	72.2	1 653	3 322	3.6	2.8
SK	885	28 231	57 071	1 244	1 203	49.1	3 183	3 650	2.6	3.0
FI	938	54 354	117 605	5 948	1 828	23.5	10 388	3 887	1.7	2.1
SE	1 857	100 155	197 470	11 096	2 736	19.8	17 518	5 382	1.6	2.0
UK	44 625	606 881	1 223 047	48 100	13 172	21.5	106 510	53 789	2.2	4.1
BG	1 230	90 593	200 940	1 721	1 909	52.6	3 957	11 471	2.3	6.0
IS	319	8 005	16 639	229	643	73.7	361	1 208	1.6	1.9
LI	46	608	1 189	1	50	97.5	3	108	2.3	2.2
NO	1 136	67 522	143 568	7 736	2 656	25.6	12 349	4 761	1.6	1.8
CH	5 643	139 941	259 004	:	:	:	:	:	:	:

(1) EU-25, Spain, France, Italy, Poland, Portugal and the United Kingdom, 2004; Switzerland, 2002; Hungary and Poland, provisional.

(2) The Czech Republic, Spain, Italy, Portugal and the United Kingdom, 2004; Ireland, 2002; Hungary, provisional.

(3) EU-25, the Czech Republic, Spain, Italy, Portugal and the United Kingdom, 2004; Ireland, 2002 (estimated); Hungary, provisional.

Source: Eurostat (Tourism)

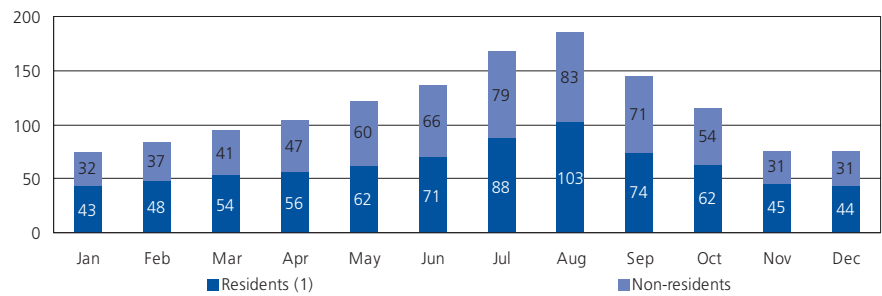
There are four main types of accommodation: hotels, camping sites, holiday dwellings and other collective establishments. The Member States that had the largest number of hotels and similar establishments in 2005 were Germany and the United Kingdom (2004) with 52 900 and 44 600 establishments respectively, which combined accounted for close to half the total number in the EU-25. In terms of the number of arrivals (combining resident and non-resident arrivals), Germany and France were the largest markets. A number of southern Member States recorded the longest average stays (nights per arrival), notably in Cyprus, Malta and Greece where this exceeded 5 nights seasonality of demand for hotels and similar accommodation can be clearly seen from Figure 19.5, with the number of nights spent rising 2.5 times from its lowest point in January to its peak in August. Table 19.9 provides an overview of the supply of other types of collective accommodation, where there were approximately 13.6 million bed-places in the EU-25 in 2004, 1.3 times as many as in hotels and similar establishments.

STRUCTURAL PROFILE

Accommodation services (NACE Groups 55.1 and 55.2) generated EUR 53.0 billion of value added in the EU-25 in 2003 and had a workforce of just over 2 million persons. This subsector contributed one third (34.4 %) of total wealth creation within the EU-25's hotels and restaurants sector (NACE Section H), while accounting for one quarter (24.7 %) of the hotels and restaurants workforce. Among the Member States, the United Kingdom created the highest value added for accommodation services in 2003 (EUR 9.5 billion, 17.9 % of the EU-25 total), and had the largest workforce (18.2 % of the EU-25 total). Accommodation services in the EU-25 accounted for 2.0 % of the non-financial services (NACE Sections G to I and K) value added in 2003. Relative to this proportion, Malta stood out as being several times more specialised, as its accommodation services sector accounted for 11.2 % (2002) of Maltese non-financial services value added.

Figure 19.5

Number of nights spent in hotels and similar establishments, EU-25, 2004 (millions)



(1) Estonia, Spain and Finland, provisional; excluding Ireland.
Source: Eurostat (Tourism)

Table 19.9

Main indicators for collective accommodation establishments other than hotels, 2005 (1)

	Number of establishments (units)			Number of bed places: total
	Total	Tourist campsites	Holiday dwellings	
EU-25	202 442	:	:	13 636 578
BE	1 550	554	75	294 501
CZ	3 329	499	331	203 698
DK	608	430	77	320 832
DE	18 694	2 410	10 804	2 359 157
EE	467	80	143	12 860
EL	341	341	:	95 560
ES	15 666	1 257	4 405	1 461 850
FR	10 689	8 174	1 319	3 558 132
IE	4 458	112	4 133	60 200
IT	81 009	2 529	56 586	2 205 848
CY	134	4	130	4 128
LV	81	22	46	4 816
LT	193	7	173	11 314
LU	255	103	116	52 404
HU	1 010	262	377	162 391
MT	6	:	:	684
NL	4 025	2 446	783	997 519
AT	6 281	538	3 225	354 701
PL	4 523	136	315	400 287
PT	285	225	:	179 233
SI	358	39	39	34 656
SK	1 131	73	66	103 124
FI	459	284	128	92 608
SE	2 089	1 065	309	537 381
UK	45 133	4 751	39 163	796 171
BG	325	18	:	20 204
IS	294	145	32	:
LI	112	2	101	2 020
NO	1 121	796	252	343 629
CH	94 100	590	90 000	811 674

(1) EU-25, Spain, France, Italy, Portugal and the United Kingdom, 2004; Liechtenstein, bed places, 2002; Switzerland, 2002 (estimated); Hungary, provisional.
Source: Eurostat (Tourism)

Table 19.10

Hotels; camping sites, other provision of short-stay accommodation (NACE Groups 55.1 and 55.2)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	United Kingdom (9 483.8)	17.9	United Kingdom (369.6)	18.2	Malta (11.2)	Malta (13.5)
2	Germany (8 450.0)	15.9	Germany (362.0)	17.8	Austria (4.7)	Austria (6.9)
3	France (8 000.2)	15.1	Italy (258.8)	12.7	Spain (3.4)	Ireland (6.7)
4	Spain (7 712.4)	14.5	Spain (248.4)	12.2	Slovenia (3.3)	Slovenia (3.4)
5	Italy (6 584.1)	12.4	France (227.9)	11.2	Ireland (3.0)	Spain (3.4)

(1) Malta, 2002; Greece, not available.

(2) Lithuania and Malta, 2002; Greece and Cyprus, not available.
Source: Eurostat (SBS)

Table 19.11

Hotels; camping sites, other provision of short-stay accommodation (NACE Groups 55.1 and 55.2)
Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (1)	Personnel costs as a share of total operating costs (%) (1)	Apparent labour productivity (EUR thousand) (2)	Average personnel costs (EUR thousand) (2)	Wage adjusted labour productivity (%) (2)	Gross operating rate (%) (2)
EU-25	17.2	61.3	38.7	26.1	18.3	142.1	18.4
1	Lithuania (63.3)	Czech Republic (71.7)	Cyprus (54.4)	Belgium (41.0)	Belgium (30.8)	Latvia (259.3)	Latvia (36.5)
2	Latvia (46.0)	Estonia (70.8)	Germany (48.1)	Luxembourg (36.5)	Sweden (28.3)	Malta (237.2)	Malta (34.9)
3	Estonia (43.9)	Finland (70.4)	Luxembourg (42.5)	Finland (36.3)	France (27.0)	Estonia (201.9)	Cyprus (25.6)
4	Hungary (36.1)	Lithuania (69.3)	Netherlands (41.7)	France (35.1)	Finland (26.7)	United Kingdom (167.7)	Estonia (23.7)
5	Slovakia (34.7)	Hungary (67.9)	Spain (41.5)	Sweden (33.4)	Luxembourg (25.9)	Cyprus (165.3)	Germany (22.9)

(1) Malta, 2002; Greece, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Malta, 2002; Greece, not available.

Source: Eurostat (SBS)

The next most specialised Member States ⁽⁴⁾ in accommodation services were Austria (4.7 % of non-financial services value added), Spain (3.4 %) and Slovenia (3.3 %) - see Table 19.10 - while the least specialised were Denmark (1.0 %), Latvia, Lithuania (2002), Poland and Belgium (all 1.2 %).

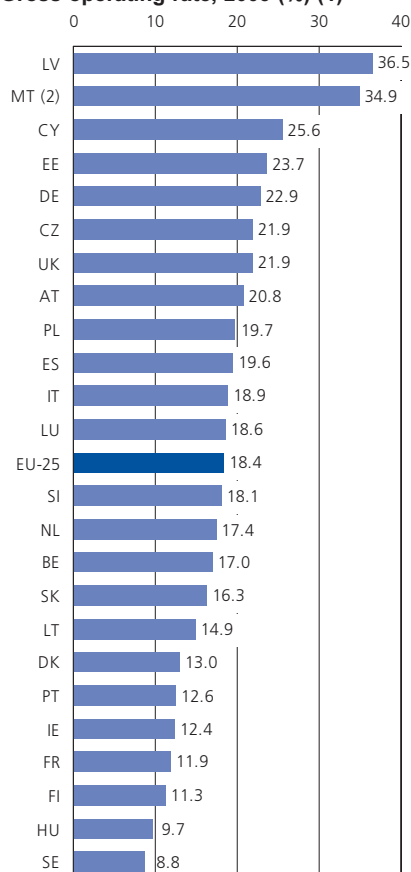
COSTS, PRODUCTIVITY AND PROFITABILITY

In the accommodation services sector in the EU-25 each person employed generated on average EUR 26 100 of value added in 2003, while average personnel costs per employee reached EUR 18 300. Both indicators were much lower than for non-financial services as a whole, but higher than the averages for the hotels and restaurants sector, by EUR 7 400 and EUR 3 500 respectively. The wage adjusted labour productivity ratio was 142.1 %, 15.9 percentage points above the hotels and restaurants sector average and not far from the 2002 non-financial services average (145.9 %).

The gross operating rate for the EU-25's accommodation services sector was 18.4 %, which was high compared with both the hotels and restaurants average (15.4 %) and the non-financial services average (11.2 %, 2002). Figure 19.6 shows the gross operating rate for the Member States, with very high rates for Latvia and Malta (2002), both well in excess of 30 % and close to double the EU-25 average.

⁽⁴⁾ Lithuania and Malta, 2002; Greece and Cyprus, not available.

Figure 19.6
Hotels; camping sites, other provision of short-stay accommodation
(NACE Groups 55.1 and 55.2)
Gross operating rate, 2003 (%) (1)



(1) Greece, not available.

(2) 2002.

Source: Eurostat (SBS)

19.2: RESTAURANTS, BARS AND CATERING

The activities of the sale of meals and beverages for consumption are classified under NACE Groups 55.3 (restaurants), 55.4 (bars) and 55.5 (canteens and catering). It is important to bear in mind that only enterprises for which the provision of drinks and meals is the principal activity are covered by the statistics presented in this subchapter. Enterprises offering food and drink as a complement to their core business are not included, for example, the sale of food and beverages in cinemas or recreation parks, where, in some cases, meals and beverages may represent a significant secondary activity.

This subchapter covers the sale of food and beverages to final consumers that may be tourists or local customers. Included for example are fast-food stands, take away restaurants, self-service outlets, as well as traditional restaurants. Catering enterprises generally operate on a business-to-business level.

STRUCTURAL PROFILE

Restaurants, bars and catering (NACE Groups 55.3 to 55.5) generated a total of EUR 101.1 billion value added in the EU-25 in 2003, which accounted for 65.6 % of the hotels and restaurants (NACE Section H) total and 3.8 % of the non-financial services (NACE Sections G to I and K) total. Among the Member States ⁽⁵⁾, this proportion was somewhat higher in Ireland, Spain and Portugal where it exceeded 5 % - see Table 19.12. The United Kingdom was by far the largest producer, generating close to one quarter (24.5 %) of EU-25 value added in this sector.

The labour-intensive nature of restaurants, bars and catering was reflected through the 6.2 million persons employed in this sector in the EU-25 in 2003, more than three quarters of the hotels and restaurants workforce and 9.0 % of the non-financial services workforce. However, it should be kept in mind that this figure is based on head-counts of persons employed and does not take into account the seasonal or part-time nature of many positions. Member States ⁽⁶⁾ where restaurants, bars and catering represented a higher proportion of total employment in non-financial services than the EU-25 average included Ireland, the United Kingdom, and several southern Member States. The smallest contributions to non-financial services employment made by this sector were recorded in Slovakia (2.2 %) and Poland (4.0 %).

⁽⁵⁾ Lithuania and Malta, 2002; Greece and Cyprus, not available.

⁽⁶⁾ Lithuania and Malta, 2002; Greece and Cyprus, not available.

Table 19.12

Restaurants; bars; canteens and catering (NACE Groups 55.3, 55.4 and 55.5)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	United Kingdom (24 745.4)	24.5	United Kingdom (1 511.3)	24.4	Ireland (5.7)	Ireland (14.1)
2	France (16 200.8)	16.0	Spain (848.5)	13.7	Spain (5.6)	Portugal (12.2)
3	Germany (13 156.0)	13.0	Germany (804.0)	13.0	Portugal (5.2)	United Kingdom (11.8)
4	Spain (12 887.5)	12.7	Italy (750.4)	12.1	Italy (4.8)	Spain (11.6)
5	Italy (12 719.5)	12.6	France (618.5)	10.0	Luxembourg (4.6)	Malta (10.9)

(1) Malta, 2002; Greece, not available.

(2) Lithuania and Malta, 2002; Greece and Cyprus, not available.

Source: Eurostat (SBS)

Table 19.13

Restaurants; bars; canteens and catering (NACE Groups 55.3, 55.4 and 55.5)**Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003**

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (1)	Personnel costs as a share of total operating costs (%) (1)	Apparent labour productivity (EUR thousand) (2)	Average personnel costs (EUR thousand) (2)	Wage adjusted labour productivity (%) (2)	Gross operating rate (%) (2)
EU-25	6.3	69.8	30.2	16.3	13.5	120.7	14.1
1	Latvia (18.3)	Czech Republic (82.9)	Netherlands (48.5)	Luxembourg (31.1)	Luxembourg (26.7)	Malta (170.4)	Malta (22.3)
2	Belgium (12.5)	Poland (82.8)	Luxembourg (41.9)	Finland (28.2)	France (23.5)	Latvia (165.1)	Cyprus (21.8)
3	Lithuania (9.3)	Hungary (81.5)	Cyprus (37.9)	France (26.2)	Finland (23.4)	United Kingdom (152.0)	Germany (19.7)
4	France (8.4)	Malta (79.8)	Germany (37.5)	Sweden (25.0)	Sweden (23.2)	Netherlands (141.3)	Netherlands (16.4)
5	Hungary (8.3)	Italy (79.0)	Austria (37.2)	Cyprus (22.6)	Austria (19.6)	Germany (139.4)	United Kingdom (16.1)

(1) Malta, 2002; Greece, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Malta, 2002; Greece, not available.

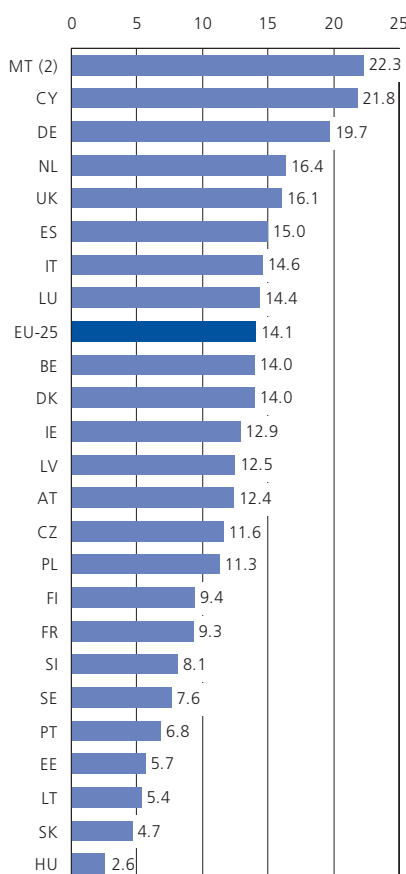
Source: Eurostat (SBS)

COSTS, PRODUCTIVITY AND PROFITABILITY

Restaurants, bars and catering had lower apparent labour productivity, average personnel costs and wage adjusted labour productivity, as well as a lower gross operating rate, than accommodation services, reflecting the labour-intensive nature of these activities, as well as the relatively high turnover of these activities that in some ways resemble distributive trades activities. On average, each person employed in restaurants, bars and catering generated EUR 16 300 of value added, a figure that was less than half the non-financial services average of EUR 38 200. In keeping with this low figure for apparent labour productivity, average personnel costs for restaurants, bars and catering were EUR 13 500 per employee. As a consequence, wage adjusted labour productivity for the restaurants, bars and catering sector was 120.7 %, some 25.2 percentage points below the 2002 average for non-financial services (145.9 %).

In contrast, the gross operating surplus generated by restaurants, bars and catering in the EU-25 was equivalent to 14.1 % of turnover, which was 2.9 percentage points above the equivalent ratio for non-financial services (11.2 %, 2002) as a whole. As with accommodation services, Malta (2002) recorded a very high gross operating rate for the restaurants, bars and catering sector, along with Cyprus, and to a lesser extent Germany - see Figure 19.7.

Figure 19.7

Restaurants; bars; canteens and catering (NACE Groups 55.3, 55.4 and 55.5)
Gross operating rate, 2003 (%) (1)

(1) Greece, not available.

(2) 2002.

Source: Eurostat (SBS)

Table 19.14

Hotels and restaurants (NACE Section H)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million)	367 317	8 918	3 305	4 425	44 198	275	:	47 122	57 224	7 826	53 318	1 409	222	262	901	2 193	541
Production (EUR million)	:	8 164	3 089	4 242	38 890	266	:	46 950	50 836	4 810	50 881	1 384	218	230	894	1 598	543
Value added at factor cost (EUR million)	154 171	3 298	1 037	1 978	21 606	96	:	20 600	24 201	2 836	19 304	800	86	80	456	540	281
Gross operating surplus (EUR million)	56 477	1 299	470	608	9 233	35	:	7 736	5 810	996	8 409	331	42	20	139	101	165
Purchases of goods and services (EUR million)	:	5 506	2 310	2 587	18 385	185	:	27 263	32 537	5 004	33 819	576	141	188	436	1 532	250
Gross investment in tangible goods (EUR million)	:	980	314	263	1 292	44	:	3 545	5 299	722	5 366	99	45	54	49	315	31
Number of persons employed (thousands)	8 228	153	171	91	1 166	15	:	1 097	846	141	1 009	32	19	30	14	123	18
Personnel costs (EUR million)	97 694	1 999	567	1 371	12 373	60	:	12 864	18 391	1 841	10 895	469	44	60	317	439	117
App. labour productivity (EUR thous./pers. emp.)	18.7	21.5	6.1	21.8	18.5	6.4	:	18.8	28.6	20.2	19.1	24.8	4.4	2.7	32.3	4.4	15.8
Average personnel costs (EUR thous./employee)	14.8	18.4	4.8	16.8	12.9	4.1	:	15.9	24.5	15.2	18.1	17.6	2.3	2.1	26.5	4.4	7.6
Wage adjusted labour productivity (%)	126.2	116.9	125.3	129.9	143.8	156.3	:	118.2	116.8	133.1	105.6	140.9	193.2	126.2	121.9	99.3	206.7
Gross operating rate (%)	15.4	14.6	14.2	13.7	20.9	12.8	:	16.4	10.2	12.7	15.8	23.5	18.8	7.7	15.4	4.6	30.5
Investment per person employed (EUR thousand)	:	6.4	1.8	2.9	1.1	3.0	:	3.2	6.3	5.1	5.3	3.1	2.3	1.8	3.5	2.6	1.7
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million)	14 134	11 491	2 931	7 686	957	265	4 340	7 744	78 713	660	:	887	:	:	:	5 094	13 500
Production (EUR million)	13 771	11 322	2 760	6 666	842	237	4 269	7 659	66 541	507	:	650	:	:	:	5 014	13 063
Value added at factor cost (EUR million)	6 117	5 633	944	2 446	378	97	1 619	3 005	34 229	180	:	233	:	:	:	2 053	6 577
Gross operating surplus (EUR million)	2 358	1 902	417	623	112	30	430	619	13 747	82	:	74	:	:	:	315	1 289
Purchases of goods and services (EUR million)	4 382	5 880	1 809	5 358	568	166	2 807	4 851	42 323	529	:	676	:	:	:	3 056	6 475
Gross investment in tangible goods (EUR million)	707	911	216	648	99	47	190	491	5 897	253	:	229	:	:	:	259	:
Number of persons employed (thousands)	292	222	213	229	29	17	54	110	1 881	101	:	95	:	:	:	85	172
Personnel costs (EUR million)	3 759	3 730	527	1 823	266	68	1 189	2 387	20 483	98	:	159	:	:	:	1 738	5 288
App. labour productivity (EUR thous./pers. emp.)	20.9	25.4	4.4	10.7	13.1	5.8	30.0	27.4	18.2	1.8	:	2.5	:	:	:	24.1	38.2
Average personnel costs (EUR thous./employee)	14.5	21.3	4.8	9.3	11.1	4.1	24.2	24.7	11.7	1.3	:	1.8	:	:	:	21.7	:
Wage adjusted labour productivity (%)	144.6	119.3	92.9	115.5	117.9	141.5	124.0	110.9	155.8	141.3	:	139.5	:	:	:	111.1	:
Gross operating rate (%)	16.7	16.6	14.2	8.1	11.7	11.2	9.9	8.0	17.5	12.4	:	8.3	:	:	:	6.2	9.5
Investment per person employed (EUR thousand)	2.4	4.1	1.0	2.8	3.4	2.8	3.5	4.5	3.1	2.5	:	2.4	:	:	:	3.0	:

(1) Malta, 2002.

Source: Eurostat (SBS)

Transport services



The transport policy strategy currently being implemented within the EU is based upon the White paper 'European transport policy for 2010: time to decide' ⁽¹⁾, which was adopted in 2001 and aims to improve transport quality and efficiency of transport within the EU. A mid-term review of this policy has been conducted, and in June 2006 the European Commission published a communication ⁽²⁾ entitled 'Keep Europe moving - sustainable mobility for our continent'. While the original goals of the 2001 White paper are deemed to be relevant, this review tries to take account of a number of issues, such as enlargement, the entry into force of the Kyoto Protocol, developments in energy policy and markets. One of the key conclusions of this communication concerns the balance between environmentally friendly modes of transport and high levels of mobility: each transport mode must be optimised; all modes must become more environmentally friendly, safe and energy efficient; each mode should be used efficiently on their own and in combination to achieve an optimal and sustainable utilisation of resources. The specific actions foreseen in this mid-term review include (among others): in 2006 an action plan for energy efficiency and a road map for renewables; in 2007 the presentation of a Green paper on urban transport and the implementation of the recently adopted NAIADES action plan for inland waterways - see Subchapter 20.3. Alongside this major review of transport policy there have been a number of recent developments in more specific transport areas: the 'third railway package' (see Subchapter 20.1); the 'Eurovignette' (see Subchapter 20.2); preparatory steps towards dealing with air transport and climate change and the introduction of a so-called black list of airlines (see Subchapter 20.4); and a directive on port security (see Subchapter 20.5).

In addition, there has been progress on a proposal concerning public road and rail transport. The Community framework from 1969 applicable to public passenger transport services allows Member States to impose public service obligations on operators aimed at guaranteeing the provision of services, with compensation for the costs incurred. This was amended in 1991 and extended to local transport services. The development of an increasingly competitive market requires a reform of this framework to ensure transparency and fair competition and trade. A new proposal ⁽³⁾ for a regulation on public passenger transport services by rail and by road was adopted by the European Commission in July 2005: at the time of writing this is expected to be adopted shortly.

Environmental issues remain of great importance to this sector, as transport is a major source of emissions and noise, as well as land use. Table 20.1 shows the change in selected emissions from all transport (not only those of the transport sector) between 1990 and 2003 - see also the use of biofuels in Subchapter 20.2 and concerns about aviation and the environment in Subchapter 20.4.

⁽³⁾ COM(2005) 319.

Transport services include: land transport (NACE Division 60), which includes railways, urban transport systems (NACE Group 60.1), road and other land transport (NACE Group 60.2), as well as transport by pipelines (NACE Group 60.3); water transport (NACE Division 61); air transport (NACE Division 62); auxiliary transport activities (NACE Division 63, excluding NACE Group 63.3) and travel agencies (NACE Group 63.3). In previous editions of this publication, transport by pipelines and travel agencies were included in the chapters on energy and tourism respectively.

Note that this chapter focuses on transport services provided to clients for hire and reward. When analysing emissions from transport and transport traffic volumes (numbers of passengers or tonnes of freight), it is important to bear in mind that these include own account transport as well as transport services for hire and reward. This is particularly important in road transport where, for example, a manufacturer might collect materials or deliver own output, rather than contracting a transport service enterprise to do this. Equally, the use of own vehicles (typically passenger cars) accounts for a very large part of passenger transport.

NACE

- 60: land transport; transport via pipelines;
- 60.1: transport via railways;
- 60.2: other land transport;
- 60.3: transport via pipelines;
- 61: water transport;
- 61.1: sea and coastal water transport;
- 61.2: inland water transport;
- 62: air transport;
- 62.1: scheduled air transport;
- 62.2: non-scheduled air transport;
- 62.3: space transport;
- 63: supporting and auxiliary transport activities; activities of travel agencies;
- 63.1: cargo handling and storage;
- 63.2: other supporting transport activities;
- 63.3: activities of travel agencies and tour operators; tourist assistance activities n.e.c.;
- 63.4: activities of other transport agencies.

⁽¹⁾ Available at:
http://europa.eu.int/comm/energy_transport/en/lb_en.html.

⁽²⁾ COM(2006) 314.

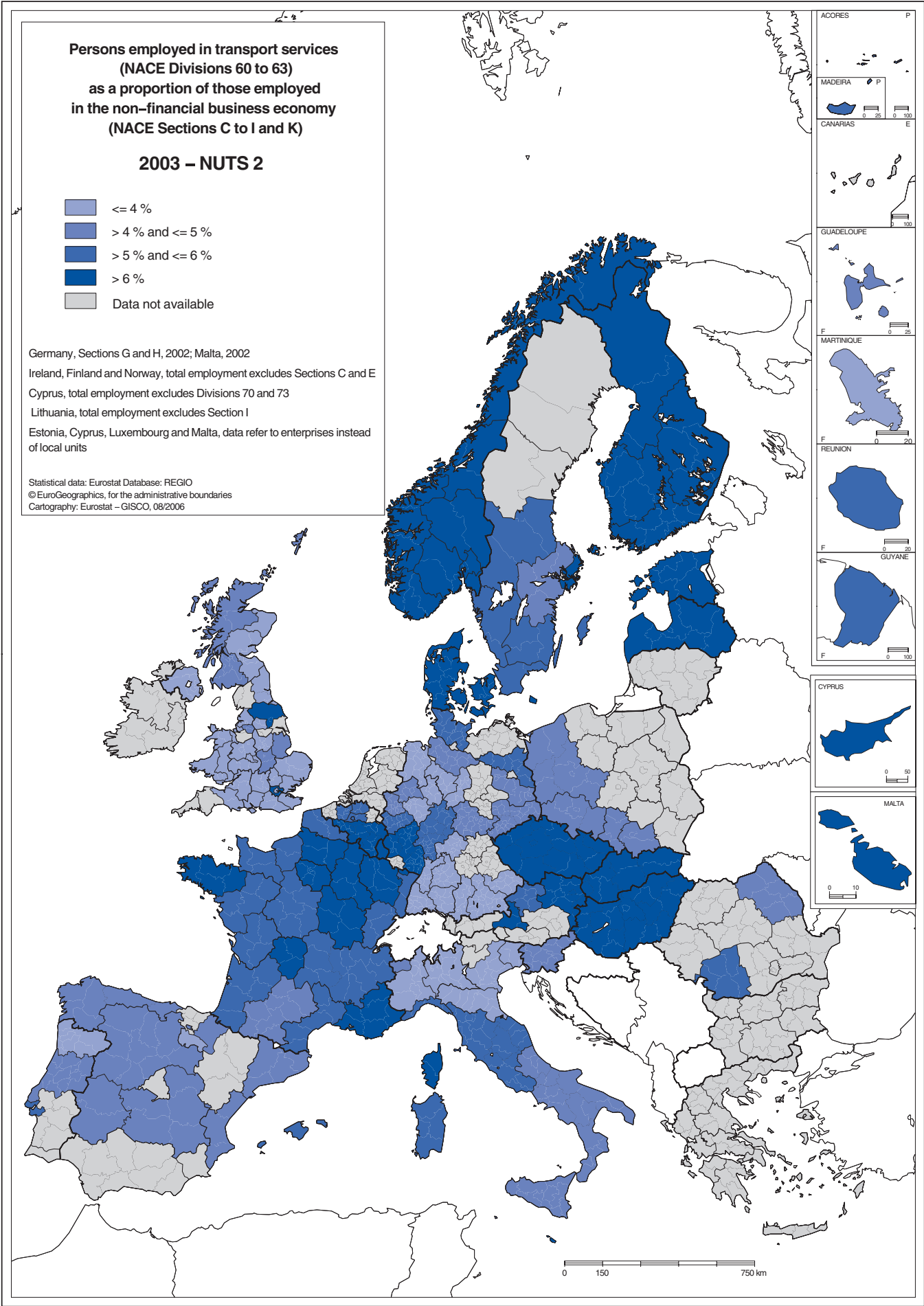


Table 20.1

Emissions by all transport, EU-25 (1)

	Transport				Road transport			
	1 000 tonnes		as a share of all emissions (%)		1 000 tonnes		as a share of transport emissions (%)	
	1990	2003	1990	2003	1990	2003	1990	2003
Sulphur oxides	1 275	394	5.3	5.0	757	114	59.3	29.0
Nitrogen oxides	8 869	5 944	55.2	54.6	7 189	4 472	81.1	75.2
Ammonium	22	86	0.5	2.3	19	84	83.1	97.1
Carbon monoxide	37 521	16 134	60.7	50.6	35 311	13 990	94.1	86.7
Non-methane volatile organic compounds	7 072	3 072	43.0	31.9	6 390	2 521	90.3	82.1
Carbon dioxide	753 872	921 740	18.3	22.7	:	:	:	:
Methane	239	131	0.9	0.7	:	:	:	:
Nitrous oxide	37	87	2.4	6.9	:	:	:	:

(1) Transport includes: civil aviation; road transportation; railways; navigation; other transportation (IPCC common reporting format sector classification); excluding inter-national transport.

Source: Eurostat (Air emissions)

Table 20.2

Transport services (NACE Divisions 60, 61, 62 and 63)
Structural profile, EU-25, 2003

	Value added (EUR million)	Share of non-financial services value added (%)	Number of persons employed (thousands)	Share of non-financial services employment (%)
Transport services (1)	334 000	12.6	8 000	11.6
Transport via railways (2)	35 117	:	926	1.3
Road and other land transport (3)	130 000	4.9	4 200	6.1
Pipelines (4)	3 136	:	10	:
Water transport	17 474	0.7	181	0.3
Air transport	27 755	1.0	401	0.6
Auxiliary transport activities (1)	105 000	4.0	1 800	2.6
Activities of travel agencies	19 000	0.7	470	0.7

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

(2) 2002 for value added.

(3) Value added and related share, rounded estimates based on non-confidential data.

(4) 2002.

Source: Eurostat (SBS)

STRUCTURAL PROFILE

The transport services sector (NACE Divisions 60 to 63) in the EU-25 generated EUR 334 billion of value added in 2003. This represented a 12.6 % share of value added in the non-financial services sector (NACE Sections G to I and K). Some 8 million persons were employed in the transport services sector in 2003 in the EU-25, which represented 11.6 % of those working in non-financial services.

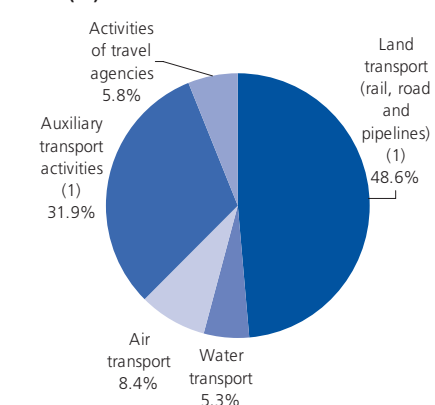
Half of the wealth created by transport services within the EU-25 was generated by land transport (NACE Division 60), where value added reached EUR 167 billion in 2003: an analysis for 2002 shows that just over one fifth of the land transport total was generated by railway transport (see Subchapter 20.1) and the remainder by road and other land transport and pipelines (see Subchapter 20.2). The diverse set of activities classified under the heading of auxiliary transport activities (NACE Groups 63.1, 63.2 and 63.4) was the second largest subsector within transport services (see Subchapter 20.5),

with value added of EUR 105 billion in 2003, close to one third of the total. Water transport (NACE Division 61) and air transport (NACE Division 62) were the two smallest subsectors directly involving the transport of passengers and freight (see Subchapters 20.3 and 20.4), each contributing between 5 % and 10 % of transport value added, as did the services of travel agencies (NACE Group 63.3) presented in Subchapter 20.6.

Malta was the most specialised Member State in transport services within the EU-25 ⁽⁴⁾ with these services contributing 29.4 % of non-financial services value added in 2002, boosted by the import of goods and the tourism centred economy of this island nation. However, the importance of transport services was much less significant in employment terms. The Baltic States were also particularly specialised in transport services in value added terms, with transport contributing more than one fifth of non-financial services' value added in each country. Compared with other

non-financial services, the transport services sector in Ireland and the United Kingdom was proportionally smaller than the EU-25 average, both in terms of value added and employment.

Figure 20.1

Transport services
(NACE Divisions 60, 61, 62 and 63)
Breakdown of sectoral value added, EU-25,
2003 (%)

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

⁽⁴⁾ Lithuania and Malta, 2002; Greece and Cyprus, not available.

Table 20.3

Transport services (NACE Divisions 60, 61, 62 and 63)**Value added and employment: ranking of the top 5 Member States, 2003**

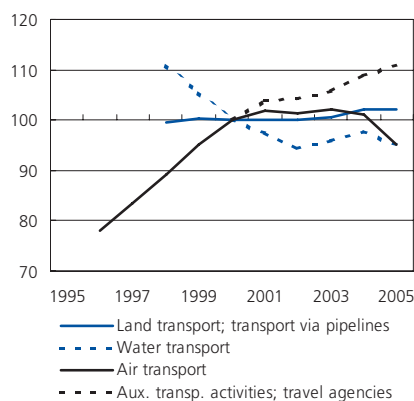
Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	Germany (64 737.4)	19.4	Germany (1 191.7)	14.9	Malta (29.4)	Slovakia (21.9)
2	United Kingdom (56 884.2)	17.0	France (1 118.0)	14.0	Latvia (22.7)	Lithuania (19.7)
3	France (52 117.0)	15.6	United Kingdom (1 057.9)	13.2	Lithuania (22.5)	Latvia (18.9)
4	Italy (37 699.8)	11.3	Italy (927.8)	11.6	Estonia (22.0)	Estonia (18.1)
5	Spain (31 381.5)	9.4	Spain (790.1)	9.9	Czech Republic (17.6)	Finland (17.7)

(1) Lithuania and Malta, 2002; Greece, not available.

(2) Lithuania and Malta, 2002; Greece and Cyprus, not available.

Source: Eurostat (SBS)

Figure 20.2

Transport services**(NACE Divisions 60, 61, 62 and 63)****Evolution of main indicators, EU-25 (2000=100)**

Source: Eurostat (STS)

The regional specialisation of transport services is shown in the map on page 334 which is based on the non-financial business economy employment share of this sector. The most specialised region (at the level of detail shown in the map) was by far Åland (Finland), and there were several regions in Finland and France, as well as Estonia, Latvia and Luxembourg (considered each as one region at the level of detail in the map), and several regions of Norway that were highly specialised in transport services.

The development of the EU-25 employment index between 2000 and 2005 for the transport NACE divisions shows that the strongest growth was for supporting and auxiliary transport activities and activities of travel agencies (NACE Division 63), for which annual growth averaged 2.1 % per annum over this five year period. Land transport and transport via pipelines (NACE Division 60) also recorded employment stability or growth each year since 2000, but at a much slower rate, averaging growth of 0.4 % per annum. In contrast, air and water transport (NACE Divisions 61 and 62) recorded alternating one or two year periods of increases and decreases in employment. In 2005 both of these activities saw their employment levels contract (-2.7 % for water transport and -5.7 % for air transport). Indeed, these were the only services NACE divisions (covered by short-term statistics) that recorded reductions in employment in 2005.

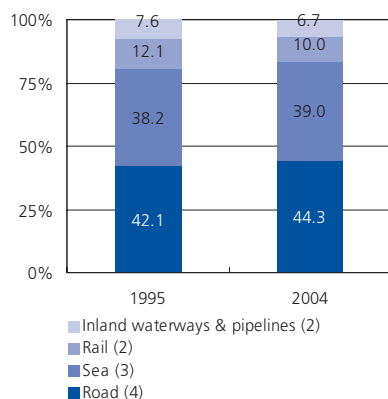
Size class data show that transport services enterprises were on average larger than the non-financial services' average. Micro and small enterprises (employing less than 50 persons) contributed less than two fifths (37 %) of total value added in the EU-25's transport services sector in 2003, around 10 percentage points less than the non-financial services average of 47.4 %. This was balanced by the fact that large enterprises (with 250 or more persons employed) generated nearly half (46.3 %) of the transport services value added, just over 9 percentage points higher than the non-financial services average. Behind these averages for the transport sector lies a distinction, essentially between air and rail transport (see Subchapters 20.1 and 20.4) which are dominated by large enterprises, and the remaining transport services which are characterised by a greater contribution from SMEs (with less than 250 persons employed), but where large enterprises still contribute a greater share of value added than the average for all non-financial services - more details on size class breakdowns are presented in the subchapters that follow.

TRANSPORT OF GOODS AND PASSENGERS

Over several decades, road and sea transport of goods increased strongly in the EU-15, while the volume of goods transported by inland waterways was relatively stable and rail freight transport declined. For the EU-25 around ten years of data is now available for most modes of transport, and this provides an insight into the changes in more recent periods for both goods and passengers - see Figures 20.3 to 20.6. Since 1995 the use of rail freight transport was quite volatile with alternating periods of expansion and contraction, but the overall trend has been quite stable. Because of growth in the overall volume of freight transport, its share of the total volumes transported has however continued to fall, as has the share of inland waterways and pipelines. The use of road freight transport continued to rise faster than other modes, and its share reached 44.3 % by 2004.

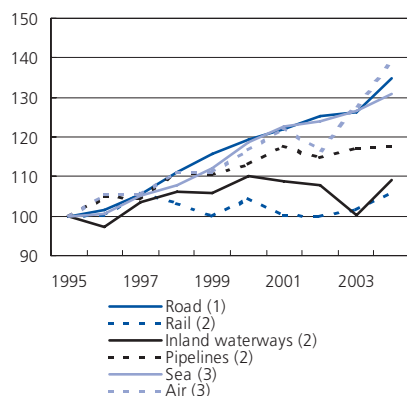
Rail passenger transport displayed a similar situation to that for freight, although there was overall growth in passenger transport between 1995 and 2003, but again this was slower than for other modes and its modal share slipped from 6.3 % in 1995 to 5.8 % by 2003. Other collective land passenger transport such as bus, metro, tram and coaches also recorded a slow increase in the volume of passenger transport combined with a fall in their respective modal shares. Unlike for freight, the largest increase in the share of total passenger transport was recorded for air transport, up from 6.0 % in 1995 to 7.5 % by 2003. The relatively stable modal share of passenger cars indicates that growth in the use of passenger cars was only slightly higher than the rates recorded by most other forms of passenger transport.

Figure 20.3
Modal split of goods transport, EU-25
(% of billion tonne-kilometres) (1)



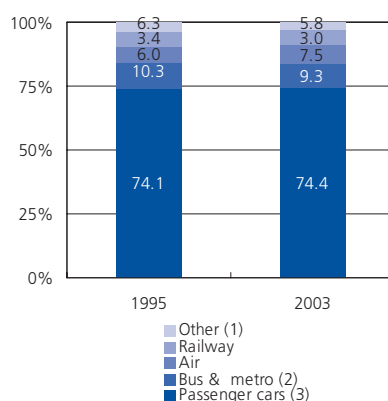
(1) Excluding air.
(2) Excluding Northern Ireland.
(3) Domestic and intra-EU-25 transport only; data under revision.
(4) Haulage by vehicles registered in the EU.
Source: Eurostat; ECMT; UIC; estimates, in European Union Energy and Transport in Figures pocketbook 2005, European Commission, Directorate-General for Energy and Transport

Figure 20.4
Index of the evolution of goods transport
(billion tonne-kilometres), EU-25 (1995=100)



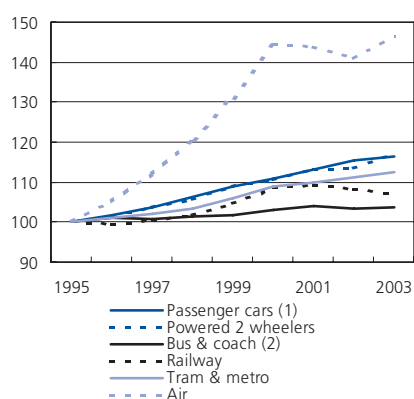
(1) Haulage by vehicles registered in the EU.
(2) Excluding Northern Ireland.
(3) Domestic and intra-EU-25 transport only; data under revision.
Source: Eurostat; ECMT; UIC; estimates, in European Union Energy and Transport in Figures pocketbook 2005, European Commission, Directorate-General for Energy and Transport

Figure 20.5
Modal split of passenger transport, EU-25
(% of billion passenger-kilometres)



(1) Powered two wheelers and sea.
(2) Includes also coach and tram; only inter-urban bus and coach traffic for Poland and Slovakia; excluding Northern Ireland for bus and coach.
(3) Excluding Northern Ireland.
Source: Eurostat; ECMT; IUPT; UIC; estimates, in European Union Energy and Transport in Figures pocketbook 2005, European Commission, Directorate-General for Energy and Transport

Figure 20.6
Index of the evolution of land passenger transport
(billion passenger-kilometres), EU-25 (1995=100)



(1) Excluding Northern Ireland.
(2) Includes bus, tram and metro for the Netherlands; only inter-urban traffic for Poland and Slovakia; excluding Northern Ireland.
Source: Eurostat; ECMT; IUPT; UIC; estimates, in European Union Energy and Transport in Figures pocketbook 2005, European Commission, Directorate-General for Energy and Transport

Table 20.4

Land transport; transport via pipelines; water transport; air transport; supporting and auxiliary transport activities; activities of travel agencies (NACE Divisions 60, 61, 62 and 63)

Labour force characteristics, 2005

	Male		Full-time		Breakdown by age (% share of total)		
	Proportion of those employed (%)	Index (non-financial services=100)	Proportion of those employed (%)	Index (non-financial services=100)	< 30 years	30-49 years	50+ years
EU-25	78.9	140.8	90.9	114.7	17.5	57.5	25.0
BE	78.9	133.9	88.0	112.7	19.3	57.6	23.1
CZ	79.2	145.1	98.5	104.7	17.3	50.7	32.0
DK	76.4	128.4	89.4	120.8	15.6	55.9	28.5
DE	75.9	143.5	86.6	121.2	16.1	57.7	26.2
EE	76.8	150.8	96.7	105.5	17.5	51.2	31.2
EL	83.8	137.2	98.8	103.3	16.2	56.7	27.1
ES	82.7	150.2	93.4	109.7	18.2	59.3	22.4
FR	76.3	134.0	92.1	109.9	18.2	62.2	19.5
IE	80.0	147.5	93.1	115.1	21.1	53.4	25.5
IT	82.7	137.9	93.8	112.1	16.0	60.9	23.2
CY	69.3	127.9	92.5	102.0	18.0	56.2	25.8
LV	77.1	161.2	98.0	104.1	17.8	57.3	24.9
LT	81.4	155.7	97.9	104.0	14.6	64.2	21.2
LU	82.8	143.0	95.0	111.8	20.7	62.9	16.5
HU	82.1	152.6	98.6	103.7	16.9	60.7	22.4
MT	79.7	113.7	94.4	109.0	26.3	51.5	22.2
NL	77.1	132.7	72.2	134.4	21.6	54.6	23.8
AT	76.4	153.2	89.3	121.0	20.5	62.3	17.2
PL	83.6	150.9	97.1	108.3	15.3	60.7	24.0
PT	79.6	144.1	96.9	104.5	17.6	55.4	27.0
SI	83.6	154.9	95.2	104.3	18.9	57.2	23.9
SK	81.1	153.4	98.8	101.8	17.7	59.8	22.5
FI	78.3	142.8	90.7	111.5	18.5	52.7	28.8
SE	76.6	126.0	86.7	112.9	20.5	48.1	31.4
UK	76.7	136.1	87.1	123.8	18.0	51.6	30.4

Source: Eurostat (LFS)

LABOUR FORCE CHARACTERISTICS

On the basis of Labour Force Survey data, transport services clearly stand out from most other service activities in terms of their gender profile. Only 21.1 % of the persons employed in this sector in 2005 in the EU-25 were women, which was less than half the average for non-financial services (NACE Sections G to I and K), where women accounted for 44.0 % of those employed. In road transport (NACE Division 60) the share of women in the workforce was just 13.9 %, the lowest share of the non-financial services NACE divisions. Among the four transport NACE divisions, the share of women in the workforce was highest in air transport, at 40.2 %, still below the non-financial services average.

Part-time work was also relatively less frequent in transport services than in other service activities, since 90.9 % of those employed in transport services in the EU-25 in 2005 worked on a full-time basis, compared with a non-financial services average of 79.2 %. The high incidence of full-time employment was observed in all transport services NACE divisions, but particularly so in water (93.5 %) and land (92.6 %) transport.

The age profile of the transport services workforce was also markedly different from the non-financial services average. The proportion of the transport services workforce aged 15 to 29 was 17.5 % in 2005, some 8.7 percentage points below the 26.2 % average for all non-financial services. The share of the transport services workforce aged 30 to 49 was 57.5 %, 4.8 percentage points higher than the non-financial services average, while persons aged 50 or more accounted for exactly one quarter of the workforce, compared with just over one fifth (21.1 %) for the whole of the non-financial service sector.

Structural business statistics indicate that the proportion of paid employees in the total number of persons employed (which also includes the self-employed and unpaid family workers) was around 87 % in the EU-25 transport services sector in 2003. This was several percentage points higher than the non-financial services average in 2002 (81.6 %): in fact all of the transport services subsectors presented in Subchapters 20.1 to 20.6 recorded a higher proportion of paid employees than the non-financial services average, except for road and other land transport (2002), as the share of employees in persons employed was close to or exceeded 90 % in all other transport services subsectors in 2003.

COSTS, PRODUCTIVITY AND PROFITABILITY

Transport services (NACE Divisions 60 to 63) reported high investment expenditure compared with operating expenditure: gross tangible investment in EU ⁽⁵⁾ transport services was equivalent to 11.9 % of operating expenditure, just over double the non-financial services (NACE Sections G to I and K) average. One subsector stood out from the others based on this ratio, and that was the EU's ⁽⁶⁾ travel agencies (NACE Group 63.3) where gross tangible investment was equivalent to just 0.9 % of gross operating expenditure. In the five other transport subsectors this ratio was close to or above the non-financial services average, and it was particularly high for the EU's ⁽⁷⁾ auxiliary transport activities (NACE Groups 63.1, 63.2 and 63.4) at 18.8 % and in the EU's ⁽⁸⁾ water transport (NACE Division 61) subsector at 14.6 %.

Personnel costs accounted for around one quarter of operating expenditure in transport services, about half as much as the non-financial services average. This share was particularly high among the land transport (NACE Division 60) subsectors (including both rail transport and road and other land transport and pipelines) where the EU ⁽⁹⁾ average was 35.2 %.

The high levels of full-time employment may to some extent explain why average personnel costs faced by transport services enterprises were generally higher than in the other non-financial services: in transport services they averaged EUR 31 000 per employee in 2003 in the EU-25 compared with EUR 25 900 (2002) for non-financial services as a whole. Average personnel costs in 2003 in the EU-25 ranged from EUR 25 700 for travel agencies to more than twice as much (EUR 55 800) in the air transport (NACE Division 62) subsector.

The relatively high level of average personnel costs impacted on the wage adjusted labour productivity ratio, which represents the extent to which value added per person employed covers average personnel costs. In the EU-25's transport services' sector, this ratio was 137 % in 2003, below the 2002 non-financial services' average of 145.9 %. A further analysis shows that there were considerable differences in the value of this ratio between the transport subsectors, ranging from low values in air transport (124 %) and the land transport subsectors (including rail transport, as well as road and other land transport, 121 %), to higher values most notably in water transport (231.9 %).

In contrast, the gross operating rate (gross operating surplus relative to turnover) was higher for transport services (12.9 %) in 2003 than the non-financial services average (11.2 %, 2002). Once more air transport recorded a low value (5.7 %) and water transport a high one (15.9 %), but in contrast to a relatively low wage adjusted labour productivity ratio the gross operating rate for the land transport subsectors (again including rail transport, as well as road and other land modes) was above the transport services average at 14.4 %, while for travel agencies the gross operating rate was comparatively low (5.9 %).

⁽⁵⁾ EU average, 2003; Lithuania and Malta, 2002; excluding Greece and the Netherlands.

⁽⁶⁾ EU average, 2003; Malta, 2002; excluding Greece and Ireland.

⁽⁷⁾ EU average, 2003; Ireland and Malta, 2002; excluding Greece.

⁽⁸⁾ EU average, 2003; Latvia and Malta, 2002; excluding Greece, Ireland and Poland.

⁽⁹⁾ EU average, 2003; Lithuania and Malta, 2002; excluding Greece.

20.1: RAILWAY TRANSPORT

This subchapter includes information on the transport of passengers and goods by railways (NACE Group 60.1). The activities relating to the operation of the railway infrastructure are classified as auxiliary transport activities and are covered by Subchapter 20.5. Equally, this subchapter does not cover urban and suburban railway transportation, which is included in the following subchapter on road and other land transport.

Box 20.1: structural change - rail transport services, infrastructure and related activities

In several Member States, the distinction between rail service operators and rail infrastructure operators has become clearer, with these sometimes being given separate legal identities. In business statistics (SBS), enterprises are classified according to their principal activity. An enterprise that carries out simultaneously these two types of rail activities would normally have been classified in the rail transport subsector (NACE Group 60.1), as this would normally have been the larger of the two activities. If such an enterprise is split into two separate enterprises, only the rail transport enterprise would stay classified to NACE Group 60.1, and the rail infrastructure operator would be classified to supporting land transport activities (NACE Class 63.21). This explains some of the large changes in employment in the railway sector seen in recent years.

Rail transport in the EU experienced a steady decline over several decades, especially in the area of goods transport, notably as a result of the move away from heavy industry (with low value bulk inputs or output) and competition from road haulage. Railway transport is often perceived as less flexible and less reliable than road haulage as regards delivery times, an essential element when considering just-in-time delivery. In addition, international rail traffic is hindered by long stopping times en route, to give priority to passenger trains or because of procedures at borders, while at the same time formalities for heavy goods vehicles have been greatly simplified following the introduction of the single market.

In recent years, considerable legislative efforts have been made to open up and revitalise the rail transport sector, motivated in part by the wish to take advantage of lower emissions from rail transport, and to reduce road congestion. The European Commission has proposed three packages of legislation for rail transport. The first was adopted by the Parliament and Council in 2001 and focused on a drive to open up the international rail freight network. The second package was adopted by the Parliament and Council in 2004 and concerned opening-up the national rail freight transport market, as well as legislation aimed at improving interoperability (between networks) and safety. It also included the establishment of a railway agency to support the work on issues relating to safety and interoperability. Proposals for a third package were adopted by the European Commission in 2004 and concern, among other issues, opening up international passenger services to competition within the European Union, as such completing the integration of railway transport. It is hoped that improvements in rail passenger services will allow rail transport to compete more effectively with some segments of air transport. Significant progress has been made to reach an agreement on this third package and, at the time of writing, it is expected to be adopted shortly. Local authorities will have the option either of running local transport themselves or of entrusting it, in a fully transparent manner, to a specialised operator.

STRUCTURAL PROFILE

On the basis of structural business statistics (SBS), there were 925 600 persons employed in the EU-25's rail transport (NACE Group 60.1) sector in 2003, a fall of 6.8 % compared with the previous year. However, care has to be taken when analysing time series of SBS data because of structural changes - see Box 20.1. EU-25 rail transport enterprises generated value added of EUR 35.1 billion in 2002, or 10.4 % of the total for transport services (NACE Divisions 60 to 63).

Due to the dominance of rail transport by a few enterprises in most Member States an analysis of the size structure of the sector is difficult for reasons of statistical confidentiality. Nevertheless, the information that is available for a few Member States illustrates that this activity is dominated by large enterprises to a greater extent than in nearly any other activity: in Germany large enterprises (with 250 or more persons employed) contributed 92.7 % of value added in railway transport in 2003, while the equivalent share in the United Kingdom was 99.6 %.

TRANSPORT OF GOODS AND PASSENGERS

During several decades rail lost significant ground relative to other transport modes in the EU in terms of the volumes of goods and passengers transported, but this decline reversed during the 1990s. Figure 20.7 shows the development of both types of rail transport between 1990 and 2004 and the reversal in fortunes can be clearly seen: passenger transport volumes reached a low in 1994, since when average growth was 1.0 % per year; goods transport volumes stabilised after 1993 since when average annual growth was 0.9 %. By 2004, the volume of freight transported by rail was 379.5 billion tonne-kilometres and the volume of passenger transport was 350.6 billion passenger-kilometres.

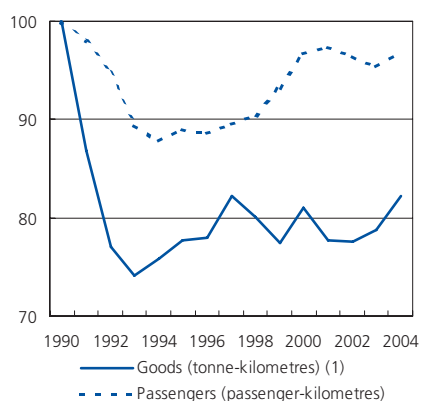
Table 20.5 shows the very strong growth in passenger volumes on high speed rail networks in the EU, where relatively new networks in Italy and Sweden recorded enormous growth since 1995, while volumes on the German and Spanish high speed rail networks also more than doubled over the same period. The French high-speed rail network had the largest volume of passenger traffic.

COSTS, PRODUCTIVITY AND PROFITABILITY

Average personnel costs in the EU-25 railway transport sector (NACE Group 60.1) reached EUR 29 500 per employee in 2002, around EUR 1 000 below the transport services (NACE Divisions 60 to 63) average (EUR 30 500). Wage adjusted labour productivity in the EU-25 was 119.9 % in the railway transport sector in 2002, which was considerably lower than the 135.7 % average for all transport services. The gross operating rate, calculated as the ratio of gross operating surplus (value added less personnel costs) to turnover, is a measure of profitability, and for the EU-25 rail transport sector stood at 10.0 % in 2002, compared with 12.6 % for all transport services; this was one of the lowest gross operating rates among transport services.

Figure 20.7

Evolution of rail transport, EU-25 (1990=100)



(1) Excluding Northern Ireland.

Source: ECMT; UIC; in European Union Energy and Transport in Figures pocketbook 2005, European Commission, Directorate-General for Energy and Transport

Table 20.5

Passengers transported by high speed rail (billion passenger-kilometres) (1)

	1990	1995	2000	2001	2002	2003	2004
BE	-	-	0.9	0.9	0.9	0.9	0.9
DE	-	8.7	13.9	15.5	15.3	17.5	19.6
ES	-	1.2	2.2	2.4	2.5	2.5	2.7
FR	14.9	21.4	34.7	37.4	39.9	39.6	41.5
IT	0.3	1.1	5.1	6.8	7.1	7.4	7.9
NL	-	-	0.1	0.2	0.2	0.2	0.2
FI	-	-	0.1	0.1	0.1	0.2	0.2
SE	0.0	0.4	2.0	2.2	2.3	2.4	2.4
UK	-	-	-	-	-	-	-

(1) None of the other Member States had high-speed rail networks.

Source: UIC; in European Union Energy and Transport in Figures pocketbook 2005, European Commission, Directorate-General for Energy and Transport

20.2: ROAD AND OTHER LAND TRANSPORT; PIPELINES

Road and other land transport activities (NACE Group 60.2) cover road freight transport, urban and suburban passenger transport by bus, coach, tram, trolleybus, underground or elevated railway, inter-city land passenger transport (other than railways), as well as taxi operations and charters. This definition includes a diverse number of enterprises, ranging from independent lorry or taxi drivers to large national or metropolitan public transport enterprises.

Transport via pipelines (NACE Group 60.3) includes the transport of gases, liquids, slurry and other commodities via pipelines and the operation of pump stations; it does not include the distribution (as opposed to the transport) of natural or manufactured gas via mains, or of water or steam. In previous editions of this publication this activity was included in the chapter on energy.

Road transport has been one of the main areas of growth in the transport sector over the past 30 years, as it has benefited from increased demand for mobility and flexibility from private individuals and enterprises alike. The greatest competitive advantage of road transport is perceived to be its flexibility - its ability to carry goods (without transshipment) and passengers from door to door - while it is criticised for its externalities, chiefly emissions and noise, and the use of land for the expanding road network.

The European Commission's communication ⁽¹⁰⁾ on alternative fuels for road transport in 2001 identified biofuels as one possible transport fuel, and later targets were set for biofuel use. To further stimulate the use of biofuels the European Commission presented a Biomass action plan ⁽¹¹⁾ in December 2005 and in February 2006 it adopted a communication ⁽¹²⁾ on an EU strategy for biofuels.

In May 2006 Directive 2006/38/EC of the European Parliament and of the Council on the charging of heavy goods vehicles for the use of certain infrastructures was adopted, modifying a 1999 directive (the 'Eurovignette' Directive) that fixes the framework for infrastructure charging of heavy goods vehicles. It determines the manner in which charges can be levied for the cost of infrastructure and also for other external costs. The aim is to develop tolls and charges which will make it possible to improve the management of commercial freight traffic, reduce pollution and generate funds for investment in new transport infrastructure. The modification lowers the threshold for such tolls and charges from lorries of more than 12 tonnes to those of more than 3.5 tonnes, and extends coverage to allow Member States to levy charges and tolls on all roads. It aims to make the tolls and charges fair, proportionate, transparent and non-discriminatory, to reduce obstacles to the free movement of goods, and guarantee fair competition between road haulage operators.

Road freight transporters have over a long period expanded beyond simple transport services, to provide other supporting activities, notably logistics and warehousing, competing with specialists in these activities as well as wholesalers who have also extended the range of their operations into transport and supporting activities - see Chapter 17.

⁽¹⁰⁾ COM(2001) 547.

⁽¹¹⁾ COM(2005) 628.

⁽¹²⁾ COM(2006) 34.

Table 20.6

Other land transport (NACE Group 60.2)**Value added and employment: ranking of the top 5 Member States, 2003**

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (3)	Highest share of national non-financial services value added (%) (4)	Highest share of national non-financial services employment (%) (5)
1	France (19 985.4)	15.4	Germany (554.7)	14.3	Finland (8.7)	Finland (10.0)
2	United Kingdom (19 966.3)	15.4	France (544.1)	12.6	Latvia (7.9)	Estonia (9.5)
3	Germany (19 933.2)	15.3	United Kingdom (521.7)	12.0	Czech Republic (7.7)	Slovenia (9.0)
4	Spain (15 928.1)	12.3	Spain (510.5)	11.5	Slovenia (7.5)	Czech Republic (8.9)
5	Italy (15 166.9)	11.7	Italy (470.9)	10.8	Hungary (7.2)	Hungary (8.8)

(1) Malta, 2002; Denmark, Greece and Ireland, not available.

(2) Malta and Netherlands, 2002; Denmark, Greece and Ireland, not available.

(3) 2002.

(4) Malta, 2002; Denmark, Greece, Ireland, Cyprus and Lithuania, not available.

(5) Malta and the Netherlands, 2002; Denmark, Greece, Ireland, Cyprus and Lithuania, not available.

Source: Eurostat (SBS)

STRUCTURAL PROFILE

The road and other land transport (NACE Group 60.2) subsector generated value added of EUR 130 billion in 2003 in the EU-25, while the transport via pipelines (NACE Group 60.3) subsector generated EUR 3.1 billion of value added in 2002. As such, road and other land transport accounted for close to two fifths (38.9 %) of all value added generated by transport services (NACE Divisions 60 to 63) and 4.9 % of non-financial services (NACE Sections G to I and K) value added in 2003, while the share of pipelines in transport services value added in 2002 was 0.9 %. Within road and other land transport services, by far the largest activity in value added terms was road freight transport (NACE Class 60.24). Alone it accounted for more than three fifths of the value added created by the EU-25's road and other land transport subsector in 2003, the remainder being generated by other passenger land transport activities (NACE Classes 60.21 to 60.23).

Employment in the road and other land transport subsector in the EU-25 was about 4.2 million in 2003, while there were a further 9 800 persons employed in 2002 within the transport via pipelines subsector. As such, the road and other land transport subsector provided just over half the transport services' workforce in 2003, and around 6.1 % of the non-financial services workforce.

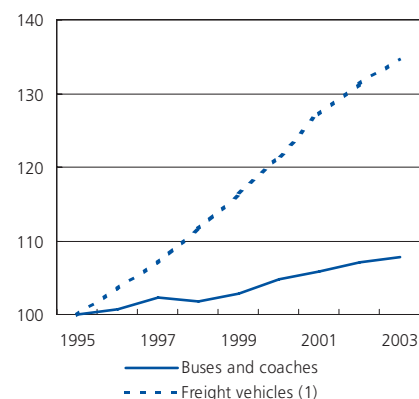
Unsurprisingly, the larger Member States contributed the greatest shares of EU-25 value added in this sector. Focusing on the largest subsector, road and other land transport, France, the United Kingdom and Germany all accounted for just over 15 % of EU-25 value added in 2003, followed by Spain (12.3 %) and Italy (11.7 %). However, an analysis based on relative specialisation highlights the importance of the road and other land transport subsector in several other Member States. For example,

this activity contributed 8.7 % of non-financial services value added in Finland, and over 7 % in Latvia, the Czech Republic, Slovenia and Hungary. In contrast, the road and other land transport subsector was notably smaller (in relative terms) in Malta, where in 2002 it accounted for only 2.0 % of the value added created within non-financial services. The relative importance of road freight transport on the one hand and other passenger land transport on the other differed considerably between the Member States: as the share of road freight (in value added terms) rose above 75 % in Estonia, the Czech Republic, Slovenia, Lithuania and Luxembourg ⁽¹³⁾. In contrast, road and other land passenger transport services generated more than 50 % of sectoral value added in Malta (2002), Slovakia and Cyprus: in this context it should be noted that Cyprus and Malta have no rail network as an alternative form of inland passenger transport, and many tourists therefore use other forms of public transport (notably buses and coaches).

An analysis of the geographical specialisation within the EU of the transport via pipelines subsector is limited by weak data availability. Nevertheless, the dominance of this activity by Italy is clear, as 44.5 % of EU-25 value added in this subsector was generated in Italy in 2002, and its share of the workforce was 31.3 % in the same year.

⁽¹³⁾ Malta, 2002; Denmark, Greece and Ireland, not available.

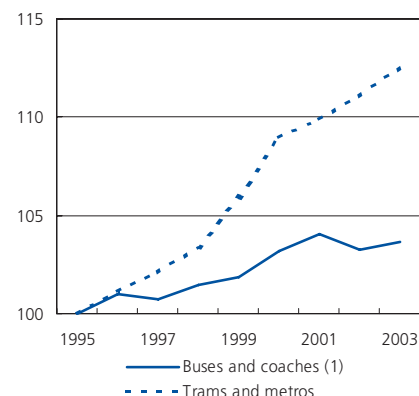
Figure 20.8

Evolution of the stock of road vehicles, EU-25 (1995=100)

(1) Estonia, Ireland, Luxembourg and Austria, lorries only; Portugal, includes special vehicles.

Source: Eurostat; CCFA; ACEA; national statistics in European Union Energy and Transport in Figures pocketbook 2005, European Commission, Directorate-General for Energy and Transport

Figure 20.9

Evolution of passenger land transport (passenger-kilometres), EU-25 (1995=100)

(1) Estimates for some countries; the Netherlands, including tram and metro; Poland and Slovakia, only inter-urban traffic; excluding Northern Ireland.

Source: Eurostat; ECMT; IUPT; estimates in European Union Energy and Transport in Figures pocketbook 2005, European Commission, Directorate-General for Energy and Transport

Table 20.7

Road freight transport traffic; national and international haulage by vehicles registered in the country (billion tonne-kilometres)

	2000	2001	2002	2003	2004
EU-25	1 490.8	1 521.0	1 562.7	1 574.9	1 683.7
BE	51.0	53.2	52.9	50.5	47.9
CZ	37.3	39.1	43.7	46.5	46.0
DK	24.0	22.2	22.5	23.0	23.1
DE	280.7	289.0	285.2	290.8	303.8
EE	:	:	:	:	5.1
EL (1)	21.5	21.6	21.7	21.8	22.0
ES	148.7	161.0	184.5	192.6	220.8
FR	204.0	206.9	204.4	203.6	212.2
IE	12.3	12.3	14.3	15.7	17.1
IT	184.7	186.5	192.7	174.1	197.0
CY	:	:	1.3	1.4	1.1
LV	4.8	5.4	6.2	6.8	7.4
LT	7.8	8.3	10.7	11.5	12.3
LU	7.6	8.7	9.2	9.6	9.6
HU	19.1	18.5	17.9	18.2	20.6
MT (1)	0.5	0.5	0.5	0.5	0.5
NL	79.6	78.5	77.4	79.8	89.7
AT	35.1	37.5	38.5	39.6	39.2
PL	75.0	77.2	80.3	86.0	102.8
PT	:	:	:	:	40.8
SI	5.3	7.0	6.6	7.0	9.0
SK	14.3	13.8	14.9	16.7	18.5
FI	32.0	30.5	32.0	30.9	32.3
SE	35.6	34.2	36.7	36.6	37.0
UK	165.6	163.3	164.0	167.1	167.9

(1) Estimates.

Source: Eurostat; ECMT; in European Union Energy and Transport in Figures pocketbook 2005, European Commission, Directorate-General for Energy and Transport

TRANSPORT OF GOODS AND PASSENGERS

When analysing statistics on land transport traffic volumes it is important to bear in mind that this includes own account transport as well as transport services marketed to clients. Figure 20.8 highlights the growth in the stock of road transport vehicles, namely buses, coaches and road freight vehicles; road freight vehicles in particular have seen very strong growth. The volume of traffic is shown in Figure 20.9 for the main land passenger services. The volume of passenger transport by bus and coach was 483.0 billion passenger-kilometres in the EU-25 in 2003 compared with 72.2 billion passenger-kilometres for tram and metro. Table 20.7 shows the development of road freight transport over the last few years. In 2004, national and international road haulage by EU registered vehicles was 1 684 billion tonne-kilometres, more than four times the traffic transported by rail in the EU-25.

The transport of oil by pipeline in the EU-25 increased from 105.5 billion tonne-kilometres in 1995 to 124.3 billion tonne-kilometres in 2004, with one fifth of this total in Poland.

COSTS, PRODUCTIVITY AND PROFITABILITY

The road and other land transport subsector (NACE Group 60.2) is characterised by a relatively low apparent labour productivity, combined with relatively high profitability, based on an analysis of the gross operating rate. In 2003, apparent labour productivity in the EU-25 in this subsector was EUR 30 000 per person employed, below the transport services (NACE Divisions 60 to 63) average of EUR 42 000 and also the non-financial services average (NACE Sections G to I and K) of EUR 38 200. In contrast, the gross operating rate for the road and other land transport subsector, calculated as the ratio of gross operating surplus (value added minus personnel costs) to turnover, was 15.0 %, above the transport services average of

12.9 %. This resulted from relatively low average personnel costs, EUR 26 500 per employee in the road freight transport activity (NACE Class 60.24) and EUR 25 300 per employee in other land passenger transport (NACE Classes 60.21 to 60.23), well below the transport services average of EUR 31 000. Despite these low average personnel costs per employee, expenditure on personnel accounted for 33.6 % of operating expenditure in the road and other land transport subsector in the EU (14), which was approximately 1.3 times the share recorded for transport services as a whole and more than double the non-financial services average.

Turning to the smaller subsector of transport via pipelines (NACE Group 60.3), in 2002 this subsector recorded apparent labour productivity of EUR 318 500 per person employed, an extremely high level reflecting the capital intensive nature of this activity. Investment data is not available for many countries for the transport via pipelines subsector, but an analysis just for Italy, which contributed a very large proportion (44.5 %) of EU-25's output in this subsector, shows that gross tangible investment was equivalent to 35.1 % of gross operating expenditure in 2003, a particularly high ratio. Average personnel costs in the transport via pipelines subsector were EUR 42 400 per employee in 2002, and the combination of these two indicators resulted in an extremely high wage adjusted labour productivity ratio of 750.3 %, many times greater than the transport services average of 135.7 %. Likewise, the EU-25's gross operating rate was very high, with this profitability ratio showing that the gross operating surplus was equivalent to 48.6 % of turnover in 2002.

(14) EU average, 2003; Malta, 2002; excluding Denmark, Greece and Ireland.

Table 20.8

Other land transport (NACE Group 60.2)

Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003 (1)

Rank	Investment in tangible goods relative to total operating costs (%) (2)	Purchases of goods and services as a share of total operating costs (%) (3)	Personnel costs as a share of total operating costs (%) (3)	Apparent labour productivity (EUR thousand) (4)	Average personnel costs (EUR thousand) (5)	Wage adjusted labour productivity (%) (5)	Gross operating rate (%) (4)
EU-25	10.5	66.4	33.6	30.0	25.7	120.0	15.0
1	Latvia (35.7)	Lithuania (83.5)	Cyprus (53.8)	Belgium (45.5)	Belgium (36.9)	Latvia (283.3)	Malta (34.5)
2	Portugal (27.4)	Estonia (83.2)	Germany (41.2)	Luxembourg (44.8)	Sweden (34.5)	Lithuania (187.9)	Latvia (32.4)
3	Austria (18.2)	Poland (82.0)	France (39.8)	Austria (44.2)	Finland (33.9)	Estonia (162.4)	Spain (23.4)
4	Czech Republic (16.0)	Malta (81.1)	Netherlands (38.7)	Finland (43.5)	Luxembourg (33.6)	Malta (161.2)	Finland (19.9)
5	Finland (14.8)	Slovenia (79.9)	Finland (36.4)	Netherlands (42.6)	France (33.3)	Czech Republic (148.1)	Czech Republic (18.9)

(1) Malta, 2002; Denmark, Greece and Ireland, not available. (2) Also excluding the Netherlands; EU-25 is an EU average based on available data for 2002 and 2003.

(3) EU-25 is an EU average based on available data for 2002 and 2003. (4) EU-25, rounded estimate based on non-confidential data. (5) EU-25, 2002.

Source: Eurostat (SBS)

20.3: WATER TRANSPORT

This subchapter covers all water transport activities included in NACE Division 61, both sea and coastal transport (NACE Group 61.1) and inland water transport (NACE Group 61.2).

For information on infrastructure and ports see Subchapter 20.5.

Maritime freight shipping is made up of line (generally scheduled services) and tramp shipping, with a distinction between tankers (liquid and gas) and bulk carriers, and between containerised and general cargo. As well as freight, maritime transport also covers passenger transport, for example, scheduled ferry services and cruises. The EU relies heavily on maritime transport for its external trade.

Inland navigation traditionally holds a strong market share in the transport of bulk cargo (such as iron ores, construction materials and metal products). In addition to these traditional markets, inland navigation is expanding into new markets such as the hinterland transport of maritime containers, waste and recycling, dangerous goods, and the transport of vehicles. In January 2006 the European Commission adopted a communication on the promotion of inland waterway transport. The NAIADES action programme is intended for the period 2006 to 2013 and focuses on five strategic areas for a comprehensive inland waterway transport (IWT) policy: the market, fleet, jobs and skills, image, and infrastructure. It aims to support the contribution of this mode of transport for freight transport. One of the early priorities of the programme concerns a directive on technical criteria for inland waterway vessels which has progressed recently and, at the time of writing, is expected to be adopted in the near future. The aim of this proposal is to help improve safety and promote inland waterway transport.

STRUCTURAL PROFILE

In 2003 value added in water transport services (NACE Division 61) in the EU-25 was EUR 17.5 billion, which represented 5.3 % of the wealth created in all transport services (NACE Divisions 60 to 63). Employment in the water transport services sector was 180 900 persons, which represented just 2.3 % of the transport services' total, less than half the contribution of this sector in terms of value added. Sea and coastal transport (NACE Group 61.1) dominated the water transport services sector, with 77.5 % of employment and 89.4 % of value added in the EU-25 in 2003, the remainder accounted for by inland water transport (NACE Group 61.2).

Naturally, some countries reported a much greater reliance on water transport services than others, because of geographical, climatic, or historical reasons. In particular, as much as one quarter of transport services' activity was in the water transport services sector in Denmark (26.4 %) in value added terms, and in Cyprus the share was 18.5 %. In contrast, all of the Member States with no coastlines reported only limited activity within the water transport services sector, with Slovakia recording the highest share (1.4 %) of this sector in transport services value added among the land-locked Member States. Conversely, some countries with important coastlines also reported relatively low degrees of specialisation in water transport services, in particular Spain (1.5 % of transport services value added) and France (2.1 %). Consequently, while the Member State with the largest water transport services sector (in value added terms) was large, namely Germany (28.3 % of the EU-25 total), Denmark was the second largest (14.8 %) and the Netherlands was the fifth largest (9.7 %), just behind two other large Member States, Italy and the United Kingdom. The water transport services sector in

the Netherlands was split in value added terms, with 57.4 % for the sea and coastal transport subsector and 42.6 % for inland water transport services, whereas for the four Member States with the largest water transport services sector - sea and coastal transport dominated, generating between 88.9 % (Germany) and 99.7 % (Denmark) of the total.

Large enterprises (with 250 or more persons employed) contributed 41.3 % of value added in EU-25 water transport activities in 2003, several percentage points higher than the non-financial services average (36.9 %). Nevertheless, this share was just below that recorded for land transport (including rail, road and pipelines), and much lower than that recorded for air transport.

TRANSPORT OF GOODS AND PASSENGERS

Table 20.11 shows the size of sea transport, both for freight and for passengers. The total movement of goods, both inward and outward reached 3 505 million tonnes in the EU-25 in 2004. The United Kingdom accounted for the largest share of sea transport of goods (both inward and outward), 16.4 % of the EU-25 total, followed by Italy (13.8 %) and the Netherlands (12.6 %). Only in the Baltic States and Poland did the outward volume of sea goods transport exceed the inward volume, with Malta and Cyprus having by far the highest ratio of inward to outward sea freight transport. In terms of EU passenger sea transport, the total number of passengers was 406.1 million in 2004 (inward plus outward), of which Greece (23.7 %) and Italy (20.5 %) provided by far the largest shares. The Nordic trio of Denmark (12.0 %), Sweden (8.2 %) and Finland (4.1 %) also contributed relatively high shares.

Table 20.9

Water transport (NACE Division 61)

Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national non-financial services value added (%) (3)	Highest share of national non-financial services employment (%) (4)
1	Germany (4 943.5)	28.3	Germany (26.1)	14.4	Denmark (4.6)	Denmark (1.3)
2	Denmark (2 588.8)	14.8	Italy (24.2)	13.4	Finland (1.9)	Finland (1.3)
3	Italy (2 202.9)	12.6	France (16.4)	9.1	Lithuania (1.6)	Malta (1.0)
4	United Kingdom (2 047.5)	11.7	United Kingdom (16.2)	9.0	Estonia (1.2)	Sweden (0.9)
5	Netherlands (1 700.1)	9.7	Sweden (14.3)	7.9	Netherlands (1.2)	Estonia (0.6)

(1) Malta, 2002; Greece, Ireland and Poland, not available.

(2) Malta, 2002; Greece, Ireland, the Netherlands and Poland, not available.

(3) Lithuania and Malta, 2002; Greece, Ireland, Cyprus and Poland, not available.

(4) Lithuania and Malta, 2002; Greece, Ireland, Cyprus, the Netherlands and Poland, not available.

Source: Eurostat (SBS)

Table 20.10
Merchant fleet, EU-25, 2004 (1)

	Number of ships (units)	Tonnage (million DWT)
Total fleet controlled	9 425	290
National flag	3 238	95
Foreign flag	6 187	196

(1) Ships of 1 000 GRT and over, as of 1 January 2004; including international registers like the Danish International Ship Register; including vessels registered at territorial dependencies.

Source: ISL merchant fleet databases based on the Lloyd's Maritime Information System, in European Union Energy and Transport in Figures pocketbook 2005, European Commission, Directorate-General for Energy and Transport

COSTS, PRODUCTIVITY AND PROFITABILITY

Water transport services (NACE Division 61) were characterised by relatively high average personnel costs, though these were more than matched by high apparent labour productivity. Employees cost on average EUR 41 700 in the EU-25 in 2003, around one third more than the average level for all transport services (NACE Divisions 60 to 63). To some respect this may reflect the high proportion of full-time employees in this sector. Average personnel costs in the EU-25 were significantly higher for the sea and coastal transport subsector (EUR 44 600 per employee, NACE Group 61.1) than for inland water transport (EUR 30 500, NACE Group 61.2), where they were just below the transport services average. Because of the high figures for value added per person employed (EUR 96 600) wage adjusted labour productivity ratios were significantly higher than the transport services average. The average value added generated by each person employed in the EU-25's water transport services sector represented as much as 231.9 % of average personnel costs per employee in 2003, while the corresponding ratio for

Table 20.11
Seaborne transport of goods and passengers, 2004

	Goods (million tonnes)		Passengers (thousands)	
	Inward	Outward	Inward	Outward
EU-25	2 228.2	1 276.5	203 846	202 254
BE	108.9	78.9	388	399
CZ	-	-	-	-
DK	54.6	45.8	24 297	24 258
DE	168.5	103.4	14 818	14 997
EE	4.0	40.8	3 231	3 221
EL	92.7	65.2	48 270	48 146
ES	269.9	103.2	11 381	10 314
FR	240.5	93.5	13 494	13 574
IE	34.7	13.0	1 776	1 774
IT	338.4	146.6	41 716	41 600
CY	5.6	1.3	124	123
LV	3.5	51.3	64	66
LT	4.4	21.5	73	74
LU	-	-	-	-
HU	-	-	-	-
MT	3.0	0.4	113	112
NL	339.5	101.2	1 006	1 006
AT	-	-	-	-
PL	16.5	35.8	1 030	1 001
PT	43.1	15.9	325	325
SI	8.8	3.3	21	21
SK	-	-	-	-
FI	58.5	48.0	8 432	8 375
SE	90.6	76.8	16 892	16 426
UK	342.4	230.6	16 395	16 442

Source: Eurostat (Maritime transport)

transport services was 137 %. As such, the water transport services sector had the third highest wage adjusted labour productivity ratios of any non-financial services (NACE Sections G to I and K) NACE division ⁽¹⁵⁾ in 2003. The gross operating rate also reflected the strong performance of this activity in the EU-25, as the gross operating surplus, despite high personnel costs, was equivalent to 15.9 % of turnover in 2003, and reached 19.9 % for inland water transport.

⁽¹⁵⁾ NACE Divisions 50 to 52, 2002.

Water transport services also reported relatively high investment expenditure compared with operating expenditure: as gross tangible investment in the EU's ⁽¹⁶⁾ water transport sector was equivalent to 14.6 % of operating expenditure, more than two and a half times as high as the non-financial services average ratio and 1.2 times as high as the transport services average.

⁽¹⁶⁾ EU average, 2003; Latvia and Malta, 2002; excluding Greece, Ireland and Poland.

Table 20.12
Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (4)
EU-25	14.6	88.9	11.1	96.6	41.7	231.9	15.9
1	Slovenia (106.8)	Belgium (97.4)	Cyprus (37.9)	Denmark (193.7)	United Kingdom (64.5)	Germany (446.9)	Luxembourg (27.0)
2	Slovakia (43.0)	Estonia (94.4)	Malta (30.9)	Germany (189.2)	Belgium (56.7)	Denmark (369.2)	Germany (25.6)
3	Italy (42.8)	Denmark (93.8)	Lithuania (28.0)	Luxembourg (139.3)	Denmark (52.5)	Luxembourg (312.4)	Cyprus (25.2)
4	Malta (37.8)	Germany (91.5)	Slovakia (27.5)	United Kingdom (126.3)	France (46.0)	Latvia (236.5)	Latvia (22.0)
5	Portugal (26.2)	Netherlands (89.2)	Czech Republic (21.2)	Italy (91.1)	Luxembourg (44.6)	Italy (215.9)	Malta (19.7)

(1) Latvia and Malta, 2002; Greece, Ireland and Poland, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Malta, 2002; Greece, Ireland and Poland, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Malta, 2002; Greece, Ireland, the Netherlands and Poland, not available.

(4) Malta, 2002; Greece, Ireland and Poland, not available.

Source: Eurostat (SBS)

20.4: AIR TRANSPORT

The air transport sector comprises enterprises engaged in the transport of passengers and freight by air on scheduled (NACE Group 62.1) as well as unscheduled services (NACE Group 62.2). Space transport activities (NACE Group 62.3), which essentially include the launching of satellites and space vehicles are also covered by the air transport sector. For information on airports see Subchapter 20.5.

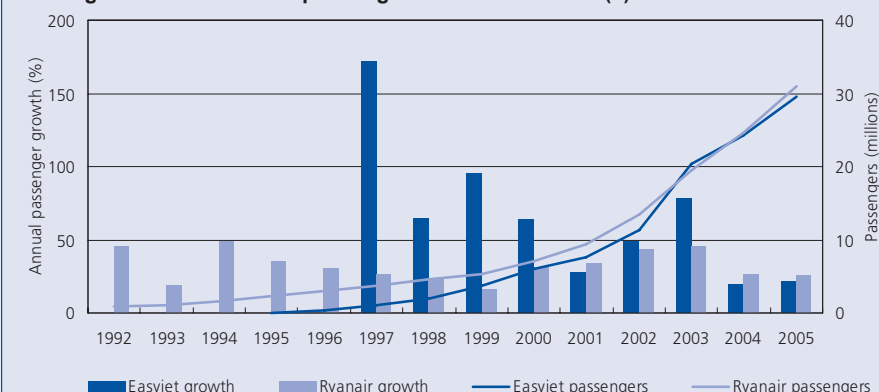
Growth in EU air traffic has occurred in a climate of market liberalisation and structural change, with an increased number of operators, particularly low cost carriers. The development of low cost carriers has expanded the market for air travel, by offering the possibility of relatively cheap flights for the leisure market. Figure 20.10 shows the recent development of passenger numbers for the two largest low cost carriers in Europe.

The expansion of air traffic has faced criticism, notably because of the high levels of emissions and noise from this means of transport, although emissions have grown more slowly than air traffic volumes due to technological improvements. In September 2005, the Commission adopted a communication⁽¹⁷⁾ on reducing the climate change impact of aviation. It proposes that action needs to be taken to ensure that aviation does not undermine, but contributes to, achieving the overall objectives on climate change. Among other proposals the communication favoured the inclusion of aviation in emissions trading systems. This proposal for an emission cap and trading system has been supported by the European Parliament, the latter also proposing to remove the tax exemption for aviation fuel on intra-EU flights.

⁽¹⁷⁾ COM(2005) 459.

Figure 20.10

Passenger numbers on Europe's largest low cost carriers (1)



(1) Easyjet passenger numbers start in 1995 and annual growth in 1997.

Source: <http://www.ryanair.com>; <http://www.easyjet.com>

In December 2005, Regulation (EC) No 2111/2005 of the European Parliament and of the Council was adopted, essentially allowing a Community list of banned air carriers to be established and published, a so-called black-list. In March 2006 the first black-list was adopted and published⁽¹⁸⁾ by the European Commission, and this was revised in June 2006.

STRUCTURAL PROFILE

The air transport sector (NACE Division 62) in the EU-25 in 2003 contributed an 8.4 % share of transport services' (NACE Divisions 60 to 63) value added, some EUR 27.8 billion. Total employment in the air transport sector was 401 100 persons in 2003, which represented around 5 % of the transport services' workforce. More than one third (34.0 %) of the EU-25's value added was generated in the United Kingdom alone. France contributed 15.6 % of EU-25 value added, while there was no other Member State with a share in excess of 10 %.

⁽¹⁸⁾ Available at, http://ec.europa.eu/transport/air/safety/flywell_en.htm.

although the proportion of value added accounted for by the Netherlands and Spain was only just below this level. Germany accounted for 1.7 % of the EU-25 value added, having recorded a very low level of value added in 2003, after a negative value added in 2002. In contrast, Germany's share of the EU-25 workforce was 12.8 %. According to the Statistisches Bundesamt (DESTATIS), this is partly because repair and overhaul work for aircraft (NACE 62) is carried out in Germany, whereas much of the mother company's revenue (e.g. Lufthansa) is recorded in subsidiaries abroad.

In relative terms, however, Malta appeared as the most specialised Member State⁽¹⁹⁾ in the air transport sector: as air transport represented as much as 44.4 % of Maltese transport services value added in 2002. In Luxembourg too, the air transport sector was relatively large, accounting for 34.0 % of the value added generated in transport services, while Cyprus was also relatively specialised (with a 19.2 % share).

⁽¹⁹⁾ Lithuania and Malta, 2002; Greece and Ireland, not available.

Table 20.13

Air transport (NACE Division 62)

Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national non-financial services value added (%) (3)	Highest share of national non-financial services employment (%) (4)
1	United Kingdom (9 427.5)	34.0	United Kingdom (89.9)	22.4	Malta (13.1)	Malta (3.1)
2	France (4 343.2)	15.6	France (73.6)	18.4	Luxembourg (5.5)	Luxembourg (2.5)
3	Netherlands (2 647.2)	9.5	Germany (51.5)	12.8	Netherlands (1.8)	Finland (1.3)
4	Spain (2 551.0)	9.2	Spain (37.7)	9.4	Portugal (1.7)	Denmark (1.2)
5	Italy (1 596.6)	5.8	Italy (24.9)	6.2	United Kingdom (1.7)	France (0.9)

(1) Malta, 2002; Greece, Ireland and Poland, not available.

(2) Malta, 2002; Greece, Ireland, the Netherlands and Poland, not available.

(3) Lithuania and Malta, 2002; Greece, Ireland, Cyprus and Poland, not available.

(4) Lithuania and Malta, 2002; Greece, Ireland, Cyprus, the Netherlands and Poland, not available.

Source: Eurostat (SBS)

Table 20.14.

Air passenger numbers, 2004 (thousands)

	Total	National	Intra-EU	Extra-EU
EU-25 (1)	649 240	153 266	271 182	224 792
BE	17 469	1	13 050	4 417
CZ	9 950	173	7 216	2 561
DK	21 006	1 609	13 515	5 882
DE	135 850	21 385	67 248	47 218
EE	991	17	847	127
EL	29 509	5 501	20 789	3 218
ES	129 771	34 012	82 761	12 998
FR	103 016	26 975	40 907	35 133
IE	20 851	685	17 887	2 279
IT	81 213	24 195	41 580	15 438
CY	6 421	0	5 251	1 170
LV	1 056	0	888	168
LT	994	2	817	176
LU	1 509	:	1 320	189
HU	6 445	0	4 519	1 925
MT	2 790	38	2 444	308
NL	44 494	107	25 237	19 150
AT	18 297	562	11 589	6 145
PL	6 092	893	3 738	1 461
PT	18 423	2 447	13 083	2 893
SI	1 046	0	606	440
SK	1 081	36	691	354
FI	11 785	2 862	7 083	1 840
SE	19 957	6 050	10 709	3 198
UK	192 280	25 714	110 462	56 103

(1) For intra-EU transport, passengers are counted only once, not at departure and arrival.
Source: Eurostat (Air transport)

The air transport sector was dominated by large enterprises (with 250 or more persons employed), as SMEs (with less than 250 persons employed) accounted for just 12.5 % of the sector's value added in the EU-25 in 2003, compared with 53.7 % for transport services as a whole. The 87.5 % share of large enterprises in air transport value added was the second highest share among the non-financial services NACE divisions in 2003, with only communications (NACE Division 64) reporting a higher weight for large enterprises. In employment terms, the importance of large enterprises in the air transport sector was even more pronounced, as they accounted for 91.9 % of those employed.

Table 20.15.

Scheduled passenger traffic - selected airlines, 2005

		Million passenger-kilometres	Annual growth, revenue rel. to 2004 (%)
Air France	FR	116 208	8.3
Lufthansa	DE	112 794	3.0
British Airways	UK	110 960	4.2
KLM (1)	NL	63 113	:
Iberia	ES	49 019	7.1
Alitalia	IT	37 245	8.4
Virgin Atlantic	UK	32 103	6.2
SAS	DK/SE/NO	27 724	15.3
Austrian Airlines	AT	18 842	7.5
TAP	PT	14 394	9.1

(1) 2004.
Source: AEA, <http://www.aea.be>

TRANSPORT OF GOODS AND PASSENGERS

Turning to traffic figures, air transport has experienced rapid growth over the past decades, despite short-term fluctuations in activity caused by macro-economic cycles or external factors. Table 20.14 shows the number of passengers for the Member States, where the United Kingdom accounted for one quarter (25.0 %) of passengers flying outside of the EU, and Germany just over one fifth (21.0 %). Tables 20.15 and 20.16 show the scheduled ⁽²⁰⁾ volume of passenger traffic on a selection of airlines represented by the Association of European Airlines (AEA) and by the European Regions Airline Association (ERA).

⁽²⁰⁾ Passenger traffic on scheduled services that are performed according to a published timetable, or services that are so regular or frequent as to constitute a recognisably systematic service, which is open to direct booking by members of the public; and extra flights, section flights occasioned by overflow traffic from scheduled flights.

Table 20.16.

Scheduled passenger traffic - selected regional airlines, 2005

	Million passenger-kilometres	Annual growth, revenue rel. to 2004 (%)
Lufthansa regional	5 976	-5
Lufthansa CityLine	3 971	1
Tyroleair Airways	2 588	41
Air Nostrum	2 526	27
Régional	2 219	17
Aegean Airlines	1 954	11
Brit Air (+ Air France)	1 947	12
Swiss (Regional)	1 843	-1
KLM Cityhopper	1 647	9
KLM Cityhopper UK Ltd	1 199	-8
airBaltic	1 161	108

Source: ERA, <http://www.eraa.org>

COSTS, PRODUCTIVITY AND PROFITABILITY

Gross tangible investment by the EU's ⁽²¹⁾ air transport (NACE Division 62) sector in 2003 was equivalent to just 5.7 % of gross operating expenditure, reflecting on the one hand high operating costs in this sector (both in terms of personnel and fuel), and on the other a relatively low level of investment. Investment figures can be very volatile, particularly in activities that make occasional, very large purchases such as the air transport sector: as such, a snapshot of investment in just one year needs to be interpreted with care.

Average personnel costs were significantly higher in the air transport sector than in the other transport services' NACE divisions. In the EU-25, enterprises in the air transport sector faced average personnel costs of EUR 55 800 per employee in 2003. This was 80 % higher than the average of EUR 31 000 per employee recorded for all transport services (NACE Divisions 60 to 63). These high figures for average personnel costs were only partly compensated for by higher apparent labour productivity, which reached EUR 69 200 per person employed. This was reflected in a wage adjusted labour productivity ratio that was 124 %, below the transport services average of 137 %. These high average personnel costs also resulted in a relatively low gross operating surplus (value added minus personnel costs), as when compared with turnover this gave a gross operating rate of 5.7 %, the lowest of the transport sectors presented in Subchapters 20.1 to 20.6.

⁽²¹⁾ EU average, 2003; Latvia and Malta, 2002; excluding Greece, Ireland, the Netherlands and Poland.

20.5: AUXILIARY TRANSPORT ACTIVITIES

This subchapter includes information on auxiliary and supporting transport activities as covered by NACE Groups 63.1, 63.2 and 63.4, hereafter referred to as auxiliary transport services. Note that travel agencies are covered in Subchapter 20.6.

The activities covered by this subchapter are very diverse: they include a number of support services for all modes of transport, such as baggage and cargo handling, storage/warehousing, and freight forwarding/brokerage. Note that these activities may be provided by enterprises with their principal activity in auxiliary transport activities or by enterprises classified to other activities, often transporters or wholesalers (in which case they will not be included in the statistics described below). Auxiliary and supporting transport activities include the operation of terminals (rail and bus stations, ports and airports) and infrastructure (notably for inland waterways, railways, roads, tunnels and bridges), as well as the provision of navigational services (notably for air and water transport), towing, berthing and parking services (including car parks).

Based on the results of inspections carried out concerning the application of a 2002 regulation on civil aviation security, the European Commission adopted in September 2005 proposals ⁽²²⁾ to refine this legislation, allowing quicker technical updates, to simplify and clarify existing rules, and to extend it to cover freight and in-flight security. In a similar vein Directive 2005/65/EC of the European

Parliament and of the Council concerning improved port security was adopted in October 2005. A second proposed directive concerning ports, aimed at opening port services to competition, was withdrawn by the European Commission in March 2006 following its rejection by the European Parliament.

STRUCTURAL PROFILE

Auxiliary transport services (NACE Groups 63.1, 63.2 and 63.4) constitute a significant part of the transport services sector, and collectively they generated EUR 105 billion of value added in the EU-25 in 2003, which equated to 31.9 % of the total wealth created in the transport services sector (NACE Divisions 60 to 63), or 4.0 % of non-financial services (NACE Sections G to I and K) value added. Auxiliary transport activities were less important in their contribution to transport services' employment, their 1.8 million strong workforce in the EU-25 represented around 22.5 % of the transport services total in 2003.

The four largest Member States collectively accounted for 70.9 % of the EU-25's value added in this sector in 2003, compared with a 63.3 % share for the same Member States in all transport services. This was almost entirely due to the domination of the sector by Germany which generated more than one quarter (28.1 %) of EU-25 value added in auxiliary transport services, compared with its transport services average of 9.4 %. In relative terms, this sector was also important in Germany, as auxiliary transport services contributed 45.6 % to German value added within all transport services, a proportion that was only exceeded in Estonia (47.5 %) ⁽²³⁾. At the other end of the range, auxiliary transport activities contributed 9.6 % to transport services' value added in Luxembourg in 2003, by far the lowest share among the Member States.

⁽²³⁾ Ireland, Lithuania and Malta, 2002; Greece, not available.

A size class breakdown for auxiliary transport activities reveals the relatively large average size of enterprises in this sector. Based on information for 16 Member States ⁽²⁴⁾ enterprises with 250 or more persons employed generated more than half (55.2 %) of the sector's value added in 2003, compared with an EU-25 average for transport services of 46.3 %. In contrast micro enterprises (with 1 to 9 persons employed) accounted for a relatively low share of value added (9.9 % based on data for the same 16 Member States) compared with a transport services average for the EU-25 of 18.5 %.

FOCUS ON TRANSPORT NETWORKS

While the transport services described in Subchapters 20.1 to 20.4 use transport infrastructure, infrastructure management enterprises are considered as supporting transport activities (within NACE Group 63.2). Tables 20.18 and 20.19 provide information on three of the transport networks, namely rail, road and inland waterways.

Rail transport services relied on an EU-25 network encompassing 203 946 km of track in 2002. In density terms, in other words the length of railway line in relation to land area, this was the equivalent of 51.3 m of track per square kilometre. The Czech Republic, Belgium, Luxembourg and Germany had the most dense rail networks, all in excess of 100 m per square kilometre. Cyprus and Malta had no rail network, and the least dense networks were unsurprisingly found in Finland, Estonia and Sweden (the three Member States with the lowest population densities), as well as in Greece.

⁽²⁴⁾ The Czech Republic, Ireland and Malta, 2002; Estonia, Greece, Cyprus, Latvia, Luxembourg, Austria, Portugal, Slovenia and Slovakia, incomplete or not available.

⁽²²⁾ COM(2005) 429.

Table 20.17

Cargo handling and storage; other supporting transport activities; activities of other transport agencies (NACE Groups 63.1, 63.2 and 63.4)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	Germany (29 530.4)	28.1	Germany (409.1)	22.7	Malta (10.7)	Estonia (4.8)
2	United Kingdom (16 483.1)	15.7	Italy (288.2)	16.0	Estonia (10.5)	Latvia (4.7)
3	France (16 298.3)	15.5	France (256.8)	14.3	Latvia (8.9)	Malta (4.5)
4	Italy (12 104.8)	11.5	United Kingdom (244.6)	13.6	Lithuania (6.2)	Italy (3.7)
5	Spain (8 733.1)	8.3	Spain (150.2)	8.3	Germany (5.5)	Germany (3.6)

(1) Ireland and Malta, 2002; Greece, not available.

(2) Ireland, Lithuania and Malta, 2002; Greece and Cyprus, not available.

Table 20.18

Density of land transport networks (m/km²)

	Railway networks, 2002	Motorway networks, 2002 (1)
EU-25	51.3	14.4
BE	115.3	56.7
CZ	121.7	6.6
DK	64.5	23.4
DE	100.3	33.7
EE	21.4	2.2
EL	18.1	5.6
ES	32.7	19.6
FR	57.0	18.6
IE	27.3	1.8
IT	53.0	21.5
CY	-	29.0
LV	35.1	-
LT	27.2	6.4
LU	105.9	44.5
HU	82.5	5.7
MT	-	-
NL	79.0	70.8
AT	67.3	19.6
PL	67.4	1.3
PT	30.5	20.0
SI	60.6	22.5
SK	74.6	6.2
FI	17.3	1.9
SE	24.6	3.3
UK	69.6	14.8

(1) Greece and Ireland, 2001; EU-25 includes 2001 data for Greece and Ireland.

Source: Eurostat (Transport, Main indicators)

Road transport services could count on approximately 57.1 thousand km of motorways in the EU-25 in 2002. While Germany (12 000 km), France (10 200 km), Spain (9 900 km) and Italy (6 500 km) had by far the most extensive motorway networks, accounting together for two thirds (67.6 %) of the EU-25 total in 2002, the Benelux countries had the highest density of motorways in 2002. Note that there was no motorway network in Latvia or Malta. A low density of motorway networks was also recorded in the three least densely populated Member States (Finland, Estonia and Sweden), as well as in Poland and Ireland.

Table 20.19

Inland waterways network, 2003 (1)

	Length in use (km)
BE	1 527
CZ	664
DE	6 636
EE	320
FR	5 384
IT	1 477
LV	:
LT	290
LU	:
HU	1 440
NL	:
AT	351
PL	3 643
SK	172
FI	7 884
UK	1 065

(1) Belgium, Estonia and Italy, 2002.

Source: Eurostat (Inland waterways transport)

Inland waterways used for transport constituted a network of approximately 31 000 km in the EU-25: note that when such waterways constitute a border between two countries they are counted by both countries. Germany (6 600 km) and Belgium (1 500 km) had the highest density of inland waterways on their territory, while Finland (7 900 km), France (5 400 km) and Poland (3 600 km) also had extensive inland waterway networks. Note that the Netherlands has a considerable inland waterway network, although recent data is not available.

FOCUS ON PORTS

Eight of the ten largest EU sea ports were in the North Sea (see Table 20.20). Rotterdam (NL) was the largest of all, with 331 million tonnes of freight loaded and unloaded in 2004, almost two and a half times the volume of the next largest port, Antwerp (BE), with 136 million tonnes.

Table 20.20

Top 10 sea ports ranked by traffic, EU-25 (million tonnes)

		2000	2001	2002	2003	2004
Rotterdam	NL	302.5	296.6	302.7	307.4	330.9
Antwerp	BE	116.0	114.8	113.9	126.1	135.5
Hamburg	DE	77.0	82.9	86.7	93.6	99.5
Marseille	FR	91.3	89.5	89.2	92.4	90.8
Le Havre	FR	63.9	65.4	63.8	67.4	71.9
Grimsby & Immingham	UK	52.5	54.8	55.7	55.9	57.6
Tees & Hartlepool	UK	51.5	50.8	50.4	53.8	53.8
London	UK	47.9	50.7	51.2	51.0	53.3
Algeciras	ES	:	41.1	42.2	48.3	52.6
Amsterdam	NL	42.0	48.1	48.5	40.8	49.9

Source: Eurostat (Maritime transport)

Table 20.21

Top 20 airports by number of passengers, EU-25 (million passengers)

		1994	1999	2004
London Heathrow	UK	44.3	54.8	67.1
Paris Ch. de Gaulle	FR	25.0	:	51.0
Frankfurt Rhein-Main	DE	27.5	45.2	50.7
Amsterdam Schiphol	NL	23.1	36.4	42.4
Madrid Barajas	ES	8.8	27.4	38.2
London Gatwick	UK	19.4	27.6	31.4
Roma Fiumicino	IT	11.0	:	27.2
München F.J. Strauss	DE	8.2	20.8	26.6
Barcelona Transoceanico	ES	4.1	17.0	24.4
Paris Orly	FR	9.2	:	24.0
Manchester Ringway Intl	UK	12.1	14.7	21.0
London Stansted	UK	2.8	8.0	20.9
Palma de Mallorca	ES	10.6	19.0	20.4
København Kastrup	DK	:	:	18.9
Dublin Collinstown	IE	6.5	12.6	17.0
Stockholm Arlanda	SE	:	:	16.2
Bruxelles National	BE	11.2	20.0	15.4
Düsseldorf Rhein-Ruhr	DE	10.3	15.8	15.1
Wien Schwechat	AT	3.8	:	14.7
Milano Malpensa	IT	5.3	:	8.9

Source: Eurostat (Air transport)

Table 20.22

Top 20 airports by goods loaded and unloaded, EU-15 (thousand tonnes) (1)

		1994	1999	2004
Frankfurt Rhein-Main	DE	:	:	1 827.4
Amsterdam Schiphol	NL	837.5	1 180.5	1 467.0
London Heathrow	UK	954.3	1 257.4	1 412.0
Paris Ch. de Gaulle	FR	738.5	:	1 275.8
Bruxelles National	BE	374.8	:	660.4
Köln/Bonn	DE	:	:	621.9
Luxembourg Findel	LU	:	:	616.6
Liège (2)	BE	0.4	207.6	383.8
Milano Malpensa	IT	104.9	:	360.6
Madrid Barajas	ES	126.1	291.6	352.8
København Kastrup (3)	DK	:	389.3	335.6
East Midlands	UK	53.6	112.1	277.2
London Stansted	UK	81.2	166.8	239.0
London Gatwick	UK	220.6	290.8	226.9
München F.J. Strauss	DE	:	:	192.5
Wien Schwechat	AT	40.2	:	158.1
Manchester Ringway Intl	UK	91.5	106.4	153.3
Roma Fiumicino	IT	245.3	:	139.6
Bergamo Orio al Serio	IT	2.7	:	129.6
Helsinki-Vantaa	FI	:	92.2	118.0

(1) All goods loaded onto or unloaded from an aircraft; includes express services and diplomatic bags; excludes passenger baggage; excludes direct transit freight and mail.

(2) Source: <http://www.liegeairport.com>.(3) Source: <http://www.cph.dk>.

Source: Eurostat (Air transport)

FOCUS ON AIRPORTS

The largest airport in the EU-25 in 2004 in passenger terms was London Heathrow (UK), with 67.1 million passengers - see Table 20.21. Among the largest airports several have seen tremendous growth in passenger numbers in the ten years from 1994 to 2004. The highest growth among the largest airports over this period was at London Stansted (UK) and Barcelona Transoceanico (ES) where passenger numbers are estimated to have increased 7.5 and 6-fold respectively. In Madrid Barajas (ES), Wien Schwechat (AT) and München F.J. Strauss (DE), passenger numbers at least tripled.

As regards freight traffic, the largest EU-25 airport was Frankfurt (DE) with 1.8 million tonnes of loaded and unloaded freight and mail in 2004 - see Table 20.22.

COSTS, PRODUCTIVITY AND PROFITABILITY

The auxiliary transport services (NACE Groups 63.1, 63.2 and 63.4) sector reported high investment expenditure compared with operating expenditure: gross tangible investment in the EU's ⁽²⁵⁾ auxiliary transport services sector was equivalent to 18.8 % of operating expenditure, nearly three and a half times as high as the non-financial services (NACE Sections G to I and K) average and more than one and a half times as high as the average for transport services (NACE Divisions 60 to 63).

Average personnel costs in the auxiliary transport services sector were EUR 34 200 per employee in the EU-25 in 2003, somewhat higher than the EUR 31 000 average for transport services. Nevertheless, above average apparent labour productivity (EUR 58 200 per person employed) more than compensated for the high average personnel costs, and this was reflected in the ratio of wage adjusted labour productivity, which was 170 % in the EU-25 for auxiliary transport activities in 2003, some 33 percentage points above the average for transport services. Only Malta ⁽²⁶⁾ reported a wage adjusted labour productivity ratio for auxiliary transport activities lower than its transport services' average, but at 296.6 % (2002) it was still among the highest ratios recorded by any Member State. Equally the gross operating rate for auxiliary transport services was high, as the gross operating surplus represented 16.1 % of turnover in the EU-25 in 2003, some 3.2 percentage points above the transport services average and higher than in any of the other transport services presented in Subchapters 20.1 to 20.6.

⁽²⁵⁾ EU average, 2003; Ireland and Malta, 2002; excluding Greece.

⁽²⁶⁾ Ireland and Malta, 2002; Greece, not available.

Table 20.23

Cargo handling and storage; other supporting transport activities; activities of other transport agencies (NACE Groups 63.1, 63.2 and 63.4)
Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003 (1)

Rank	Investment in tangible goods relative to total operating costs (%) (2)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	18.8	76.7	23.3	58.2	34.2	170.0	16.1
1	Malta (64.5)	Czech Republic (91.1)	Cyprus (63.9)	Denmark (90.0)	Belgium (49.4)	Slovakia (301.2)	Malta (50.1)
2	Portugal (51.0)	Estonia (90.3)	Malta (48.1)	Netherlands (74.6)	Austria (46.0)	Latvia (278.6)	Cyprus (30.7)
3	Hungary (42.8)	Latvia (88.1)	Portugal (27.7)	Belgium (73.8)	Sweden (45.2)	Estonia (263.3)	Germany (26.0)
4	France (34.2)	Hungary (87.5)	Germany (26.6)	Austria (73.0)	Denmark (44.6)	Lithuania (234.0)	Slovakia (22.3)
5	United Kingdom (26.8)	Austria (86.8)	Italy (26.4)	Germany (72.2)	Netherlands (42.5)	Germany (203.1)	Portugal (21.7)

(1) Ireland and Malta, 2002; Greece, not available.

(2) EU-25 is an EU average based on available data for 2002 and 2003.

(3) EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

20.6: TRAVEL AGENCIES

Travel agencies are enterprises that are engaged in arranging transport, accommodation and catering on behalf of travellers (NACE Group 63.3). Note that in previous editions of this publication travel agencies were combined with the hotels and restaurants activities (see Chapter 19) into a tourism chapter.

Travel agents act as retailers selling travel services or packaged trips to the customer. Traditionally, tour operators acted as wholesalers to travel agents, while more recently they have moved towards selling directly to customers. Tourist guides and tourist information services, play a supporting role, offering information and services usually at the tourist destination.

Unlike most of the other services presented in this chapter, the services of travel agents are not covered by sector specific legislation, only by the European Commission's proposal for a directive on services in the internal market. The objective of the proposal is to achieve a genuine internal market in services by removing legal and administrative barriers, facilitating the provision and use of cross-border services in the EU. At the time of writing, it is expected that this directive will be adopted in the near future - see Chapter 22 for more information.

In 2005, among the ten major European travel operators/agents in terms of turnover ⁽²⁷⁾, there were four German operators/agents (TUI, Thomas Cook, Rewe Touristik and Alltours Group) and two British (My Travel and First Choice) - see Table 20.24.

STRUCTURAL PROFILE

Travel agencies (NACE Group 63.3) generated EUR 19 billion of value added in the EU-25 in 2003, accounting for 5.8 % of the transport services (NACE Divisions 60 to 63) total. They employed 470 000 persons and their contribution to the transport services workforce was also just under 6 %. The United Kingdom and Germany were by far the largest contributors to the wealth and employment generated by travel agencies in the EU-25 as together they accounted for 56.6 % of the value added and 42.3 % of the workforce.

Travel agencies in the EU-25 accounted for 0.7 % of the total value added of the non-financial services (NACE Sections G to I and K) economy in 2003. Malta (2.5 %, 2002), the United Kingdom (1.0 %) and Germany (0.9 %) were the most specialised Member States in the travel agencies sector relative to non-financial services as a whole in terms of value added ⁽²⁸⁾. This sector contributed less to non-financial services employment in Germany than in the EU-25 as a whole, whereas Malta and the United Kingdom remained relatively specialised, as was Slovenia.

⁽²⁷⁾ Source: Kuoni Annual Report.

⁽²⁸⁾ Lithuania and Malta, 2002; Greece, Ireland and Cyprus, not available.

Table 20.24

Top European travel operators/agents, 2005

		Turnover (EUR billion) (1)
TUI	DE	14.2
Thomas Cook (2)	DE	7.8
My Travel	UK	4.3
Rewe Touristik	DE	4.3
First Choice	UK	3.8
Grupo Iberostar	ES	2.5
Kuoni	CH	2.4
Club Med	FR	1.6
Alltours Group	DE	1.4
Hotel Plan	CH	1.1

(1) Rounded values converted from CHF.

(2) Travel and tourism business only.

Source: Annual Report, 2005, Kuoni Travel Holding Ltd.

Unlike many other transport activities, SME's (with less than 250 persons employed) made a relatively high contribution to the travel agents sector in the EU. Based on information for 17 Member States ⁽²⁹⁾ SMEs generated more than two thirds (67.8 %) of the sector's value added in 2003, compared with an EU-25 average for transport services of 53.7 %.

⁽²⁹⁾ Malta and Slovenia, 2002; the Czech Republic, Greece, Ireland, Cyprus, Hungary, Austria, Poland and Portugal, incomplete or not available.

Table 20.25

Activities of travel agencies and tour operators; tourist assistance activities n.e.c. (NACE Group 63.3)**Value added and employment: ranking of the top 5 Member States, 2003**

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	United Kingdom (5 802.3)	30.5	United Kingdom (136.7)	29.1	Malta (2.5)	Malta (2.4)
2	Germany (4 948.0)	26.0	Germany (61.9)	13.2	United Kingdom (1.0)	United Kingdom (1.1)
3	France (1 837.7)	9.7	Spain (47.4)	10.1	Germany (0.9)	Slovenia (1.0)
4	Spain (1 416.2)	7.5	France (45.0)	9.6	Slovenia (0.8)	Austria (0.9)
5	Italy (1 382.2)	7.3	Italy (42.8)	9.1	Estonia (0.8)	Sweden (0.8)

(1) Malta, 2002; Greece and Ireland, not available.

(2) Lithuania and Malta, 2002; Greece, Ireland and Cyprus, not available.

Source: Eurostat (SBS)

COSTS, PRODUCTIVITY AND PROFITABILITY

Apparent labour productivity for travel agencies in the EU-25 was EUR 40 000 per person employed while average personnel costs were EUR 25 700: both of these were below the transport services average. A division of these two indicators gives the wage adjusted labour productivity ratio, which shows that personnel costs (once adjusted by the ratio of persons employed to employees) in the EU-25's travel agencies were covered 156 % by value added. Despite relatively low average personnel costs, the gross operating surplus (value added minus personnel costs) was equivalent to just 5.9 % of turnover, just under half the average rate for transport services. Luxembourg recorded a negative gross operating rate (-4.1 %), indicating that personnel costs exceeded value added.

The travel agencies sector may be contrasted with the other transport services covered in this chapter in that its investment expenditure was particularly low compared with operating expenditure: gross tangible investment in the EU ⁽³⁰⁾ travel agencies sector was equivalent to 0.9 % of operating expenditure, well below the transport services EU ⁽³¹⁾ average of 11.9 %. This low ratio is the combination of a relatively low level of tangible investment and a particularly high level of turnover, as many enterprises in this activity are agents and as such their turnover reflects not just the sales of their own service, but the resale of services provided by others.

⁽³⁰⁾ EU average, 2003; Malta, 2002; excluding Greece and Ireland.⁽³¹⁾ EU average, 2003; Lithuania and Malta, 2002; excluding Greece and the Netherlands.

Table 20.26

Land transport; transport via pipelines (NACE Division 60)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million) (2)	360 000	13 387	7 605	8 082	49 708	762	:	36 560	59 720	2 836	48 518	139	729	961	1 267	4 698	80
Production (EUR million)	:	13 615	6 343	8 144	47 963	734	:	29 943	60 322	2 260	50 809	139	744	964	971	3 926	78
Value added at factor cost (EUR million) (2)	167 000	6 815	2 935	3 840	24 852	215	:	18 206	28 569	1 064	20 413	82	372	350	643	1 747	37
Gross operating surplus (EUR million) (2)	52 000	1 538	1 293	1 257	8 358	90	:	9 047	4 292	215	7 125	18	197	150	133	532	28
Purchases of goods and services (EUR million)	:	8 219	5 246	4 330	29 015	521	:	20 803	31 497	1 767	29 877	55	417	650	792	2 953	39
Gross investment in tangible goods (EUR million)	:	1 299	804	1 021	6 084	101	:	3 905	4 957	483	5 253	13	205	117	44	771	2
Number of persons employed (thousands) (2)	5 100	141	236	77	643	22	:	547	726	30	548	5	43	55	13	176	2
Personnel costs (EUR million) (2)	115 000	5 277	1 642	2 583	16 495	125	:	9 159	24 277	849	13 289	64	175	199	510	1 215	9
App. labour productivity (EUR thous./pers. emp.) (2)	33.0	48.4	12.4	49.7	38.7	9.6	:	33.3	39.3	35.5	37.3	17.4	8.7	6.3	50.2	9.9	16.0
Average personnel costs (EUR thous./employee) (2)	27.0	40.4	8.3	37.3	28.4	5.7	:	25.1	35.7	33.0	34.7	24.8	4.2	3.9	41.1	8.0	10.0
Wage adjusted labour productivity (%) (2)	121.0	119.6	149.3	133.3	135.9	170.0	:	132.6	110.1	107.4	107.5	70.0	208.7	163.5	122.3	123.4	161.2
Gross operating rate (%) (2)	14.4	11.5	17.0	15.6	16.8	11.8	:	24.7	7.2	7.6	14.7	12.9	27.0	15.6	10.5	11.3	34.5
Investment per person employed (EUR thousand)	:	9.2	3.4	13.2	9.5	4.5	:	7.1	6.8	16.1	9.6	2.7	4.8	2.1	3.4	4.4	0.7
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million)	18 213	11 316	11 672	5 001	1 433	1 346	6 504	13 666	52 747	1 689	:	3 089	:	:	:	5 770	9 220
Production (EUR million)	18 116	9 853	11 354	5 023	1 354	1 265	6 599	13 737	53 396	1 597	:	3 068	:	:	:	5 772	10 426
Value added at factor cost (EUR million)	8 844	7 168	4 132	2 119	457	472	3 336	5 217	23 124	400	:	1 133	:	:	:	2 923	7 115
Gross operating surplus (EUR million)	2 321	2 173	1 978	466	87	30	1 254	1 380	7 322	178	:	525	:	:	:	1 044	2 120
Purchases of goods and services (EUR million)	10 643	6 437	7 728	3 053	946	960	3 268	8 761	31 775	1 407	:	2 224	:	:	:	3 413	5 769
Gross investment in tangible goods (EUR million)	1 552	2 564	885	1 324	67	245	778	1 489	4 488	151	:	1 208	:	:	:	479	:
Number of persons employed (thousands)	196	149	470	104	31	69	74	120	571	116	:	218	:	:	:	69	86
Personnel costs (EUR million)	6 523	4 995	2 153	1 653	369	442	2 081	3 837	15 802	222	:	608	:	:	:	1 880	4 995
App. labour productivity (EUR thous./pers. emp.)	45.1	48.1	8.8	20.3	14.9	6.9	45.0	43.6	40.5	3.5	:	5.2	:	:	:	42.6	82.6
Average personnel costs (EUR thous./employee)	34.1	36.0	6.8	16.7	15.3	6.4	35.3	35.5	29.9	3.2	:	2.9	:	:	:	34.3	:
Wage adjusted labour productivity (%)	132.4	133.5	129.6	121.3	97.6	106.6	127.5	122.7	135.4	108.9	:	181.9	:	:	:	124.3	:
Gross operating rate (%)	12.7	19.2	16.9	9.3	6.1	2.2	19.3	10.1	13.9	10.6	:	17.0	:	:	:	18.1	23.0
Investment per person employed (EUR thousand)	7.9	17.2	1.9	12.7	2.2	3.6	10.5	12.4	7.9	1.3	:	5.5	:	:	:	7.0	:

(1) Lithuania and Malta, 2002.

(2) EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

Table 20.27

Water transport (NACE Division 61)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million)	67 754	2 142	25	12 682	15 339	277	:	1 337	6 102	:	7 749	195	19	95	29	58	50
Production (EUR million)	:	2 140	26	12 723	13 035	240	:	1 160	6 113	:	10 222	192	19	95	29	45	50
Value added at factor cost (EUR million)	17 474	92	6	2 589	4 944	29	:	475	1 069	:	2 203	102	7	40	10	13	21
Gross operating surplus (EUR million)	10 777	38	1	1 908	3 922	14	:	245	355	:	1 260	49	4	18	8	1	10
Purchases of goods and services (EUR million)	:	2 045	19	10 306	10 943	251	:	957	5 091	:	5 880	87	12	55	18	45	26
Gross investment in tangible goods (EUR million) (2)	:	75	1	1 757	760	3	:	266	553	:	2 923	7	0	5	0	9	14
Number of persons employed (thousands)	181	1	1	13	26	1	:	8	16	:	24	3	0	2	0	2	1
Personnel costs (EUR million)	6 697	55	5	681	1 022	15	:	230	713	:	944	53	3	21	2	12	12
App. labour productivity (EUR thous./pers. emp.)	96.6	65.8	7.7	193.7	189.2	23.0	:	63.0	65.0	:	91.1	29.7	19.0	21.2	139.3	8.5	29.1
Average personnel costs (EUR thous./employee)	41.7	56.7	7.2	52.5	42.3	11.9	:	30.8	46.0	:	42.2	15.5	8.1	11.5	44.6	8.3	19.1
Wage adjusted labour productivity (%)	231.9	116.0	106.8	369.2	446.9	193.1	:	204.5	141.2	:	215.9	191.9	236.5	184.1	312.4	103.5	152.3
Gross operating rate (%)	15.9	1.7	4.5	15.0	25.6	5.0	:	18.3	5.8	:	16.3	25.2	22.0	19.1	27.0	1.4	19.7
Investment per person employed (EUR thousand) (2)	:	53.4	1.1	131.5	29.1	2.4	:	35.2	33.6	:	120.9	1.9	1.2	2.4	0.5	5.9	19.3
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million)	6 295	91	:	290	21	21	2 305	3 592	7 161	:	:	:	:	:	:	12 507	262
Production (EUR million)	6 240	61	:	296	19	20	2 120	3 490	6 921	:	:	:	:	:	:	12 354	272
Value added at factor cost (EUR million)	1 700	28	:	75	2	9	607	796	2 048	13	:	:	:	:	:	3 526	155
Gross operating surplus (EUR million)	1 144	17	:	30	-1	4	247	207	1 072	:	:	:	:	:	:	2 146	33
Purchases of goods and services (EUR million)	4 612	66	:	229	19	15	1 756	2 808	5 156	:	:	:	:	:	:	9 287	125
Gross investment in tangible goods (EUR million)	813	18	:	72	23	9	141	405	422	:	:	:	:	:	:	2 330	:
Number of persons employed (thousands)	:	0	:	2	0	1	8	14	16	:	:	:	:	:	:	23	2
Personnel costs (EUR million)	556	12	:	45	3	6	360	589	976	:	:	:	:	:	:	1 380	122
App. labour productivity (EUR thous./pers. emp.)	:	82.4	:	41.3	11.8	10.1	71.9	55.8	126.3	:	:	:	:	:	:	150.6	72.0
Average personnel costs (EUR thous./employee)	:	40.1	:	25.6	21.0	6.3	43.0	43.1	64.5	:	:	:	:	:	:	59.4	:
Wage adjusted labour productivity (%)	:	205.4	:	161.4	56.2	160.5	167.4	129.5	195.9	:	:	:	:	:	:	253.5	:
Gross operating rate (%)	18.2	18.0	:	10.3	-5.6	16.8	10.7	5.8	15.0	:	:	:	:	:	:	17.2	12.5
Investment per person employed (EUR thousand)	:	52.8	:	39.8	122.7	9.8	16.7	28.4	26.0	:	:	:	:	:	:	99.5	:

(1) Malta and Switzerland, 2002.

(2) Latvia, 2002.

Source: Eurostat (SBS)

Table 20.28

Air transport (NACE Division 62)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million)	96 282	2 340	658	2 642	11 543	78	7 392	15 767	9 009	386	70	73	1 206	517	349		
Production (EUR million)	2 337	745	2 718	10 579	82	7 320	15 819	9 158	375	75	76	1 122	471	363			
Value added at factor cost (EUR million)	27 755	402	212	858	463	16	2 551	4 343	1 597	106	17	15	404	85	246		
Gross operating surplus (EUR million)	5 450	97	111	146	-2 884	7	670	94	120	-1	10	3	184	-4	229		
Purchases of goods and services (EUR million)	1 926	586	1 860	12 300	63	5 029	11 139	7 305	269	58	60	791	434	78			
Gross investment in tangible goods (EUR million) (2)	29	31	156	945	2	293	1 340	368	4	10	1	10	53	2			
Number of persons employed (thousands)	401	5	5	12	51	1	38	74	25	2	1	1	3	4	2		
Personnel costs (EUR million)	22 304	305	101	712	3 347	9	1 882	4 249	1 477	107	7	12	220	89	17		
App. labour productivity (EUR thous./pers. emp.)	69.2	82.0	39.7	73.5	9.0	27.7	67.7	59.0	64.2	43.4	27.6	14.7	124.4	22.2	107.8		
Average personnel costs (EUR thous./employee)	55.8	64.2	19.3	61.1	65.4	15.6	49.9	57.7	60.0	44.0	11.4	11.5	68.0	23.5	7.4		
Wage adjusted labour productivity (%)	124.0	127.8	206.2	120.3	13.8	177.4	135.6	102.2	107.1	98.7	242.2	128.2	183.1	94.5	1 453.2		
Gross operating rate (%)	5.7	4.2	16.9	5.5	-25.0	8.8	9.1	0.6	1.3	-0.4	14.1	4.5	15.2	-0.8	65.7		
Investment per person employed (EUR thousand) (2)	6.0	5.8	13.4	18.4	3.2	7.8	18.2	14.8	1.6	16.6	1.2	3.2	14.0	0.8			
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million)	7 102	2 496	1 735	130	47	1 659	2 728	24 691	:	:	:	:	:	:	2 635	:	:
Production (EUR million)	7 014	1 758	1 781	129	46	1 675	2 651	24 665	:	:	:	:	:	:	2 607	:	:
Value added at factor cost (EUR million)	2 647	632	550	39	0	483	934	9 428	16	:	:	:	:	:	934	:	:
Gross operating surplus (EUR million)	613	183	162	15	-5	29	26	4 767	:	:	:	:	:	:	96	:	:
Purchases of goods and services (EUR million)	4 452	2 096	1 266	84	51	1 199	1 806	14 740	:	:	:	:	:	:	1 745	:	:
Gross investment in tangible goods (EUR million)	142	30	5	4	413	106	782	:	:	:	:	:	:	:	143	:	:
Number of persons employed (thousands)	8	9	1	0	8	13	90	:	:	:	:	:	:	:	12	:	:
Personnel costs (EUR million)	2 034	449	388	25	5	453	908	4 661	:	:	:	:	:	:	838	:	:
App. labour productivity (EUR thous./pers. emp.)	83.4	62.7	66.0	-0.5	58.2	74.5	104.8	:	:	:	:	:	:	:	77.9	:	:
Average personnel costs (EUR thous./employee)	59.7	44.2	41.7	13.3	54.7	72.9	52.1	:	:	:	:	:	:	:	69.9	:	:
Wage adjusted labour productivity (%)	139.6	141.6	158.3	-3.4	106.3	102.1	201.1	:	:	:	:	:	:	:	111.4	:	:
Gross operating rate (%)	8.6	7.3	9.4	11.4	-10.1	1.8	1.0	19.3	:	:	:	:	:	:	3.6	:	:
Investment per person employed (EUR thousand)	18.7	3.4	8.1	12.8	49.8	8.5	8.7	:	:	:	:	:	:	:	11.9	:	:

(1) Malta, 2002.

(2) Latvia, 2002.

Source: Eurostat (SBS)

Table 20.29

Supporting and auxiliary transport activities; activities of travel agencies (NACE Division 63)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million) (2)	420 000	16 735	4 358	9 204	78 150	1 242	37 178	60 214	46 683	353	1 028	646	670	2 790	473		
Production (EUR million)	15 712	3 616	6 678	51 490	1 165	17 136	59 872	50 386	353	472	637	204	988	480			
Value added at factor cost (EUR million) (2)	120 000	3 415	701	2 529	34 478	273	10 149	18 136	13 487	262	271	195	130	459	249		
Gross operating surplus (EUR million) (2)	54 000	1 185	384	1 216	18 924	167	4 401	7 074	4 052	116	174	111	25	190	171		
Purchases of goods and services (EUR million)	12 646	3 670	6 756	52 220	955	27 389	43 640	34 497	90	786	458	541	2 291	219			
Gross investment in tangible goods (EUR million)	770	139	370	5 083	178	4 588	14 732	5 820	17	190	74	89	809	87			
Number of persons employed (thousands) (2)	2 300	50	41	31	471	11	198	302	331	7	16	13	3	30	5		
Personnel costs (EUR million) (2)	70 000	2 230	317	1 312	15 554	106	5 748	11 062	9 436	146	97	84	105	269	78		
App. labour productivity (EUR thous./pers. emp.) (2)	54.0	68.2	17.0	81.6	73.2	25.1	51.4	60.1	40.7	35.4	16.8	14.5	49.6	15.4	49.0		
Average personnel costs (EUR thous./employee) (2)	32.6	47.2	9.9	42.8	34.7	9.9	31.1	36.7	32.4	21.4	6.0	6.4	41.3	9.8	17.8		
Wage adjusted labour productivity (%) (2)	167.0	144.6	171.9	190.6	211.0	254.0	165.3	163.6	125.6	165.4	277.8	226.4	120.2	157.5	274.8		
Gross operating rate (%) (2)	12.8	7.1	8.8	13.2	24.2	13.4	11.8	11.7	8.7	32.8	16.9	17.1	3.7	6.8	36.2		
Investment per person employed (EUR thousand)	15.4	3.4	11.9	10.8	16.4	23.2	48.8	17.6	2.3	11.8	5.5	34.0	27.2	17.1			
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million)	17 500	13 050	4 844	5 771	1 081	852	5 178	17 489	92 602	788	1 188	:	:	:	9 483	6 947	
Production (EUR million)	17 398	3 865	4 518	5 930	958	826	4 505	13 766	91 803	772	1 220	:	:	:	9 268	7 116	
Value added at factor cost (EUR million)	5 617	2 324	1 203	1 842	283	189	1 318	2 813	22 285	262	350	:	:	:	2 206	2 783	
Gross operating surplus (EUR million)	2 316	794	604	851	117	118	422	563	9 798	103	141	:	:	:	913	558	
Purchases of goods and services (EUR million)	12 919	10 901	3 790	4 088	782	665	3 918	11 097	70 499	560	812	:	:	:	7 451	4 349	
Gross investment in tangible goods (EUR million)	2 361	369	194	1 597	146	20	256	468	10 113	99	166	:	:	:	285	:	
Number of persons employed (thousands)	87	39	79	38	9	10	25	55	381	40	40	:	:	:	28	41	
Personnel costs (EUR million)	3 301	1 530	599	991	167	71	896	2 251	12 488	159	209	:	:	:	1 293	2 226	
App. labour productivity (EUR thous./pers. emp.)	64.3	59.7	15.2	48.8	31.3	19.2	53.4	51.1	58.5	6.5	8.7	:	:	:	77.6	67.8	
Average personnel costs (EUR thous./employee)	38.9	40.9	9.4	26.9	18.9	7.2	37.0	43.3	33.6	4.5	5.3	:	:	:	46.8	:	
Wage adjusted labour productivity (%)	165.3	145.9	161.0	181.4	165.3	264.4	144.4	118.0	173.9	146.1	164.8	:	:	:	165.8	:	
Gross operating rate (%)	13.2	6.1	12.5	14.7	10.8	13.8	8.2	3.2	10.6	13.1	11.9	:	:	:	9.6	8.0	
Investment per person employed (EUR thousand)	27.0	9.5	2.5	42.4	16.2	2.0	10.4	8.5	26.5	2.5	4.1	:	:	:	10.0	:	

(1) Malta, 2002.

(2) EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

Communications and media



This chapter gathers together several activities linked to communication and media activities, however, within this group a distinction has to be made between traditional activities (for example, postal services) for which growth is rather stable and other more modern activities (such as mobile telephony and electronic publishing), for which growth developments are more marked. In terms of coverage, the media sector includes both services and manufacturing activities. This is a consequence of the way NACE organises media activities, some of which are considered as manufacturing (the publishing of books or music), while others are seen as services (the production of films). This distinction is further blurred by the wide range of delivery channels for sound, images and information content providers: ranging from the traditional retail distribution network for hardcopy products (CDs, DVDs, books and other printed matter), through cinema, (terrestrial, cable and satellite) radio and television services, and the Internet.

Growing access to broadband Internet among consumers, and the increased use of mobile devices for receiving electronic content are important aspects in the development of on-demand services, as is effective management of the radio spectrum. More information on the management of the radio spectrum, and more broadly on the use of the Internet is presented in Subchapter 21.2.

The uptake of digital (radio and television) transmission as well as delivery over the Internet is intertwined with the development of digital content. This will increase flexibility, allowing content to be more easily shared across devices, facilitating more tailored products, and a greater possibility of on-demand services. Nevertheless, digital technologies also make content easier to share not just between devices but between consumers, which may play an important role in terms of its impact on intellectual property rights, an issue which has been widely debated with respect to downloading and sharing of music files. The management of digital rights is an issue faced by many of the activities covered in this chapter, and in April 2006 the European Commission adopted a revised proposal ⁽¹⁾ for a Directive of the European Parliament and of the Council to combat intellectual property offences.

⁽¹⁾ COM(2006) 168.

This chapter focuses on activities whose principal characteristic is to provide services related to the exchange of information. It includes communications and media: communications covers postal, courier and telecommunication services (NACE Division 64), while media covers the activities of publishing, printing, and the reproduction of recorded media (NACE Division 22), audio-visual activities made up of motion picture and video activities (NACE Group 92.1) and radio and television activities (NACE Group 92.2). Audio-visual activities are not covered by regular structural business statistics (SBS) and the availability of official data for this area is generally weak. Note that in previous editions of this publication computer and related activities were also included in this chapter, but in this edition they are included in Chapter 22 on business services.

NACE

- 22: publishing, printing and reproduction of recorded media;
- 22.1: publishing;
- 22.2: printing and service activities related to printing;
- 22.3: reproduction of recorded media;
- 64: post and telecommunications;
- 64.1: post and courier activities;
- 64.2: telecommunications;
- 92.1: motion picture and video activities;
- 92.2: radio and television activities.

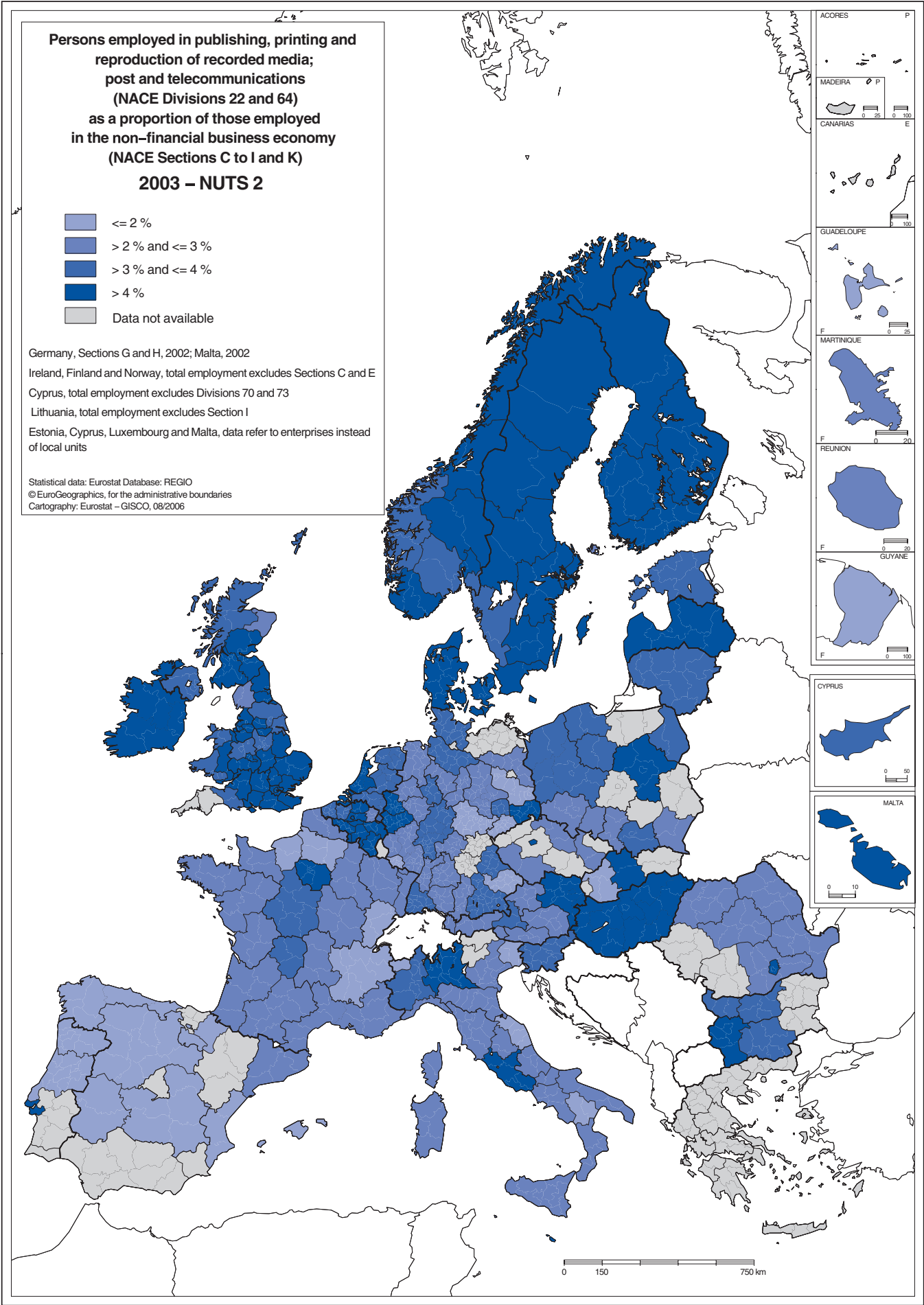


Table 21.1

Communications, publishing and printing (NACE Divisions 22 and 64)
Structural profile, EU-25, 2003

	Value added (EUR million)	Share of non-financial business economy value added (%)	Number of persons employed (thousands)	Share of non-financial business economy employment (%)
Communications, publishing and printing (1)	321 000	6.7	4 810	4.1
Post and courier activities	57 503	1.2	1 844	1.6
Telecommunications	174 283	3.6	1 144	1.0
Publishing, printing, reproduction of recorded media (1)	90 000	1.9	1 820	1.6

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

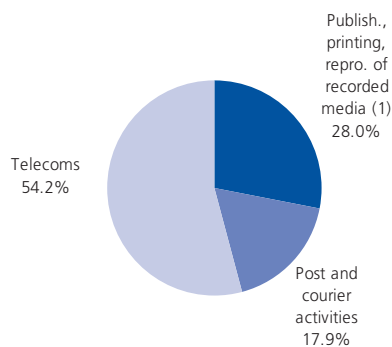
STRUCTURAL PROFILE

Communications, publishing and printing (NACE Divisions 22 and 64) together generated EUR 321.0 billion of value added in the EU-25 in 2003 and employed 4.8 million persons. This collection of activities accounted for 6.7 % of value added in the non-financial business economy (NACE Sections C to I and K), but just 4.1 % of employment.

Telecommunications, (NACE Group 64.2) generated the largest part of the sectoral value added in 2003, accounting for over half (54.2 %) of the total, while publishing, printing, and the reproduction of recorded media (NACE Division 22) was the second largest subsector with a 28.0 % share of value added; the smallest part of this sector was post and courier activities (NACE Group 64.1) which generated less than one fifth (17.9 %) of sectoral value added. The composition of the sector in employment terms was very different (see Figures 21.1 and 21.2), as less than one quarter (23.8 %) of the sectoral workforce was employed in telecommunications. Despite having the lowest value added share, post and courier activities had the largest workforce of the three subsectors covered, with 38.3 % of the communications, publishing and printing total, marginally higher than the share recorded for publishing, printing, and the reproduction of recorded media (37.9 %).

In 2003, the United Kingdom and Germany were the largest Member States, accounting for around one fifth of EU-25's value added and employment within the communications and media sector. Looking at the relative importance of this sector within the non-financial business economy, the most specialised Member States⁽²⁾ in 2003, in value added terms, included the three Baltic Member States (Lithuania, 2002), Malta (2002), Hungary, Slovakia and Portugal. These activities were, nevertheless, important in all Member States, as even in the least specialised Member States they accounted for more than 5 % of non-financial business economy value added.

Figure 21.1

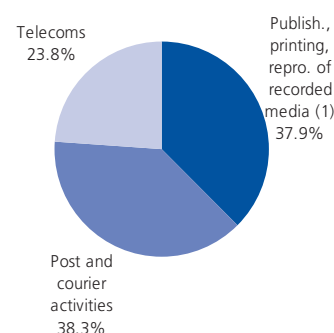
Communications, publishing and printing (NACE Divisions 22 and 64)
Breakdown of sectoral value added, EU-25, 2003 (%)


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

The regional specialisation of these activities is shown in the map on page 356 which is based on the non-financial business economy employment share of this sector. In some countries one region is particularly specialised in these services, and this is notably the case in Köln (Germany), Île de France (France), and Stredné Slovensko (Slovakia). In contrast, several other countries, notably the Nordic countries, Belgium and the United Kingdom report that many regions are specialised in these services.

EU-25 time series for communications (NACE Division 64) are available from 1998 for employment and from 2000 for turnover, while longer time-series are available for the industrial activity of publishing, printing, and the reproduction of recorded media (NACE Division 22) - see Figure 21.3. Looking first at turnover, the two parts of communications, namely postal and courier activities (NACE Group 64.1) and telecommunications (NACE Group 64.2) developed strongly between 2000 and 2005, averaging growth of 4.7 % per annum for postal and courier activities and 6.1 % per annum for telecommunications in

Figure 21.2

Communications, publishing and printing (NACE Divisions 22 and 64)
Breakdown of sectoral employment, EU-25, 2003 (%)


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

the EU-25. In contrast, the turnover index for publishing, printing, and the reproduction of recorded media grew on average by 1.2 % per year over the same period in the EU-25, resulting from a period of stability between 2000 and 2003, followed by more rapid annual growth of 2.9 % and 1.6 % respectively in 2004 and 2005.

In employment terms, communications (covering postal and courier activities, as well as telecommunications) and publishing, printing, and the reproduction of recorded media recorded a similar development, with a period of growth until 2000 or 2001, followed by a reduction in employment levels. Between 2000 and 2005 the employment index for publishing, printing, and the reproduction of recorded media fell by 7.5 % overall. In contrast, the employment index for communications fell more sharply, down 11.1 % overall by 2004 from its peak of 2001, although 2005 saw signs of recovery, as employment grew by 1.6 %, the first positive growth rate in four years.

⁽²⁾ Lithuania, Malta and Sweden, 2002; Greece, Ireland, Cyprus and Luxembourg, not available.

Table 21.2

Communications, publishing and printing (NACE Divisions 22 and 64)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national non-financial business economy value added (%) (3)	Highest share of national non-financial business economy employment (%) (4)
1	United Kingdom (66 392.3)	20.7	Germany (987.7)	20.5	Latvia (9.6)	Denmark (6.1)
2	Germany (62 829.5)	19.6	United Kingdom (900.2)	18.7	Lithuania (9.0)	Finland (5.8)
3	France (46 101.9)	14.4	France (667.1)	13.9	Malta (8.7)	United Kingdom (5.0)
4	Italy (36 737.9)	11.4	Italy (430.4)	8.9	Hungary (8.1)	Belgium (5.0)
5	Spain (23 849.6)	7.4	Spain (324.4)	6.7	Estonia (7.9)	Sweden (5.0)

(1) Malta and Sweden, 2002; Greece and Luxembourg, not available.

(2) Sweden, provisional; Malta, 2002; Greece and Luxembourg, not available.

(3) Lithuania, Malta and Sweden, 2002; Greece, Ireland, Cyprus and Luxembourg, not available.

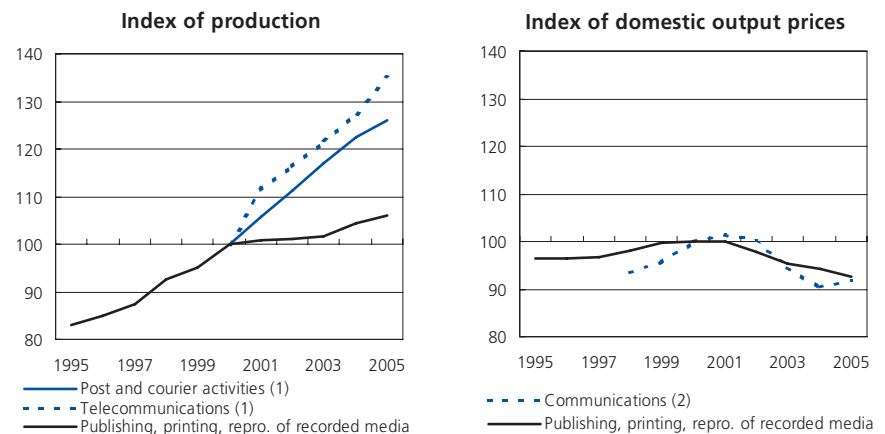
(4) Sweden, provisional; Lithuania and Malta, 2002; Greece, Ireland, Cyprus and Luxembourg, not available.

Source: Eurostat (SBS)

Large enterprises (with 250 and more persons employed) contributed the highest share of EU-25 value added in 2003 for both of the NACE divisions covered within this chapter, however, aside from this fact there was little in common between the relative size structures of the two activities - see Figure 21.4. Communications (NACE Division 64) was dominated by large enterprises, as these accounted for 92.2 % of communications value added in the EU-25. This was the highest proportion of value added accounted for by large enterprises in any non-financial business economy NACE division ⁽³⁾ in 2003. In contrast, the value added share of large enterprises in publishing, printing and the reproduction of recorded media (NACE Division 22) was 41.0 %, marginally below the non-financial business economy average of 42.7 %. Equally, the share of value added generated by micro enterprises (with less than 10 persons employed) in publishing, printing and the reproduction of recorded media was below average (13.6 %) compared with the non-financial business economy (20.5 %), and as a result both small enterprises (with between 10 and 49 persons employed), and particularly medium-sized enterprises (with between 50 and 249 persons employed) made a relatively high contribution to activity within this subsector.

⁽³⁾ NACE Divisions 12 and 16, not available.

Figure 21.3
Communications, publishing and printing (NACE Divisions 22 and 64)
Evolution of main indicators, EU-25 (2000=100)

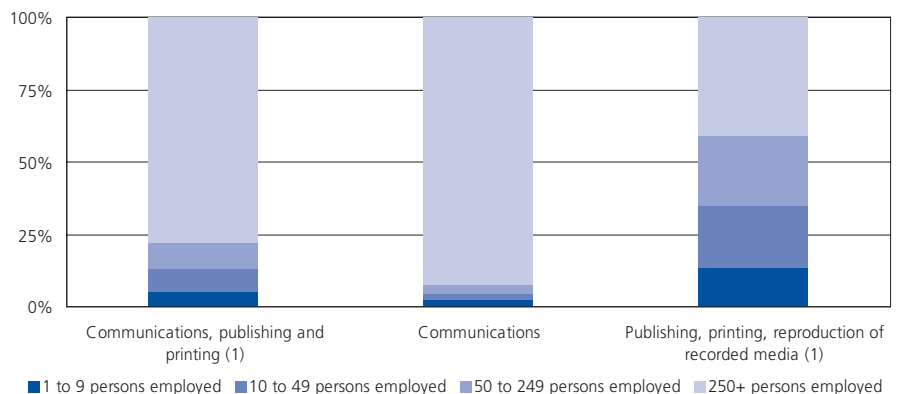


(1) Series starts in 2000.

(2) Series starts in 1998.

Source: Eurostat (STS)

Figure 21.4
Communications, publishing and printing (NACE Divisions 22 and 64)
Share of value added by enterprise size class, EU-25, 2003 (%)



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

Source: Eurostat (SBS)

Table 21.3

Communications, publishing and printing (NACE Divisions 22 and 64)
Labour force characteristics, 2005

	Male		Full-time		Breakdown by age (% share of total)		
	Proportion of those employed (%)	Index (non-financial business economy=100)	Proportion of those employed (%)	Index (non-financial business economy=100)	< 30 years	30-49 years	50+ years
EU-25	60.7	92.7	82.7	97.0	21.2	56.6	22.2
BE	66.6	98.0	85.4	102.4	18.5	59.4	22.1
CZ	43.4	67.9	91.6	95.3	23.0	51.1	26.0
DK	61.8	93.2	75.9	93.5	29.2	47.1	23.7
DE	58.4	91.7	70.9	88.9	18.9	56.7	24.4
EE	39.9	69.3	92.4	97.8	29.6	48.4	22.0
EL	70.8	102.3	96.4	99.9	22.3	55.3	22.3
ES	63.5	93.8	91.2	101.3	27.8	57.7	14.6
FR	53.3	81.5	86.2	97.8	14.7	62.0	23.2
IE	70.0	105.4	91.3	104.2	23.0	55.8	21.2
IT	64.5	94.5	91.8	104.0	13.2	63.6	23.1
CY	63.4	98.0	91.0	98.5	25.6	58.9	15.5
LV	40.4	70.4	87.9	92.4	25.7	55.3	19.0
LT	36.6	62.4	84.2	87.6	19.3	60.8	19.9
LU	68.9	101.3	85.6	97.0	15.8	64.1	20.1
HU	51.4	83.1	94.8	98.5	20.9	59.7	19.4
MT	68.5	90.4	95.9	105.5	42.6	38.9	:
NL	66.6	100.4	51.1	82.6	31.4	46.6	21.9
AT	62.8	100.9	81.6	100.8	23.2	60.9	15.9
PL	54.2	83.6	93.1	100.2	26.5	59.3	14.2
PT	60.0	94.2	96.3	101.5	33.9	49.5	16.5
SI	54.7	87.8	91.2	97.0	28.5	57.1	14.4
SK	44.4	70.0	95.3	97.1	29.4	54.1	16.5
FI	57.6	89.5	84.8	97.2	24.6	47.6	27.8
SE	62.0	91.0	76.6	93.1	22.2	47.6	30.2
UK	68.6	105.3	83.8	107.2	21.0	53.9	25.1

Source: Eurostat (LFS)

LABOUR FORCE CHARACTERISTICS

The workforce in the EU-25's communications, publishing and printing sector (NACE Divisions 22 and 64) had a relatively high proportion of part-time employment (17.3 %) in 2005 (see Table 21.3), higher than the non-financial business economy average (14.7 %). This high rate was mainly due to the publishing, printing and the reproduction of recorded media subsector (NACE Division 22) where part-time employment reached 19.9 %.

Looking at the age structure of the EU-25's communications, publishing and printing workforce, the relatively low share (21.2 %) of younger workers (aged less than 30) was notable. The share of younger workers was 23.4 % in the publishing, printing and the reproduction of recorded media subsector, closer to the non-financial business economy average of 24.5 %, while it was just 19.7 % in communications.

In 2005, just over three fifths (60.7 %) of the communications, publishing and printing sector's workforce were men, below the non-financial business economy average (65.5 %). This situation was observed in communications (NACE Division 64) where the share was 61.2 %, and also in publishing, printing and the reproduction of recorded media, where the proportion was slightly lower, at 59.9 %.

Table 21.4

Publishing, printing, reproduction of recorded media; post and telecommunications (NACE Divisions 22 and 64)
Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	8.4	70.5	29.5	66.8	35.3	189.0	22.6
1	Malta (39.2)	Ireland (86.2)	Cyprus (51.7)	Ireland (178.0)	Belgium (46.4)	Ireland (423.2)	Malta (46.0)
2	Cyprus (28.3)	Lithuania (80.2)	Malta (42.6)	Netherlands (90.5)	France (43.7)	Latvia (343.8)	Cyprus (45.5)
3	Latvia (21.7)	Hungary (77.6)	Denmark (34.0)	Italy (85.4)	Ireland (42.1)	Slovakia (295.7)	Latvia (39.9)
4	Slovakia (21.1)	Slovakia (77.3)	France (33.9)	Belgium (79.4)	United Kingdom (40.7)	Malta (287.8)	Czech Republic (32.0)
5	Slovenia (18.1)	Estonia (77.0)	Germany (31.3)	Austria (79.3)	Austria (40.5)	Estonia (284.5)	Ireland (31.6)

(1) Malta and Sweden, 2002; Belgium, Greece, Luxembourg and the Netherlands, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Malta and Sweden, 2002; Greece and Luxembourg, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Malta and Sweden, 2002; Greece and Luxembourg, not available; EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

COSTS, PRODUCTIVITY AND PROFITABILITY

An analysis of tangible investment and operating expenditure shows a different profile for the three subsectors covered by this chapter. The capital intensive nature of telecommunications made this subsector stand out, as gross tangible investment was equivalent to 13.3 % of gross operating expenditure in the EU ⁽⁴⁾ when averaged across those countries for which data are available, compared with less than 4 % in the other two subsectors. The labour-intensive nature of the EU's ⁽⁵⁾ post and courier activities was reflected in the 57.3 % share of personnel costs in gross operating expenditure, far higher than in the other two subsectors where this share was below 30 %.

⁽⁴⁾ EU average, 2003; Slovenia, 2002; excluding Denmark, Greece, Ireland, Malta, the Netherlands and Poland.

⁽⁵⁾ EU average, 2003; Slovenia, 2002; excluding Denmark, Greece, Ireland, Malta, the Netherlands and Poland.

The relative dynamism of the communications, publishing and printing sector was visible from some selected measures of productivity and profitability. EU-25 apparent labour productivity was EUR 66 800 per person employed overall in 2003, well above the non-financial business economy average (EUR 41 200). Behind this sectoral average there were great differences: as apparent labour productivity ranged from EUR 31 200 for post and courier activities, through EUR 49 000 in printing, publishing and the reproduction of recorded media, to EUR 152 300 for telecommunications. However, high productivity was accompanied by relatively high personnel costs in 2003, with a per employee average of EUR 26 400 for post and courier activities, EUR 35 000 for publishing, printing, and the reproduction of recorded media, and EUR 50 400 for telecommunications. Only the post and courier activities value was below the non-financial business economy average (EUR 28 400, 2002). For the communications, publishing and printing sector as a whole, wage adjusted labour productivity was 189 %, indicating that apparent labour productivity was 89 % higher than average personnel costs. Again post and courier activities recorded the lowest level among the three subsectors, with a wage adjusted labour productivity ratio of 118.1 %, compared with 142 % for publishing, printing, and the reproduction of recorded media, and 302.1 % for telecommunications.

The gross operating rate, calculated as the relationship between the gross operating surplus (value added minus personnel costs) and turnover, was 31.3 % for telecommunications, well above the 14.0 % and 10.7 % rates recorded for publishing, printing, and the reproduction of recorded media, and for post and courier activities respectively; although the latter was close to the non-financial business economy average (10.8 %, 2002).

21.1: POSTAL AND COURIER SERVICES

This subchapter covers NACE Group 64.1, which includes both national post activities (NACE Class 64.11) and other courier activities (NACE Class 64.12). National post activities include the pick-up, transport and delivery (domestic or international) of mail and parcels, and other services such as P.O. boxes or *poste restante*. Courier activities other than national post activities include mainly express courier services, where enterprises have widened their initial focus on business documents towards the transfer of packages and freight, blurring the distinction between courier and transport enterprises.

Unlike the telecommunications and audiovisual services covered in Subchapters 21.2 and 21.3, postal services are covered by the European Commission's proposal for a Directive on services in the internal market. The objective of the proposal is to achieve a genuine internal market in services by removing legal and administrative barriers to the development of service activities between Member States, facilitating the provision and use of cross-border services in the EU. At the time of writing, it is expected that this Directive will be adopted in the near future - see Chapter 22 for more information.

From the supply side, both public and private operators run postal and courier activities. Universal service providers (USPs), be they publicly or privately owned, continue to provide the majority of general letter services and in most countries they still operate as a monopoly; they have exclusive rights, balanced by the fact they have a universal service obligation. Private operators dominate the express services market, providing letter and parcel services, specifically to the business-to-business, direct mail and business-to-private segments of the market. The competitive environment in this sector has changed as there have been developments towards market liberalisation. Indeed, gradual and controlled opening of postal markets has taken place since the middle of the 1990s, with the two so-called 'Postal Directives' in 1997 and 2002 steadily opening-up the sector to competition. It is planned that in 2007 the EU's Member States will discuss opening their markets completely by 2009.

Traditional mail products are increasingly substituted by new technologies, such as electronic mail and the Internet, as well as alternatives ways of communications (for example, telephone or fax) that make information available in a fast manner. Nevertheless, the delivery of goods remains a key element for post and courier activities and is supported, for example, by increased on-line purchasing of goods.

FOCUS ON POSTAL INFRASTRUCTURE AND TRANSPORT OF POSTAL ITEMS

According to data collected by the UPU ⁽⁶⁾ from its postal administration members, there were about 99 300 permanent post offices in the EU-25 in 2004 - see Table 21.5 - a contraction of 5 % when compared with the number in 2000.

The number of letter-items for both domestic and international dispatch reached 121.3 billion letters in the EU-25 in 2004, an increase of more than 6 % when compared with 2000. Ordinary parcels for both domestic and international dispatch amounted to 1.1 billion items in 2004, of which 98.7 % were handled within the domestic market. The number of parcels dispatched fell overall by more than 5 % between 2000 and 2003, but increased in 2004 by 2.6 % compared with the previous year.

STRUCTURAL PROFILE

Post and courier activities (NACE Group 64.1) generated EUR 57.5 billion of value added in the EU-25 in 2003, which equated to 1.2 % of the non-financial business economy (NACE Sections C to I and K) total. With 1.8 million persons employed, these activities represented 1.6 % of the non-financial business economy workforce. The difference between these two shares illustrates one of the main characteristics of post and courier activities, namely that they tend to have a relatively high reliance on labour input. Table 21.7 shows the size of the two subsectors, with national post activities (NACE Class 64.11) accounting for two thirds (66.8 %) of post and courier activities value added in the EU-25 (2002), while employing a slightly lower proportion (65.9 %) of the workforce; the remainder being accounted for by courier activities other than national post activities (NACE Class 64.12).

⁽⁶⁾ UPU (Universal Post Union), more information at: <http://www.upu.int>.

Table 21.5

Postal services in the EU-25

	2000	2001	2002	2003	2004
Total number of permanent post offices (units)	104 598	103 466	103 023	101 357	99 333
of which, staffed by people from outside the administration (%)	31.0	33.9	34.9	34.7	34.8
Number of letter-post items, domestic service (millions)	110 746	112 283	113 223	114 209	118 623
Number of letter-post items, international service-dispatch (millions)	3 428	3 268	2 964	2 885	2 678
Ordinary parcels, domestic services (millions)	1 144	1 121	1 110	1 085	1 113
Ordinary parcels, international service-dispatch (millions)	14	14	14	14	14

Source: UPU, <http://www.upu.int>, Postal statistics database

Table 21.6
Postal services, 2004

	Number of permanent post offices	Number of letter post items treated by national post (millions)		
		Number of letter-post items, domestic service (1)	Number of letter-post items, international service - dispatch (2)	Number of letter-post items, international service - receipt (3)
BE	1 369	:	:	:
CZ	3 419	3 077	27	52
DK	996	1 122	:	:
DE	13 019	21 744	:	:
EE	545	54	5	5
EL	2 200	550	48	41
ES	3 291	5 178	222	140
FR	16 947	17 571	:	:
IE	1 604	509	91	99
IT	13 855	6 574	94	197
CY	1 111	46	10	12
LV	968	53	3	4
LT	955	43	5	6
LU	109	105	43	28
HU	2 824	1 057	13	15
MT	51	43	6	8
NL	3 188	5 302	:	:
AT	1 999	970	:	:
PL	10 923	1 482	47	51
PT	3 026	999	55	46
SI	557	795	8	11
SK	1 598	433	9	14
FI	1 311	830	19	43
SE	:	:	:	:
UK	14 609	21 030	449	362

(1) Denmark, excluding registered items, insured letters, newspapers, unaddressed advertising items and hybrid mail; Estonia, excluding registered items, insured letters, newspapers, advertising items and hybrid mail; France, including international services but excluding newspapers or unaddressed advertising items; Cyprus, excluding registered items; Ireland, Latvia and Poland, excluding registered items, insured letters, newspapers and advertising items; Lithuania and Luxembourg, excluding newspapers, unaddressed advertising items and hybrid mail; Hungary, excluding registered items, insured letters and newspapers; Malta, excluding registered items and advertising items; the Netherlands, addressed items only; Austria, excluding newspapers; Portugal, excluding advertising items and hybrid mail; Slovakia, excluding registered items, insured letters and newspapers; Finland, excluding newspapers and advertising items.

(2) Estonia, excluding registered items, insured letters, advertising items and hybrid mail; Spain and Finland, excluding advertising items; Ireland and Malta, excluding registered items; Cyprus, Hungary, Poland and Slovakia, excluding registered items and insured letters; Latvia, excluding registered items, insured letters and advertising items; Luxembourg, excluding unaddressed advertising items and hybrid mail.

(3) Estonia, Cyprus, Latvia, Hungary, Malta, Poland and Slovakia, excluding registered items and insured letters; Ireland, excluding registered items.

Source: UPU, <http://www.upu.int>, Postal statistics database

Among the Member States, the five largest were the same whether measured in value added or employment terms - see Table 21.8. However, relative to non-financial business economy value added, the importance of post and courier activities was most marked among the Member States with available data⁽⁷⁾ in Luxembourg (2.3 % of non-financial business economy value added) and to a lesser extent France (1.7 %). At the other end of the spectrum, the lowest proportion of non-financial business economy value added coming from post and courier activities was observed in Spain (0.5 %), Latvia (0.6 %) and Lithuania (0.7 %, 2002).

Annual short-term statistics for post and courier activities in the EU-25 provide a picture of the development of the turnover index over the period 2000 to 2005 - see Figure 21.5. Overall growth was slightly lower than for communications (NACE Division 64) as a whole, but was uninterrupted as turnover increased during each year of the period considered, rising by as much as 5.7 % in 2001. Nevertheless, the 2.9 % growth recorded between 2004 and 2005 was the lowest annual growth rate registered during the period considered and was the second year in succession that the rate of growth diminished.

⁽⁷⁾ Lithuania and Sweden, 2002; Denmark, Greece, Ireland, Cyprus, Malta, the Netherlands, Poland and Sweden, not available.

Table 21.7

Post and courier activities (NACE Group 64.1)
Structural profile, EU-25, 2003

	Value added (EUR million)	Number of persons employed (thousands)
Post and courier activities	57 503	1 844
National post activities (1)	38 154	1 227
Courier activities other than national post activities (1)	18 975	635

(1) Value added, 2002.

Source: Eurostat (SBS)

Table 21.8

Post and courier activities (NACE Group 64.1)
Value added and employment: ranking of the top 5 Member States, 2003 (1)

Rank	Highest value added (EUR million)	Share in EU-25 value added (%)	Highest number of persons employed (thousands)	Share in EU-25 employment (%)
1	Germany (13 223.2)	23.0	Germany (414.4)	22.5
2	France (11 615.6)	20.2	France (305.4)	16.6
3	United Kingdom (10 594.4)	18.4	United Kingdom (300.1)	16.3
4	Italy (6 148.0)	10.7	Italy (161.0)	8.7
5	Spain (2 171.7)	3.8	Spain (106.3)	5.8

(1) Slovenia, 2002; Denmark, Greece, Ireland, Malta, the Netherlands and Poland, not available.

Source: Eurostat (SBS)

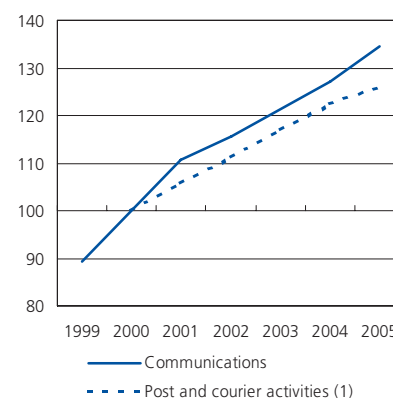
COSTS, PRODUCTIVITY AND PROFITABILITY

With EUR 31 200 of value added generated per person employed in 2003, the EU-25's post and courier services recorded a relatively low level of apparent productivity compared with most other activities, some EUR 10 000 lower than the non-financial business (NACE Sections C to I and K) economy average. Despite a relatively low level of apparent labour productivity, EU-25 average personnel costs per employee were more typical for the non-financial business economy, at EUR 26 400 per employee in 2003, just EUR 2 000 below the non-financial business economy average for 2002. As a consequence, the wage adjusted labour productivity ratio for post and courier services was 118.1 % in the EU-25, significantly below the non-financial business economy average of 143.8 % (2002).

The gross operating rate is a measure of operating profitability relating the gross operating surplus to turnover: for the EU-25's post and courier activities this rate was 10.7 % in 2003, practically the same as the non-financial business economy average for 2002 (10.8 %).

Figure 21.5

Post and courier activities (NACE Group 64.1)
Evolution of turnover, EU-25 (2000=100)



(1) Series starts in 2000.

Source: Eurostat (STS)

21.2: TELECOMMUNICATION SERVICES

Telecommunications services (NACE Group 64.2) embrace the distribution of sound, images, data and other information via cables, broadcasting, relay or satellite. These services include both the management and maintenance of networks and the provision of services using these networks, including the provision of radio and television services, but not the production of radio and television programmes (which are covered in Subchapter 21.3).

In terms of legislation, services or networks that transmit communications electronically, whether they be wireless or fixed, carrying data or voice, Internet based or circuit switched, broadcasting or personal communication, are all covered by a set of Directives that became applicable on 25 July 2003, and that have been largely implemented by the Member States. In a June 2006 Communication⁽⁸⁾ the European Commission published its review of this framework, which is likely to lead to new legislative proposals. The review focused on spectrum management, streamlining reviews of national markets (to assess potential barriers to the internal market), strengthening consumer protection/user rights, security, and more generally keeping the legislation up-to-date. One issue emphasised in the review was the management of the radio spectrum, which refers to the attribution of certain parts of the radio spectrum to specified uses, notably for broadcasting, wireless telephony and computer networks, in order to avoid interference between devices. In September 2005 the European Commission adopted three Communications⁽⁹⁾ on radio spectrum policy as part of the i2010 initiative (see below). Included are proposals for EU-wide rules for ultra wideband and broadband wireless access technologies as well as 'wireless barcodes' for radio frequency identification tags (RFIDs), greater flexibility in the usage rights and tradability of individual spectrum bands, and investigating further the opportunities to make licence-free radio frequencies available.

⁽⁸⁾ COM(2006) 334.

⁽⁹⁾ COM(2005) 410, COM(2005) 411, COM(2005) 461.

Table 21.9
Number of operators and service providers in telecommunications (NACE Group 64.2), 2004 (units) (1)

	Fixed network operators offering local national telecommunications (2)	Fixed network operators offering long distance national telecommunications (3)	Operators offering international telecommunications (2)	Cellular mobile operators (4)	Internet service providers (5)
BE	48	48	48	3	92
CZ	36	35	35	3	2 934
DK	44	44	46	24	49
DE	72	100	100	4	900
EE	29	29	17	5	135
EL	16	14	17	4	170
ES	69	69	69	4	672
FR	21	27	27	10	34
IE	25	25	25	3	20
IT	:	:	:	4	:
CY	7	7	20	2	15
LV	8	8	15	3	129
LT	9	9	21	8	98
LU	17	10	17	3	32
HU	42	54	56	3	100
MT	1	1	10	2	15
NL	29	33	32	5	:
AT	38	38	36	8	270
PL	89	89	89	3	108
PT	13	13	13	3	30
SI	1	1	12	4	61
SK	81	39	39	2	211
FI	44	10	10	15	120
SE	50	50	50	28	150
UK	:	:	:	:	:

(1) The data for the number of fixed network operators offering local and long distance national telecommunications cover facilities based or resale; for international telecommunications and the number of cellular mobile operators, data cover digital or analogous, facilities based or resale; data for Internet service providers cover access and backbone services.

(2) Latvia and Austria, 2003.

(3) Greece, Latvia and Austria, 2003.

(4) Italy, 2003.

(5) Spain, 2003.

Source: Eurostat (Information society statistics)

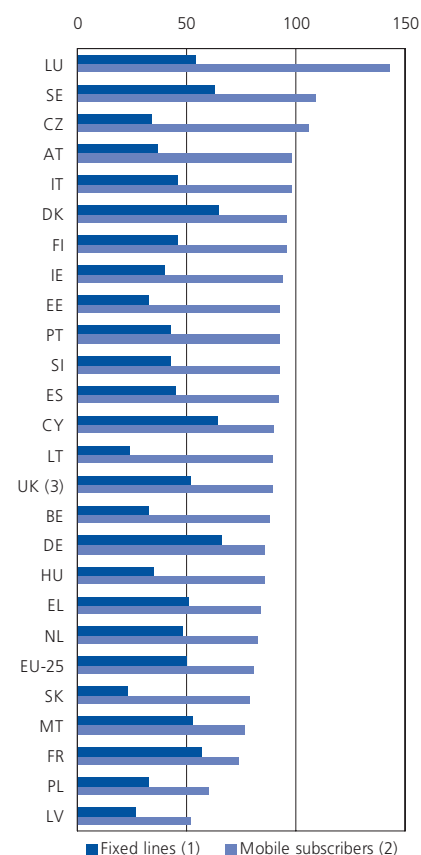
FOCUS ON MOBILE AND FIXED LINE TELEPHONY

Information on the number of operators and service providers in the Member States is presented in Table 21.9 for 2004. In some Member States, the same operators for the fixed network offer local and long distance national and international telecommunications, while in other markets some operators specialise in particular services. As regards access to networks, there were on average 50 fixed telephone lines⁽¹⁰⁾ and 81 mobile subscriptions per 100 inhabitants in the EU-25

in 2004 – see Figure 21.6. Among the Member States, Germany had the highest density of fixed lines, as the number of lines per 100 inhabitants reached 66 in 2004, followed by Denmark, Cyprus and Sweden where the density was below 60 lines. Slovakia, Lithuania and Latvia had less than 30 fixed lines per 100 inhabitants, the lowest density among the EU-25 Member States. In all the Member States, the number of mobile subscriptions exceeded the number of fixed lines in 2004. Note that the number of mobile subscriptions needs to be interpreted with some care, as to some extent it overstates the true use of mobile telephony, as consumers may switch between operators without closing old accounts. Equally, the high number of subscriptions in

⁽¹⁰⁾ A telephone line connecting the subscriber's terminal equipment to the public switched network and having a dedicated port in the telephone exchange system. The line may be an exclusive exchange line or a shared line. This is not the same as a subscriber.

Figure 21.6
Access to networks per 100 inhabitants, 2004

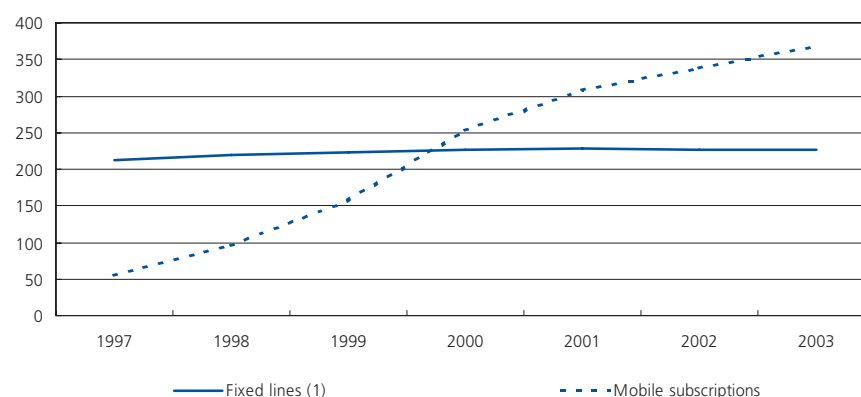


(1) EU-25, Italy and the United Kingdom, 2003.
 (2) EU-25, Italy, Latvia, the Netherlands and the United Kingdom, 2003.
 (3) Fixed lines, estimate.
 Source: Eurostat (Information society statistics)

Luxembourg may in part be due to many (of the large number of) cross-border commuters having a subscription in Luxembourg to avoid roaming charges. Looking at the evolution of fixed line and mobile telephony (see Figure 21.7), the number of fixed lines continued to rise in the EU-25 to a peak in 2001, since when it declined to 225.7 million. In contrast, the number of mobile subscriptions developed at a rapid pace, although this growth slowed slightly after 2000.

Table 21.10 provides information on the cost of three types of fixed line calls. The difference in the cost between Member States is remarkable. For all three types of calls Cyprus recorded the lowest costs: in comparison, local calls were 2.9 times as high in Belgium, national calls 6.1 times as high in Slovakia and Hungary, and calls to the United States 7.9 times as high in Latvia. Concerning mobile phone charges, in July 2006 the European Commission announced that it would take action to reduce the cost of using mobile phones abroad (roaming charges), with the goal of capping charges by the middle of 2007.

Figure 21.7
Evolution of the number of telephone lines, EU-25 (millions)



(1) Break in series between 1998 and 1999.
 Source: Eurostat (Information society statistics)

Table 21.10
Cost including VAT of a 10 minute call at 11 a.m., August 2004 (EUR)

	Local calls	National calls	International calls to USA
EU-25	0.4	0.9	2.1
BE	0.6	0.6	2.0
CZ	0.4	1.2	2.9
DK	0.4	0.4	2.4
DE	0.4	1.2	1.2
EE	0.3	0.3	2.4
EL	0.3	0.7	2.9
ES	0.3	0.9	1.5
FR	0.4	1.0	2.2
IE	0.5	0.8	1.9
IT	0.3	1.2	2.1
CY	0.2	0.2	0.8
LV	0.4	1.1	6.3
LT	0.4	0.8	4.1
LU	0.3	~	1.4
HU	0.5	1.2	2.7
MT	0.3	~	1.8
NL	0.3	0.5	0.9
AT	0.5	0.6	1.9
PL	0.3	1.1	3.3
PT	0.4	0.7	2.5
SI	0.3	0.3	1.8
SK	0.6	1.2	2.9
FI	0.2	0.9	4.8
SE	0.3	0.3	1.1
UK	0.4	0.4	2.1

Source: Eurostat (Information society statistics, Structural indicators - original source Teligen Ltd.)

FOCUS ON THE INTERNET

The European Commission developed a number of broad initiatives (such as eEurope 2005) to support the development of the information society. This work continued with the i2010 initiative, announced in June 2005, which aims to create an open and competitive market for information society and media services, stimulate research investment for information and communication technologies (ICT), and promote an inclusive European information society. The last of these three points, as well as addressing the more established socio-economic digital divide, and targeting other groups recognised as having difficulties participating fully in the information society, also looks at the territorial digital divide: in March 2006 the European Commission released its Communication ⁽¹¹⁾ 'Bridging the broadband gap' which highlighted the divide between urban and rural areas in terms of broadband access.

⁽¹¹⁾ COM(2006) 129

One recent development relating to the Internet that is of particular relevance for the EU is the introduction of the .EU country code top level domain (ccTLD). Registration for the use of this ccTLD started in December 2005 for holders of existing trademarks and public bodies, and was subsequently extended to other rights holders, before being opened to all users from April 2006.

The Internet is the backbone for the development of the information society. According to Eurostat's information society statistics, 91 % of the business economy enterprises ⁽¹²⁾ in the EU-25 had access to the Internet at the start of 2005 – see Figure 21.8. Turning to Internet use by the workforce, 35 % of those employed used the Internet in their normal work routine by the start of 2005 - see Figure 21.9.

STRUCTURAL PROFILE

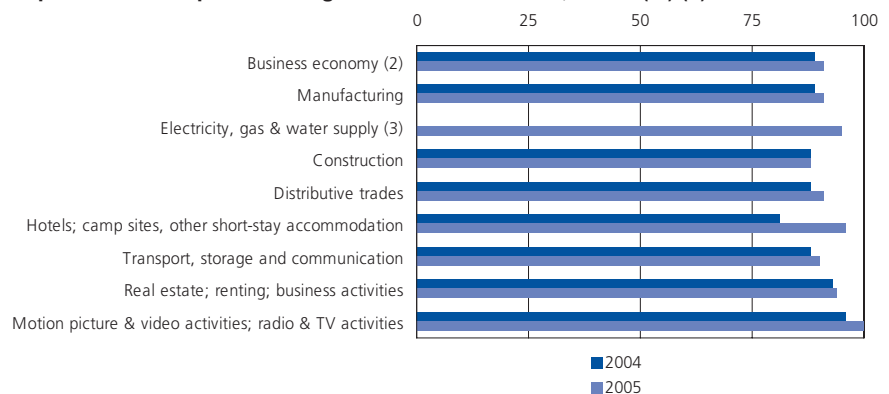
Telecommunication services (NACE Group 64.2) generated EUR 174.3 billion of value added in the EU-25 in 2003, accounting for a 3.6 % share of total value added in the non-financial business (NACE Sections C to I and K) economy, the third largest non-financial business economy activity at the NACE group level (based on available data). The 1.1 million persons employed in telecommunication services represented a significantly lower share of the non-financial business economy workforce, just 1.0 %.

The United Kingdom and Germany had the largest telecommunications sectors in the EU-25 in 2003, with 19.5 % and 18.1 % respectively of EU-25 value added and 21.2 % and 17.2 % respectively of EU-25 employment - see Table 21.11. However, the highest levels of specialisation ⁽¹³⁾ in telecommunications (relative to non-financial business economy value added) were found in several of the Member States that joined the EU in 2004, including the three Baltic Member States (Lithuania, 2002), Slovakia and Hungary, as well as Luxembourg and Portugal - in all of these Member States the contribution of value added from telecommunication services to the non-financial business economy value added total was more than 5 %. The lowest value added specialisation ratio was observed in Slovenia (2002) where telecommunication services value added represented 1.9 % of the non-financial business economy total.

⁽¹²⁾ NACE Sections D, F and G, Groups 55.1 and 55.2, Sections I and K and Groups 92.1 and 92.2, for enterprises with 10 or more persons employed.

⁽¹³⁾ Lithuania and Slovenia, 2002; Denmark, Greece, Ireland, Cyprus, Malta, the Netherlands, Poland and Sweden, not available.

Figure 21.8
Proportion of enterprises having access to the Internet, EU-25 (%) (1)



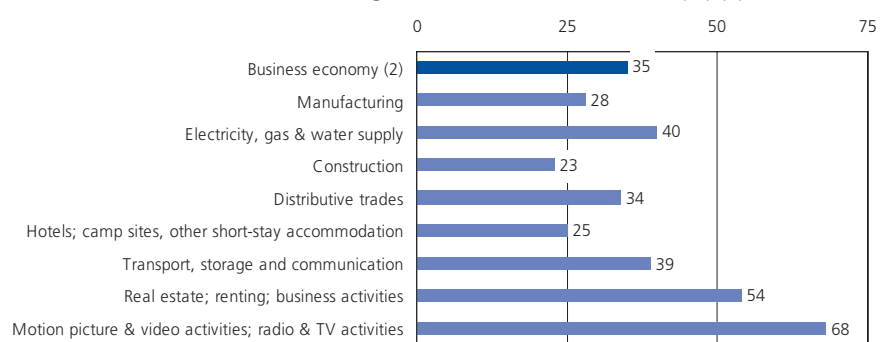
(1) Enterprises with 10 or more persons employed.

(2) Covering enterprises in NACE Sections D, F, G, I and K and NACE Groups 55.1, 55.2, 92.1 and 92.2.

(3) Not available for 2004.

Source: Eurostat (Information society statistics)

Figure 21.9
Use of the Internet in normal working routine, EU-25, start of 2005 (%) (1)



(1) Percentage of persons employed using a computer connected to the Internet in their normal work routine within enterprises with 10 or more persons employed.

(2) Covering enterprises in NACE Sections D, F, G, I and K and NACE Groups 55.1, 55.2, 92.1 and 92.2.

Source: Eurostat (Information society statistics)

Table 21.11
Telecommunications (NACE Group 64.2)

Value added and employment: ranking of the top 5 Member States, 2003 (1)

Rank	Highest value added (EUR million)	Share in EU-25 value added (%)	Highest number of persons employed (thousands)	Share in EU-25 employment (%)
1	United Kingdom (33 968.4)	19.5	United Kingdom (242.4)	21.2
2	Germany (31 478.1)	18.1	Germany (196.3)	17.2
3	France (23 485.5)	13.5	France (157.1)	13.7
4	Italy (22 086.5)	12.7	Italy (99.6)	8.7
5	Spain (15 228.1)	8.7	Spain (71.4)	6.2

(1) Slovenia, 2002; Denmark, Greece, Ireland, Malta, the Netherlands and Poland, not available.

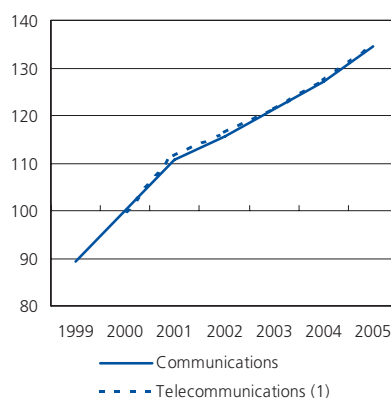
Source: Eurostat (SBS)

Annual short-term statistics are available for the index of turnover for telecommunication services for the years 2000 to 2004 - see Figure 21.10. As with post and courier activities (the other part of communications), EU-25 turnover growth was uninterrupted during this period; annual average growth between 2000 and 2005 was 6.1 %. Growth was particularly strong in 2001 (11.5 %) since when it ranged between 4.3 % and 5.6 % each year, with the rate of growth accelerating in 2004 and 2005.

COSTS, PRODUCTIVITY AND PROFITABILITY

The productivity and profitability of the EU-25's telecommunications sector in 2003, as measured by apparent labour productivity, wage adjusted labour productivity and the gross operating rate, was particularly high, relative to other activities within communications, publishing and printing, and also relative to the non-financial business economy (NACE Sections C to I and K) as a whole. Value added per person employed in the EU-25 was EUR 152 300, the wage adjusted labour productivity ratio was 302.1 % (indicating that apparent labour productivity was just over three times as high as average personnel costs), and the gross operating rate was 31.3 %. Of the non-financial business economy NACE groups for which data are available, telecommunications had the second highest level for each of these three indicators in 2003. Although relatively high, at EUR 50 400 per employee, average personnel costs in the EU-25 in 2003 were more moderate, only the tenth highest of the non-financial business economy NACE groups, but nevertheless the highest within non-financial services.

Figure 21.10
Telecommunications (NACE Group 64.2)
Evolution of turnover, EU-25 (2000=100)



(1) Series starts in 2000.
Source: Eurostat (STS)

Table 21.12

Telecommunications (NACE Group 64.2)

Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (1)	Personnel costs as a share of total operating costs (%) (1)	Apparent labour productivity (EUR thousand) (2)	Average personnel costs (EUR thousand) (2)	Wage adjusted labour productivity (%) (2)	Gross operating rate (%) (2)
EU-25	13.3	78.5	21.5	152.3	50.4	302.1	31.3
1	Cyprus (42.3)	Luxembourg (94.2)	Cyprus (59.0)	Luxembourg (647.2)	Belgium (65.7)	Luxembourg (1 054.8)	Cyprus (56.6)
2	Slovakia (33.0)	Estonia (86.0)	Belgium (24.4)	Italy (221.8)	Luxembourg (61.4)	Estonia (581.2)	Latvia (47.8)
3	Slovenia (32.5)	Lithuania (85.6)	France (23.6)	Spain (213.4)	Germany (60.4)	Latvia (498.9)	Czech Republic (43.2)
4	Latvia (31.0)	Finland (84.7)	Germany (23.3)	Portugal (181.6)	France (58.5)	Slovakia (473.8)	Slovakia (40.5)
5	Czech Republic (20.0)	Italy (83.6)	United Kingdom (22.9)	Belgium (166.4)	Sweden (57.4)	Italy (462.3)	Estonia (40.1)

(1) Slovenia, 2002; Denmark, Greece, Ireland, Malta, the Netherlands and Poland, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Slovenia, 2002; Denmark, Greece, Ireland, Malta, the Netherlands and Poland, not available.

Source: Eurostat (SBS)

21.3: AUDIO-VISUAL ACTIVITIES

This subchapter looks at several activities linked to audio-visual products. The film and video activity is covered by NACE Group 92.1, which includes cinematographic and audio-visual production (including films and TV fiction, advertising and documentaries) and production services (for example, special effects or dubbing), as well as distribution activities.

The radio and television activity consists of three major activities: the production of programmes, the compilation of schedules for those programmes, and their transmission to the final consumer. The first two are included in NACE Group 92.2 and form part of this subchapter, while the transmission of signals via hertzian relays, satellite or cable networks is covered by NACE Group 64.2, which concerns telecommunication services – see Subchapter 21.2.

Note that no European structural business statistics (SBS) are available for the film, video, radio and television activities (NACE Groups 92.1 and 92.2) and that the analysis of these activities presented below is based on data from alternative sources.

Audio-visual activities provide much of the content for the information society, particularly concerning entertainment products and providing information.

MOTION PICTURE AND VIDEO ACTIVITIES

In November 2005 Recommendation 2005/865/CE of the European Parliament and Council on film heritage and the competitiveness of related industrial activities was adopted, highlighting the need for the European film heritage to be methodically collected, catalogued, preserved and restored, in order to ensure that is passed down to future generations.

According to MEDIA Salles ⁽¹⁴⁾, France produced the most films among the Member States, with a total of 203 productions in 2004 (including co-productions), followed by Italy, Spain and the United Kingdom each with between 130 and 140 films. Germany (87 films) was the only other Member State ⁽¹⁵⁾ to produce more than 30 films in 2004 – see Table 21.13.

⁽¹⁴⁾ More information at: <http://www.mediasalles.it>.

⁽¹⁵⁾ Malta, not available.

Table 21.13

Main indicators of the cinema industry, 2004

	National film productions (units) (1)	Cinema screens (units) (2)	Total number of seats (thousands) (3)	Total number of admissions (millions) (4)	Total revenue from ticket sales (EUR million) (5)	Market share of US films (%) (6)
BE	17	515	115.2	24.1	142.3	77.9
CZ	21	675	:	12.0	36.3	:
DK	25	380	57.0	12.8	105.2	72.1
DE	87	4 870	864.3	156.7	892.9	72.1
EE	4	81	:	1.2	4.8	:
EL	25	450	:	11.0	73.6	:
ES	133	4 497	1 625.4	143.9	691.6	76.6
FR	203	5 314	1 074.8	195.2	1 136.4	53.2
IE	8	335	58.7	17.3	100.9	:
IT	138	3 610	:	115.8	658.1	61.9
CY	4	38	:	0.7	4.7	:
LV	3	78	:	1.7	5.0	:
LT	1	75	:	1.5	4.5	:
LU	14	24	4.6	1.4	8.9	71.7
HU	29	722	:	13.7	41.6	:
MT	:	43	:	1.0	:	:
NL	28	623	112.9	23.0	154.1	74.1
AT	17	558	101.6	19.4	124.7	:
PL	22	878	:	33.4	114.0	:
PT	15	594	124.5	18.8	76.1	75.7
SI	6	111	:	3.0	10.9	:
SK	2	281	:	2.9	6.8	:
FI	13	342	57.5	6.9	50.8	76.3
SE	27	1 179	167.6	16.6	141.2	69.5
UK	133	3 342	741.5	171.3	1 092.1	73.2
BG	7	80	:	3.1	6.4	:
HR	1	145	:	3.0	8.5	:
RO	21	183	:	4.0	6.3	:
TR	19	1 147	:	28.8	94.9	:

(1) Includes co-productions; Greece and Sweden, 2003; Ireland, Cyprus and Turkey, 2001.

(2) Greece, estimate; Italy, excluding screens active 60 or less days per year.

(3) Ireland, 2000.

(4) Greece, estimate; the Netherlands, excluding some small distributors.

(5) Greece, estimate; the Netherlands, excluding some small distributors; Romania, net box office.

(6) Italy, sample.

Source: European Cinema Yearbook, 2005 edition, copyright MEDIA Salles

Table 21.14

Evolution of the broadcast market in terms of net revenues, EU-25 (EUR million)

	1999	2000	2001	2002	2003
Broadcasters net revenues:	59 208	65 077	67 879	68 598	70 955
Public broadcasters (radio and television)	26 647	27 510	28 713	28 932	29 067
Private radio stations financed by advertising (estimated)	3 536	3 963	4 164	4 493	4 800
Private television financed by advertising	17 272	19 480	19 002	18 220	18 293
Home shopping	1 152	1 324	1 465	1 659	1 783
Pay-TV premium	3 157	3 343	3 642	3 698	3 332
TV packagers	5 154	6 725	7 646	8 222	10 275
Thematic channels	2 290	2 732	3 248	3 374	3 405

Source: Yearbook online premium service 2005, copyright European Audiovisual Observatory

EU-25 film distribution and projection activities enjoyed strong growth during the 1990s following the opening of a large number of multiplex sites. There were nearly 30 000 cinema screens in the EU-25 in 2004. The total number of admissions to cinemas in the EU-25 topped 1 billion in 2004, higher than in 2003 and comparable with its level in 2002, while EU-25 box office receipts were equal to EUR 5.7 billion in 2004. American productions dominated the European film marketplace, accounting for at least 60 % of ticket sales in all but one of the Member States with data available for 2004; the exception was France where the market share of films from the United States stood at 53.2 %.

TELEVISION AND RADIO

The so-called 'Television without frontiers' Directive adopted in 1989 aimed to create the conditions necessary for the free movement of television broadcasts within the EU. Among other matters, the directive ensures that events which are regarded by a Member State as being of major importance for society may not be broadcast in such a way that a substantial part of the population of that Member State is deprived of seeing them. Bearing in mind the development and application of digital technologies and other developments, in December 2005 the European Commission adopted a proposal⁽¹⁶⁾ for an 'Audiovisual media services' Directive, to update the television without frontiers Directive. This proposal covers all types of TV-like services, whether broadcast or not, and distinguishes broadcasting which pushes content to viewers, and on-demand services which the viewer pulls from a network.

⁽¹⁶⁾ COM(2005) 646.

For scheduled broadcasting, the proposal aims to make existing rules more flexible, and encourage self- and co-regulation. The proposed directive would also support new forms of advertising, and in particular would provide a legal framework for product placements: with some exceptions, clearly identified product placement would be permitted, providing an additional revenue stream.

In 2003, broadcasters' net revenues (excluding retail and similar non-broadcast revenue) amounted to EUR 71.0 billion in the EU-25, of which 41.0 % came from public broadcasters (of both radio and television), according to the EAO⁽¹⁷⁾ – see Table 21.14.

⁽¹⁷⁾ EAO (European Audiovisual Observatory), more information at: <http://www.obs.coe.int>.

21.4: PUBLISHING, PRINTING AND REPRODUCTION OF RECORDED MEDIA

Publishing can be defined as the act of producing and issuing informative material. Printing involves placing the publishing material on paper or other materials. These activities are covered by NACE Group 22.1 (for publishing) and NACE Group 22.2 (for printing and service activities related to printing). Note that publishing activities include not only the publishing of printed matter, but also the publishing of music.

As well as printing and publishing, this subchapter also includes the reproduction of recorded media (NACE Group 22.3), including reproduction services for sound and video recording (NACE Classes 22.31 and 22.32) and reproduction services for software (NACE Class 22.33). These activities were included in other subchapters in previous editions of this publication.

Publishing and printing comprises all the stages necessary to transform a piece of creative writing, music or information into a product available for distribution to the public. The explosion of information and communications technologies (ICTs) has created a wide range of opportunities for this sector and different media to work with. The Internet was initially seen by many as a direct competitor to printed matter, but enterprises that traditionally published printed and other off-line media (such as CDs and DVDs) have often diversified into on-line media too, creating new products for new markets. However, there is competition between printed and on-line media for readers and hence for advertising revenue. Digital rights management is a major issue for this sector, particularly for sound and video recordings, whether on-line or off-line.

FOCUS ON MUSIC RECORDING SALES

Music recording is dominated by a small number of multinational distribution companies, often referred to as the 'majors', including Universal, Sony/BMG⁽¹⁸⁾, EMI and Warner. According to IFPI⁽¹⁹⁾, some 545.2 million sound recordings were sold on music CDs in the EU-15⁽²⁰⁾ in 2005, 82.1 million singles, and 46.8 million music DVDs. The United Kingdom was the largest national market in terms of CDs and also singles, while France and Germany had the largest markets for music DVDs (see Table 21.15).

⁽¹⁸⁾ In July 2006 the Court of First Instance of the European Communities annulled the 2004 decision by the European Commission to authorise the creation of Sony BMG.

⁽¹⁹⁾ IFPI (the International Federation of the Phonographic Industries), more information at: <http://www.ifpi.org>.

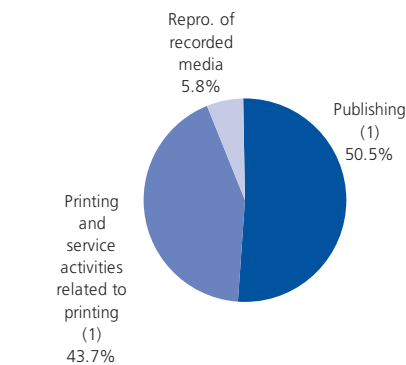
⁽²⁰⁾ Excluding Luxembourg.

Table 21.15
Sound recording sales, 2005 (million units)

	Singles	CDs	DVDs
BE	2.7	14.0	1.0
CZ	0.0	3.2	0.2
DK	0.2	9.6	0.3
DE	17.8	114.7	9.6
EE	:	:	:
EL	0.3	7.0	0.3
ES	1.7	31.1	3.2
FR	25.4	96.2	14.7
IE	1.2	7.7	0.6
IT	1.0	31.6	1.8
CY	:	:	:
LV	:	:	:
LT	:	:	:
LU	:	:	:
HU	0.0	4.2	0.2
MT	:	:	:
NL	2.0	20.4	4.6
AT	1.2	10.5	0.6
PL	0.0	9.0	0.4
PT	0.2	7.0	0.8
SI	:	:	:
SK	:	:	:
FI	0.3	7.4	0.4
SE	1.3	15.4	0.6
UK	26.8	172.6	8.3
IS	:	:	:
NO	0.5	11.0	0.3
CH	1.4	15.1	0.4

Source: IFPI, <http://www.ifpi.org>

Figure 21.11
Publishing, printing, reproduction of recorded media (NACE Division 22)
Breakdown of sectoral value added, EU-25, 2003 (%)

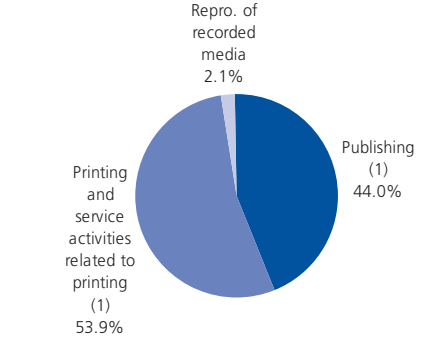


(1) Rounded estimate based on non-confidential data.
Source: Eurostat (SBS)

STRUCTURAL PROFILE

The total value added generated in the EU-25's publishing, printing and reproduction of recorded media sector (NACE Division 22) reached EUR 90 billion in 2003, some 1.9 % of non-financial business (NACE Sections C to I and K) economy total. There were 1.8 million persons employed in these activities in the EU-25, which represented a slightly lower share of the non-financial business economy workforce (1.6 %).

Figure 21.12
Publishing, printing, reproduction of recorded media (NACE Division 22)
Breakdown of sectoral employment, EU-25, 2003 (%)



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

Wealth creation in publishing, printing and reproduction of recorded media was dominated by two subsectors, as publishing (NACE Group 22.1) contributed 50.5 % of the EU-25's value added in this sector in 2003, while printing and service activities related to printing (NACE Group 22.2) contributed 43.7 %; the reproduction of recorded media (NACE Group 22.3) generated just 5.8 % of sectoral value added. In employment terms, the printing and service activities related to printing subsector was more labour-intensive, accounting for 53.9 % of the publishing, printing and reproduction of recorded media sector's workforce, while the contribution of the reproduction of recorded media was lower still, at 2.1 %.

Table 21.16
Publishing, printing, reproduction of recorded media (NACE Division 22)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (2)	Share in EU-25 employment (%) (2)	Highest share of national non-financial business economy value added (%) (3)	Highest share of national non-financial business economy employment (%) (4)
1	United Kingdom (21 829.4)	24.3	Germany (377.0)	20.7	United Kingdom (2.5)	Denmark (2.8)
2	Germany (18 128.3)	20.1	United Kingdom (357.7)	19.7	Finland (2.3)	Finland (2.4)
3	France (11 000.8)	12.2	France (204.6)	11.2	Malta (2.3)	Sweden (2.0)
4	Italy (8 503.5)	9.4	Italy (169.7)	9.3	Netherlands (2.2)	United Kingdom (2.0)
5	Spain (6 449.8)	7.2	Spain (146.7)	8.1	Latvia (2.0)	Germany (1.8)

(1) Malta and Sweden, 2002; Greece and Luxembourg, not available.

(2) Sweden, provisional; Malta, 2002; Greece and Luxembourg, not available.

(3) Malta, Lithuania and Sweden, 2002; Greece, Ireland, Cyprus and Luxembourg, not available.

(4) Sweden, provisional; Malta and Lithuania, 2002; Greece, Ireland, Cyprus and Luxembourg, not available.

Source: Eurostat (SBS)

A large part of the EU-25's value added in the publishing, printing and reproduction of recorded media sector in 2003 was concentrated in the United Kingdom (24.3 % of the EU-25 total) and Germany (20.1 %). Publishing, printing and reproduction of recorded media activities in the United Kingdom generated 2.5 % of non-financial business economy value added, 2.3 % in Finland and Malta (2002), and 2.2 % in the Netherlands ⁽²¹⁾. The lowest contribution of publishing, printing and reproduction of recorded media activities to national non-financial business economy value added was 1.3 % in both Slovakia and the Czech Republic.

There was no clear pattern as to the importance of one or other of the subsectors within the Member States. In 2003, publishing accounted for more than half of total value added in 12 of the 23 Member States for which data are available ⁽²²⁾, reaching a high of 62.1 % of the value added for publishing, printing and reproduction of recorded media in Finland. Printing and service activities related to printing generated more than half of sectoral value added in 10 of the remaining 11 Member States and was particularly dominant in Malta (2002), Cyprus and Belgium, where it generated more than 60 % of the sector's value added. Only in Ireland was the reproduction of recorded media the most important subsector, where its contribution to Irish value added in publishing, printing and reproduction of recorded media was 81.2 %.

Annual short-term statistics show that between 1996 and 2000 the EU-25 production index for publishing, printing and reproduction of recorded media grew at an average rate of 3.5 % per annum. The strongest growth over this period was within the reproduction of recorded media which averaged growth of 15.3 % per annum - see Figure 21.13. After 2000, publishing, printing and reproduction of recorded media output contracted for three years, despite strong growth in 2002 and 2003 for the reproduction of recorded media. For the first time since 2000 all three parts of the activity recorded annual growth in 2004, 0.9 %

⁽²¹⁾ Publishing, printing and reproduction of recorded media activities accounted for 10.7 % of manufacturing (NACE Section D) value added in the United Kingdom, compared with 10.0 % for Ireland (the second highest ratio); no data available for the importance of this sector in the Irish non-financial business economy.

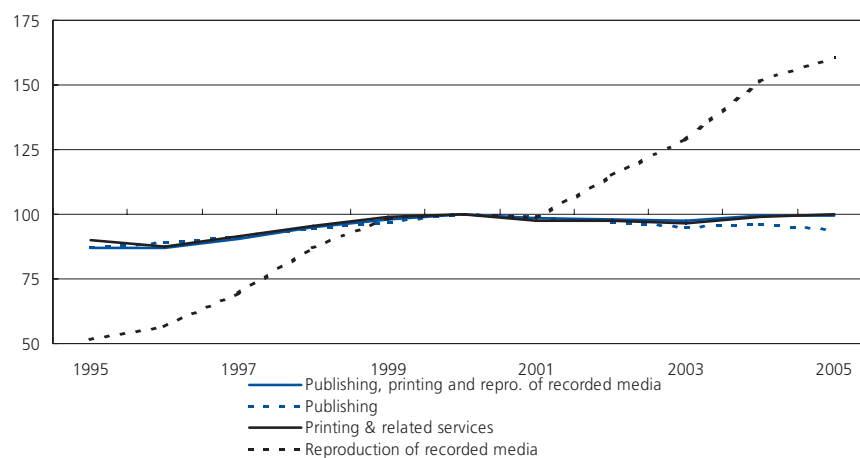
⁽²²⁾ Malta and Sweden, 2002; Greece and Luxembourg, not available.

Table 21.17
Production value of selected printed matter and recorded media products
(CPA Division 22), EU-25, 2004 (EUR million)

	Prodcom code	
Children's picture; drawing or colouring books published by you; or printed and published by you	22.11.21.80	369
Books, brochures, leaflets and the like; electronic	22.11.22.00	453
Dictionaries and encyclopaedias; and serial instalments thereof published by you; or printed and published by you	22.11.31.00	1 878
Printing of newspapers; journals and periodicals; appearing at least four times a week	22.21.10.00	3 355
New stamps; stamp-impressed paper; cheque forms; banknotes, etc	22.22.11.00	1 692
Printing of note books, letter pads, memorandum pads of paper/paperboard	22.22.20.15	462
Printing of binders, folders and file covers of paper/paperboard excl. book covers	22.22.20.50	833
Printing of newspapers, journals and periodicals, appearing <4 times a week incl. newspaper supplements excl. inserts	22.22.32.20	8 999
Binding/finishing incl. finishing of printed paper/cardboard excl. finishing of books, brochures, magazines, catalogues, samples, advertising literature	22.23.10.50	530
Composition; plate-making services; typesetting and phototypesetting	22.24.10.00	1 440

Source: Eurostat (PRODCOM)

Figure 21.13
Publishing, printing, reproduction of recorded media (NACE Division 22)
Index of production, EU-25 (2000=100)



Source: Eurostat (STS)

for publishing, 2.6 % for printing and service activities related to printing, and 17.6 % for the reproduction of recorded media. For the publishing activity this period of growth was short lived as output contracted by 1.9 % in 2005, and growth slowed in the other two activities, down to 0.6 % for printing and service activities related to printing, and 5.9 % for the reproduction of recorded media.

Table 21.18

Publishing, printing, reproduction of recorded media (NACE Division 22)**Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003**

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	3.9	71.6	28.4	49.0	35.0	142.0	14.0
1	Malta (14.3)	Ireland (91.4)	Cyprus (37.9)	Ireland (220.4)	Belgium (45.7)	Ireland (526.3)	Malta (28.6)
2	Cyprus (12.9)	Slovakia (83.7)	Denmark (35.5)	Austria (68.4)	Austria (45.6)	Latvia (217.1)	Ireland (27.1)
3	Latvia (9.2)	Hungary (83.1)	United Kingdom (34.2)	Netherlands (66.9)	France (44.7)	Malta (203.6)	Latvia (24.0)
4	Slovenia (9.0)	Czech Republic (80.8)	Germany (32.3)	United Kingdom (61.0)	Netherlands (43.2)	Slovakia (195.5)	United Kingdom (19.4)
5	Estonia (8.4)	Poland (80.6)	Malta (32.3)	Belgium (60.4)	Ireland (41.9)	Lithuania (174.5)	Poland (17.7)

(1) Malta and Sweden, 2002; Belgium, Greece and Luxembourg, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Malta and Sweden, 2002; Greece and Luxembourg, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Malta and Sweden, 2002; Greece and Luxembourg, not available; EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

Table 21.19

Printed matter and printing services (CPA Groups 22.1 and 22.2)**External trade, EU-25, 2005**

	Extra-EU exports (EUR million)	Share of EU industrial exports (%)	Extra-EU imports (EUR million)	Share of EU industrial imports (%)	Trade balance (EUR million)	Cover ratio (%)
Printed matter and printing services	6 142	0.6	3 299	0.3	2 844	186.2
Books, newspapers and other printed matter and recorded media	4 606	0.5	2 400	0.2	2 205	191.9
Printing services and services related to printing	1 537	0.2	899	0.1	638	171.0

Source: Eurostat (Comext)

COSTS, PRODUCTIVITY AND PROFITABILITY

Apparent labour productivity for the EU-25's publishing, printing and reproduction of recorded media sector stood at EUR 49 000 per person employed in 2003. There was a significant difference between the level of productivity recorded for each of the subsectors, as each person employed generated an average of EUR 57 000 of value added within publishing, EUR 39 700 within printing and service activities related to printing, and EUR 132 600 within the reproduction of recorded media. The ratio for the reproduction of recorded media was the third highest level among the non-financial business economy NACE groups in 2003, after fuel processing (NACE Group 23.2) and telecommunications (NACE Group 64.2 - see Subchapter 21.2).

In contrast, average personnel costs per employee were quite similar, ranging from EUR 30 600 in printing and service activities related to printing to EUR 39 200 for publishing, with reproduction of recorded media between these two at EUR 35 300 per employee. The wage adjusted labour productivity ratio for the reproduction of recorded media was very high, at 375.7 % the highest of all non-financial business economy NACE groups. The publishing subsector and the printing and service activities related to

printing subsector recorded wage adjusted labour productivity rates of 145 % and 130 % respectively. In a similar manner, the gross operating rate was high for the reproduction of recorded media subsector (25.6 %), while for the other two subsectors it was about half this rate in 2003, but nevertheless higher than the 2002 average for the non-financial business economy.

EXTERNAL TRADE

The EU-25 was a net exporter of printed goods, with a trade surplus equal to EUR 2.8 billion for printed matter and printing services (CPA Groups 22.1 and 22.2) in 2005, of which 77.6 % of the surplus could be attributed to books, newspapers and other printed matter and recorded media (CPA Group 22.1). The trade surplus for these goods was 11.4 % higher overall in 2005 than five years earlier. Exports were valued at EUR 6.1 billion in 2005, and imports at EUR 3.3 billion - see Table 21.19.

Among the Member States, Germany was the largest exporter of printed matter and printing services, with exports valued at EUR 4.8 billion (intra and extra-EU trade combined), followed by the United Kingdom (EUR 3.8 billion). The United Kingdom was also the largest importer, with imports of printed matter and printing services valued at EUR 2.9 billion in 2005, followed by France (EUR 2.3 million) and

Germany (EUR 2.1 billion). As a result, the largest trade surplus for printed matter and printing services in 2005 was recorded in Germany (EUR 2.6 billion), followed by the United Kingdom (EUR 0.9 billion). In 2005 Austria and France registered the largest trade deficits for printed matter and printing services among the Member States, at EUR 319.9 million, and EUR 279.9 million respectively.

Switzerland was the main EU-25 export market for published and printed goods, its 20.2 % share of EU-25 exports well ahead of the United States (15.5 %). In terms of imports into the EU-25 the situation was different, with the United States providing nearly one third (32.2 %) of all imports, followed by China (21.5 %) and Switzerland (11.0 %).

Table 21.20

Publishing, printing, reproduction of recorded media (NACE Division 22)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million) (2)	234 000	6 242	1 895	4 411	47 047	211	:	16 189	33 950	11 620	26 018	132	219	255	:	1 941	129
Production (EUR million)	:	6 042	1 871	4 439	46 366	196	:	16 068	32 573	10 742	25 919	134	216	250	:	1 562	128
Value added at factor cost (EUR million) (2)	90 000	2 075	624	1 870	18 128	78	:	6 450	11 001	3 871	8 504	63	97	91	:	501	66
Gross operating surplus (EUR million) (2)	32 000	709	309	434	4 521	25	:	2 592	2 070	3 144	3 610	19	53	41	:	215	37
Purchases of goods and services (EUR million)	:	4 162	1 330	2 605	28 516	133	:	10 138	23 171	7 698	17 796	72	126	168	:	1 411	61
Gross investment in tangible goods (EUR million) (3)	:	277	81	290	1 360	16	:	639	902	99	937	15	16	18	:	96	13
Number of persons employed (thousands) (2)	1 820	34	44	46	377	6	:	147	205	18	170	2	10	11	:	40	2
Personnel costs (EUR million) (2)	58 000	1 366	315	1 436	13 608	52	:	3 858	8 931	727	4 894	44	44	51	:	286	29
App. labour productivity (EUR thous./pers. emp.) (2)	49.0	60.4	14.2	40.5	48.1	13.6	:	44.0	53.8	220.4	50.1	26.8	9.9	8.7	:	12.6	32.0
Average personnel costs (EUR thous./employee) (2)	35.0	45.7	9.5	31.7	37.6	9.4	:	29.0	44.7	41.9	36.9	19.4	4.6	5.0	:	7.7	15.7
Wage adjusted labour productivity (%) (2)	142.0	132.1	149.3	127.5	127.8	145.2	:	151.5	120.4	526.3	135.7	138.3	217.1	174.5	:	162.8	203.6
Gross operating rate (%) (2)	14.0	11.4	16.3	9.8	9.6	11.9	:	16.0	6.1	27.1	13.9	14.6	24.0	15.9	:	11.1	28.6
Investment per person employed (EUR thousand) (3)	:	8.2	1.9	6.3	3.6	2.8	:	4.4	4.4	5.6	5.5	6.3	1.6	1.7	:	2.4	6.3
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million) (4)	12 223	4 503	4 032	2 746	686	502	4 101	7 003	46 641	265	:	670	:	:	:	4 245	:
Production (EUR million) (4)	12 115	4 428	3 987	2 715	625	472	4 150	7 037	45 719	257	:	607	:	:	:	4 259	:
Value added at factor cost (EUR million) (5)	4 978	1 835	1 366	1 093	237	140	1 615	2 310	21 829	70	:	211	:	:	:	1 912	:
Gross operating surplus (EUR million) (5)	1 826	676	715	332	71	69	508	380	9 049	34	:	129	:	:	:	541	:
Purchases of goods and services (EUR million) (4)	7 192	2 724	2 706	1 701	443	364	2 574	4 707	24 584	201	:	476	:	:	:	2 432	:
Gross investment in tangible goods (EUR million) (4)	342	264	215	187	55	32	246	238	1 630	28	:	78	:	:	:	121	:
Number of persons employed (thousands) (4)	74	27	96	41	10	10	30	52	358	14	:	32	:	:	:	30	:
Personnel costs (EUR million) (5)	3 152	1 160	651	761	166	71	1 117	1 930	12 781	36	:	82	:	:	:	1 371	:
App. labour productivity (EUR thous./pers. emp.) (5)	66.9	68.4	14.3	26.7	24.0	14.2	54.3	42.9	61.0	4.9	:	6.6	:	:	:	64.6	:
Average personnel costs (EUR thous./employee) (5)	43.2	45.6	9.0	19.3	18.2	7.3	38.2	39.5	38.2	2.9	:	2.7	:	:	:	46.5	:
Wage adjusted labour productivity (%) (5)	155.0	150.1	158.2	138.1	132.0	195.5	142.1	108.6	159.8	171.7	:	247.2	:	:	:	139.1	:
Gross operating rate (%) (5)	14.9	15.0	17.7	12.1	10.4	13.7	12.4	5.5	19.4	12.8	:	19.2	:	:	:	12.7	:
Investment per person employed (EUR thousand) (4)	4.6	9.8	2.2	4.6	5.5	3.2	8.3	4.6	4.6	2.0	:	2.4	:	:	:	4.1	:

(1) Malta, 2002. (2) EU-25, rounded estimate based on non-confidential data. (3) Belgium, 2002. (4) Sweden, provisional. (5) Sweden, 2002.
Source: Eurostat (SBS)

Table 20.21

Post and telecommunications (NACE Division 64)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million)	467 723	14 525	4 367	7 634	87 671	539	:	34 050	68 819	9 762	55 995	430	623	782	2 144	4 738	243
Production (EUR million)	:	14 492	4 285	7 633	76 659	533	:	27 486	68 972	6 047	56 104	430	585	746	1 961	3 447	246
Value added at factor cost (EUR million)	231 786	7 334	2 465	3 767	44 701	267	:	17 400	35 101	4 890	28 234	353	376	344	882	2 190	190
Gross operating surplus (EUR million)	127 055	3 558	1 696	1 618	23 229	200	:	11 959	15 121	3 604	18 424	237	283	243	659	1 333	134
Purchases of goods and services (EUR million)	:	7 660	1 993	4 341	48 510	268	:	16 570	33 211	4 856	27 434	77	249	446	1 224	2 540	53
Gross investment in tangible goods (EUR million)	:	1 814	475	747	5 142	53	:	3 038	4 562	364	3 270	72	95	90	124	524	65
Number of persons employed (thousands)	2 988	84	74	53	611	8	:	178	462	32	261	4	13	16	4	66	3
Personnel costs (EUR million)	104 731	3 777	769	2 149	21 472	68	:	5 441	19 981	1 286	9 810	116	93	101	223	857	56
App. labour productivity (EUR thous./pers. emp.)	77.6	87.2	33.5	70.7	73.2	34.3	:	97.9	75.9	154.4	108.3	96.6	28.4	21.8	214.3	33.4	60.3
Average personnel costs (EUR thous./employee)	35.7	46.7	11.2	40.8	35.9	8.7	:	31.8	43.3	42.1	38.1	32.0	7.0	6.4	54.5	13.4	17.9
Wage adjusted labour productivity (%)	217.4	186.7	297.8	173.1	203.8	393.7	:	308.3	175.4	366.4	284.6	302.3	405.1	338.1	392.9	248.7	337.5
Gross operating rate (%)	27.2	24.5	38.8	21.2	26.5	37.1	:	35.1	22.0	36.9	32.9	55.0	45.5	31.1	30.8	28.1	55.2
Investment per person employed (EUR thousand)	:	21.6	6.4	14.0	8.4	6.8	:	17.1	9.9	11.5	12.5	19.8	7.2	5.7	30.2	8.0	20.7
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million)	23 905	8 986	9 432	7 561	1 117	1 351	8 010	12 624	96 969	1 358	:	2 448	:	:	:	8 672	:
Production (EUR million)	23 407	6 356	8 993	7 377	1 017	1 243	7 480	12 629	91 311	1 309	:	2 357	:	:	:	8 628	:
Value added at factor cost (EUR million)	12 329	4 566	5 247	3 606	551	723	2 820	5 198	44 563	787	:	1 322	:	:	:	3 687	:
Gross operating surplus (EUR million)	8 073	2 526	3 441	2 351	298	503	1 421	1 925	22 079	589	:	829	:	:	:	1 853	:
Purchases of goods and services (EUR million)	11 666	4 681	4 252	4 153	557	625	5 391	7 605	52 957	605	:	1 125	:	:	:	4 998	:
Gross investment in tangible goods (EUR million)	:	904	1 212	752	202	238	1 110	1 328	9 849	337	:	508	:	:	:	632	:
Number of persons employed (thousands)	117	54	171	35	12	30	41	75	543	53	:	89	:	:	:	38	:
Personnel costs (EUR million)	4 256	2 040	1 806	1 255	253	220	1 399	3 273	22 484	198	:	494	:	:	:	1 834	:
App. labour productivity (EUR thous./pers. emp.)	105.5	84.7	30.8	104.5	47.2	23.8	69.0	69.4	82.1	15.0	:	14.8	:	:	:	97.6	:
Average personnel costs (EUR thous./employee)	35.5	38.1	11.1	36.4	22.5	7.3	34.3	44.0	42.3	3.9	:	5.6	:	:	:	49.5	:
Wage adjusted labour productivity (%)	296.9	222.4	277.5	286.7	210.3	328.2	201.0	157.7	194.4	385.2	:	263.3	:	:	:	197.0	:
Gross operating rate (%)	33.8	28.1	36.5	31.1	26.7	37.2	17.7	15.2	22.8	43.4	:	33.8	:	:	:	21.4	:
Investment per person employed (EUR thousand)	:	16.8	7.1	21.8	17.3	7.9	27.2	17.7	18.2	6.4	:	5.7	:	:	:	16.7	:

(1) Malta, 2002.

Source: Eurostat (SBS)

Business services



Services are an important and growing area of the EU economy and as such they have in recent years attracted increasing political and economic interest, as a source of growth, particularly in employment terms. This interest has to some degree been focused within the area of business services, where growth has been rapid due to the outsourcing phenomenon that has seen many enterprises use service providers for non-core professional activities (such as the development of software, accounting, or legal services) or operational activities (such as industrial cleaning and security services). Business services enterprises enable their clients to focus on their core business activities and reduce the need to occupy their own personnel on ancillary or supporting functions.

The objective of Eurostat's development project on the demand for services was to collect information on the functioning of the internal market for services, allowing a more profound understanding of the true extent of the use of services in the EU economy. It provides information on service providers, types of service purchased, the location of the main service provider, barriers to purchasing services, the level of expectations for future purchases, as well as information on service related investments in intangibles (such as tradable rights, ICT, R&D, marketing and sales). Overall, the most common service that was purchased (on the basis of the value of purchases of services in monetary terms), for the nine Member States for which data are available - see Figure 22.1 - was transport, logistics and postal services, accounting for 25.3 % of the total purchases.

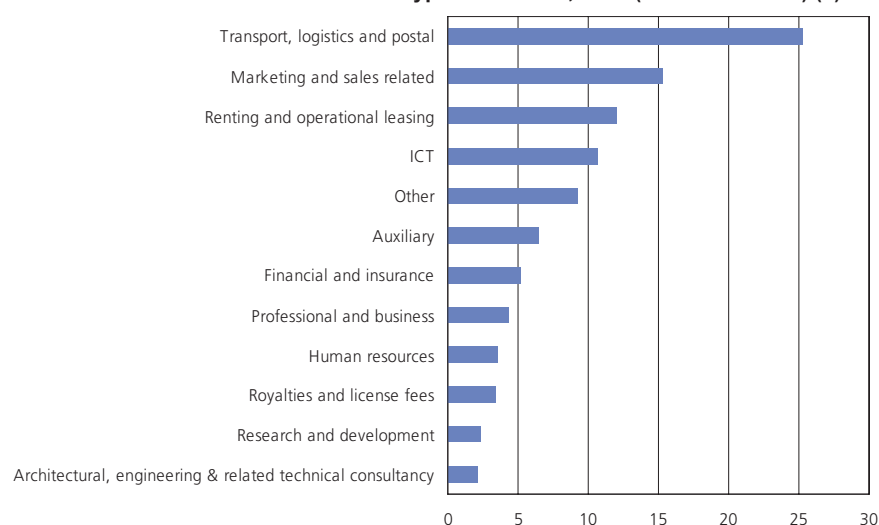
In this chapter, the term 'business services' is used to refer to the aggregate of two NACE divisions: computer and related activities (NACE Division 72, as covered by Subchapter 22.1) and other business activities (NACE Division 74, the components of which are covered in Subchapters 22.2 to 22.6). This is a change from previous editions of this publication where computer and related activities was in a different chapter, and the business services chapter included renting and leasing, and research and development activities, both of which have been separated into a new chapter, Chapter 23, along with real estate services. As such, Chapters 22 and 23 now cover the whole of NACE Section K.

NACE

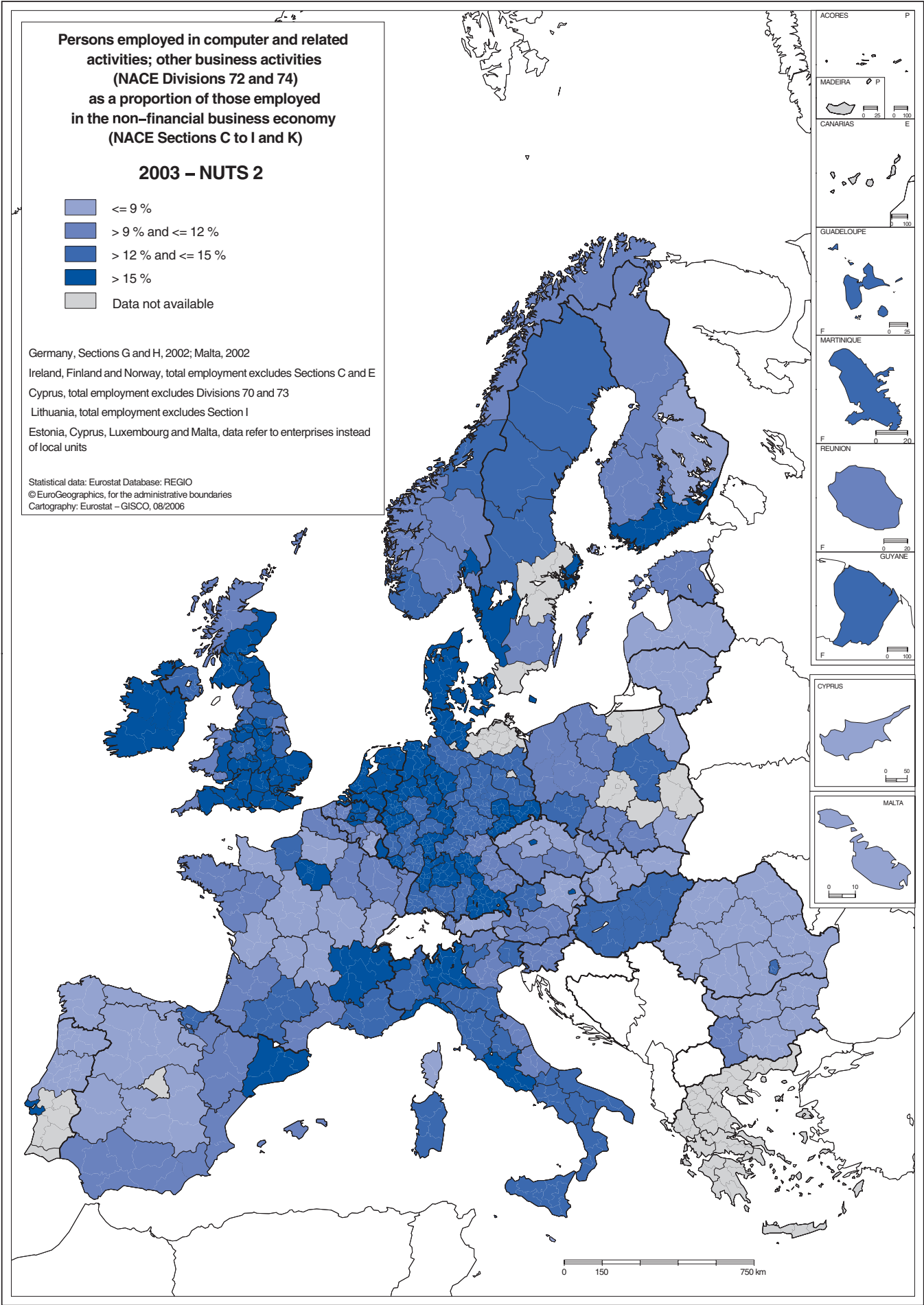
72: Computer and related activities;
 72.1: hardware consultancy;
 72.2: software consultancy and supply;
 72.3: data processing;
 72.4: database activities;
 72.5: maintenance and repair of office, accounting and computing machinery;
 72.6: other computer related activities;
 74: other business activities;
 74.1: legal, accounting, book-keeping and auditing activities; tax consultancy; market research and public opinion polling; business and management consultancy; holdings;
 74.2: architectural and engineering activities and related technical consultancy;
 74.3: technical testing and analysis;
 74.4: advertising;
 74.5: labour recruitment and provision of personnel;
 74.6: investigation and security activities;
 74.7: industrial cleaning;
 74.8: miscellaneous business activities n.e.c.

Figure 22.1

Breakdown of the demand for selected types of service, 2003 (% share of total) (1)



(1) Simple average for Denmark, Germany, Greece, Latvia, Lithuania, Poland, Slovenia, Finland and Sweden.
 Source: Eurostat (SBS)



Box 22.1: Internal market in services

At the beginning of 2004, the European Commission proposed a directive to create a real internal market in services: following the vote at first reading in the European Parliament and discussions in the Council this proposal was amended by the European Commission in April 2006 ⁽¹⁾. The objective of the proposal is to achieve a genuine internal market in services by removing legal and administrative barriers to the development of service activities between Member States, facilitating the provision and use of cross-border services in the EU. At the time of writing, it is expected that this Directive will be adopted in the near future.

The proposal requires Member States to cut administrative burdens that can currently prevent enterprises from offering their services across borders or from opening premises in other Member States. In line with the European Parliament's amendments, the European Commission's amended proposal does not affect labour law or deal with the posting of workers. At the time of writing the proposal excludes:

- activities that are already covered by sector specific legislation (such as transport, telecommunications and financial services);
- activities connected with the exercise of official authority (including part of the work of notaries) and temporary work agencies and security services (covered in this Chapter, see Subchapters 22.5 and 22.6);
- healthcare and social services (for example, social housing, childcare and support of families and persons in need);
- some entertainment activities (for example, gambling (lotteries and betting) and audiovisual services).

As such, the scope of the proposed directive remains very wide, covering the following activities in part or full:

- selected services of general economic interest, such as water supply and waste treatment (covered in Chapter 14);
- construction (covered in Chapter 15);
- distributive trades (covered in Chapters 16 to 18);
- hotels and restaurants (covered in Chapter 19);
- travel agencies (covered in Subchapter 20.6);
- postal services (covered in Subchapter 21.1);
- business services, such as computer services, legal, accounting and management services, architectural and technical testing services, advertising, labour recruitment (covered in this chapter);
- real estate, renting and R&D (covered in Chapter 23);
- other entertainment activities (such as leisure services, sports centres and amusement parks) and other activities, for example, the organisation of trade fairs (not covered in this publication).

⁽¹⁾ COM(2006) 160.

Table 22.1

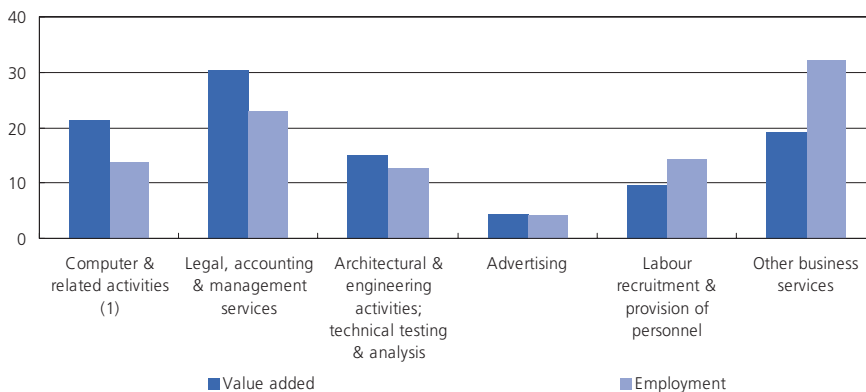
Business services (NACE Divisions 72 and 74)
Structural profile, EU-25, 2003

	Value added (EUR million)	Share of non-financial services value added (%)	Number of persons employed (thousands)	Share of non-financial services employment (%)
Business services (1)	703 000	26.5	18 100	26.2
Computer and related activities (1)	150 000	5.7	2 490	3.6
Other business activities	552 721	20.9	15 633	22.7
Legal, accounting & management services	213 244	8.0	4 146	6.0
Architectural & engineering activities; tech. testing & analysis	105 323	4.0	2 304	3.3
Advertising	31 996	1.2	758	1.1
Labour recruitment and provision of personnel	67 785	2.6	2 595	3.8
Other business services	134 373	5.1	5 829	8.4
Investigation and security activities	20 875	0.8	995	1.4
Industrial cleaning	41 528	1.6	2 774	4.0
Miscellaneous business activities	71 970	2.7	2 060	3.0

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

Source: Eurostat (SBS)

Figure 22.2

Business services (NACE Divisions 72 and 74)**Breakdown of business services employment and value added, EU-25, 2003 (%)**

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

Source: Eurostat (SBS)

Table 22.2

Business services (NACE Divisions 72 and 74)**Value added and employment: ranking of the top 5 Member States, 2003**

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	United Kingdom (191 869.4)	27.3	United Kingdom (3 697.0)	20.4	United Kingdom (34.2)	Luxembourg (35.9)
2	Germany (137 029.3)	19.5	Germany (3 249.1)	18.0	France (27.1)	Netherlands (31.5)
3	France (107 865.2)	15.3	France (2 363.3)	13.1	Sweden (26.6)	Sweden (30.6)
4	Italy (66 575.1)	9.5	Italy (2 079.2)	11.5	Luxembourg (26.1)	United Kingdom (28.9)
5	Spain (45 066.0)	6.4	Spain (1 797.5)	9.9	Netherlands (25.6)	Germany (28.7)

(1) Malta, 2002; Greece, not available.

(2) Lithuania and Malta, 2002; Greece and Cyprus, not available.

Source: Eurostat (SBS)

STRUCTURAL PROFILE

Value added generated in 2003 by the EU-25's business services (NACE Divisions 72 and 74) sector was EUR 703 billion and there were 18.1 million persons employed in this sector. As such, the business services sector accounted for more than one quarter of both value added (26.5 %) and employment (26.2 %) in the non-financial services (NACE Sections G to I and K) sector.

Computer and related activities (NACE Division 72, see Subchapter 22.1) accounted for 21.3 % of sectoral value added and the remainder was generated by the other business activities (NACE Division 74), as presented in Subchapters 22.2 to 22.6. Of these, the largest was legal, accounting and management services (NACE Group 74.1) which alone was responsible for 30.3 % of all business services value added - see Subchapter 22.2. Approximately half this size was the activity of architectural and engineering activities and technical testing (NACE Groups 74.2 and 74.3 - see Subchapter 22.3) which contributed 15.0 % of business services value added. Other business services (NACE Groups 74.6 to 74.8),

presented in Subchapter 22.6, had a combined contribution to business services value added of 19.1 %. The two remaining subsectors, advertising (NACE Group 74.4 - see Subchapter 22.4) and labour recruitment and provision of personnel (NACE Group 74.5 - see Subchapter 22.5), had shares of 4.6 % and 9.6 % respectively. In employment terms, the importance of other business services (NACE Groups 74.6 to 74.8) and labour recruitment and provision of personnel (NACE Group 74.5) was much greater, as can be seen in Figure 22.2.

The United Kingdom, with EUR 191.9 billion of value added, accounted for the largest share (27.3 %) of the EU-25's business services sector in 2003. Germany (EUR 137.0 billion) and France (EUR 107.9 billion) were the next largest contributors to the wealth generated in this sector. In terms of its contribution to non-financial services (NACE Sections G to I and K) value added, business services accounted for a 34.2 % share in the United Kingdom, far ahead of the next most specialised Member States - see Tables 22.2 and 22.3. In most of the other Member

States ⁽²⁾, business services contributed at least 15 % of non-financial services value added, although Malta (2002) and the Baltic Member States (Lithuania 2002) reported shares below this level.

The regional specialisation of these activities is shown in the map on page 376 which is based on the non-financial business economy (NACE Sections C to I and K) employment share of this sector. The region with the highest specialisation in business services is Inner London with nearly two fifths (39.8 %) of non-financial business economy employment in this sector. As well as the United Kingdom, several other countries had many regions specialised in these services, notably the Benelux countries and Germany. In a number of countries one region was particularly specialised in these services, typically around capital cities: for example in Praha (Czech Republic), Île de France (France), Lazio (Italy), Wien (Austria), and Stockholm (Sweden).

⁽²⁾ Lithuania and Malta, 2002; Greece and Cyprus, not available.

Table 22.3

Business services (NACE Divisions 72 and 74)**Share of non-financial services (NACE Sections G to I and K) value added, 2003 (%)**

	Business services: total	Computer and related activities (1)	Legal, accounting & management services	Architectural & engineering activities; tech. testing & analysis	Advertising	Other business services			
						Labour recruitment & provision of personnel	Investigation & security activities	Industrial cleaning	Miscellaneous business activities
EU-25	26.5	5.7	8.0	4.0	1.2	2.6	0.8	1.6	2.7
BE	25.3	4.5	8.9	2.9	0.9	3.5	0.7	1.4	2.3
CZ	22.5	4.4	5.8	5.1	1.8	0.5	1.2	1.0	2.7
DK	20.2	5.1	5.7	3.7	1.1	0.9	0.2	2.0	1.5
DE	25.6	5.5	8.4	4.3	1.3	1.2	0.5	1.8	2.7
EE	13.8	2.3	3.5	2.5	1.1	0.9	1.7	0.5	1.2
EL	:	:	:	:	:	:	:	:	:
ES	19.7	3.3	5.1	3.5	1.2	1.4	1.1	1.9	2.3
FR	27.1	5.0	7.2	3.7	1.5	4.7	0.9	1.5	2.6
IE	25.1	7.2	9.6	3.5	0.6	1.1	1.2	0.8	1.1
IT	24.9	5.8	7.6	4.0	0.7	0.9	0.8	2.3	2.8
CY	:	:	:	:	:	:	:	:	:
LV	10.6	2.2	2.4	2.2	1.7	0.2	0.9	0.3	0.7
LT (2)	10.7	1.9	2.1	3.5	1.1	0.1	0.9	0.3	0.9
LU	26.1	3.9	11.2	3.7	0.3	2.3	0.9	1.7	2.2
HU	18.8	4.0	5.7	3.3	0.9	0.9	1.0	0.9	2.1
MT (2)	13.3	2.1	6.3	1.7	0.7	0.3	0.3	0.3	1.6
NL	25.6	4.8	8.8	3.5	1.1	3.4	0.7	1.8	1.6
AT	20.1	3.9	6.1	3.7	1.1	2.0	0.3	1.3	1.7
PL	15.5	3.0	3.9	2.6	0.8	0.4	1.7	1.0	2.0
PT	15.2	2.0	4.5	1.7	0.9	1.6	1.4	1.0	2.1
SI	21.1	3.9	6.3	6.5	0.7	0.5	1.1	1.2	0.9
SK	17.8	3.9	4.2	4.0	1.2	0.2	1.8	0.8	1.6
FI	22.2	6.6	4.2	4.6	1.1	1.1	0.6	2.3	1.5
SE	26.6	8.0	6.0	4.8	1.7	1.4	0.8	1.7	2.1
UK	34.2	7.8	10.9	4.4	1.3	4.2	0.9	1.0	3.9

(1) EU-25, rounded estimate based on non-confidential data.

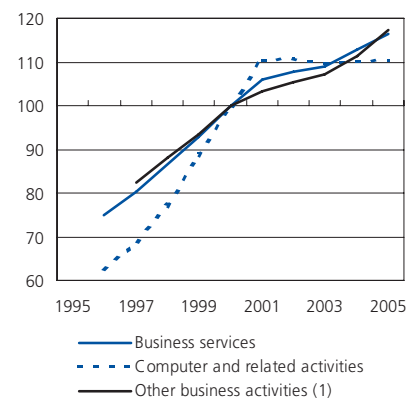
(2) 2002.

Source: Eurostat (SBS)

Figures 22.3 and 22.4 show the development of business services and some of its parts, based on annual short-term statistics. The importance of business services in terms of providing new employment opportunities can be seen clearly from Figure 22.3: the employment index for business services as a whole grew, on average, by 5.0 % per annum between 1996 and 2005. Employment growth was particularly strong for computer and related activities where the number of persons employed rose by an average of 6.6 % per annum over the same period; nevertheless, it should be noted that the majority of the gains in employment were registered during the years to 2001, after which employment levels remained relatively stable. Figure 22.4 provides a more detailed analysis of business services for the turnover index (split in two graphs). Although time-series are often short (starting in 2000) they show widespread turnover growth throughout business services. Even advertising (NACE Group 74.4), where the

turnover index had fallen below its base level of 100 by 2002, recorded three years of moderate growth up to 2005. The two activities with the longest time-series, computer and related activities (NACE Division 72) and labour recruitment and the provision of personnel (NACE Group 74.5) both recorded strong growth from 1998 through to 2001, followed in 2002 by slower growth in computer and related activities and a contraction in turnover for labour recruitment and the provision of personnel, before renewed growth through to 2005.

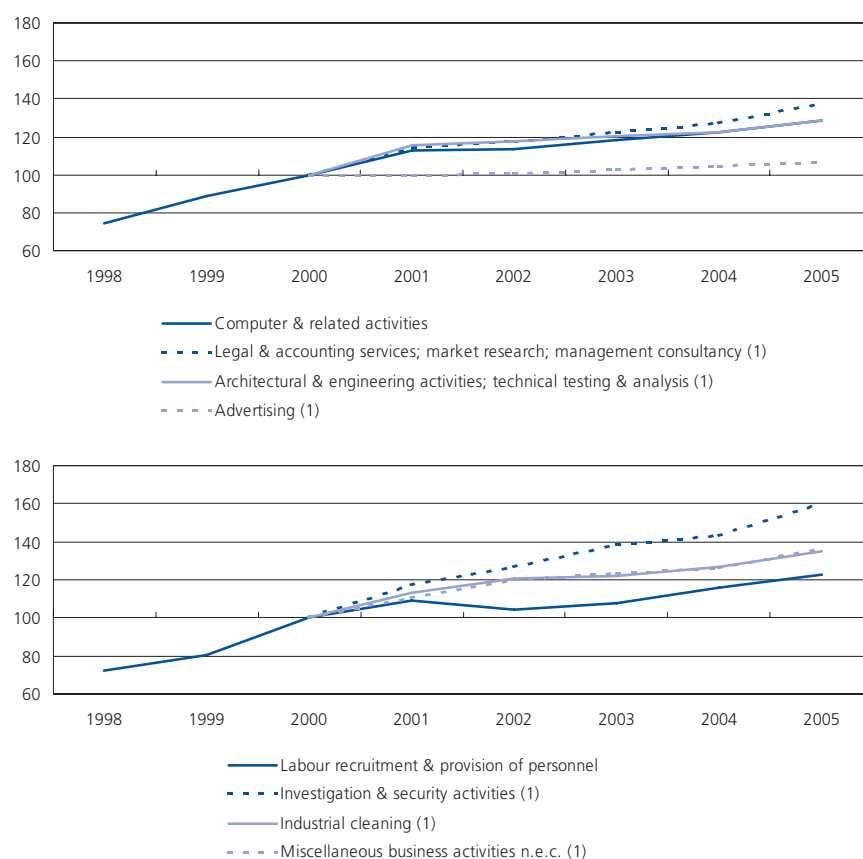
Figure 22.3

**Business services
(NACE Divisions 72 and 74)
Index of employment, EU-25 (2000=100)**


(1) Series starts in 1997.

Source: Eurostat (STS)

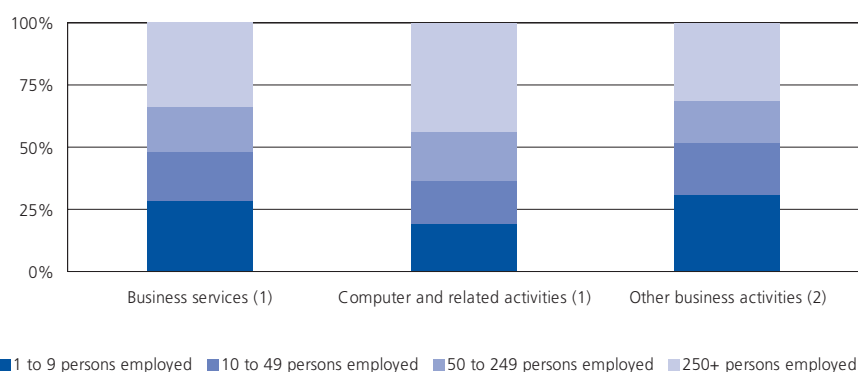
Figure 22.4

Business services (NACE Divisions 72 and 74)
Turnover index, EU-25 (2000=100)


(1) Series starts in 2000.

Source: Eurostat (STS)

Figure 22.5

Business services (NACE Divisions 72 and 74)
Share of value added by enterprise size class, EU-25, 2003 (%)


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

(2) Rounded estimate based on non-confidential data for 10 to 49 persons employed.

Source: Eurostat (SBS)

In 2003, a breakdown of EU-25 value added in the business services sector showed that large enterprises (with more than 250 persons employed) generated 34.0 % of the total, a lower share than the non-financial service average (36.9 %). The contribution of micro and small enterprises (with less than 50 persons employed) to business services value added was comparable with that in non-financial services as a whole, and as such it was medium-sized enterprises (with between 50 and 249 persons employed) that made an above average contribution to business services value added. The two NACE divisions that make up business services were somewhat different in their size class structure; the greater contribution to value added of medium-sized and large enterprises in the computer and related activities subsector can be noted, alongside the consequently smaller contribution of micro and small enterprises - see Figure 22.5.

LABOUR FORCE CHARACTERISTICS

According to structural business statistics, the share of paid employees in the number of persons employed in the EU-25's business services sector in 2003 (83.4 %) was slightly higher than for the non-financial services sector as a whole (81.6 %) in 2002. In 2003, the proportion of paid employees was particularly high in the two activities dominated by large enterprises: labour recruitment and provision of personnel (NACE Group 74.5) where it was 98.6 %, and other business services (NACE Groups 74.6 to 74.8) where it was 86.8 %, due to high shares in investigation and security activities and industrial cleaning services (NACE Groups 74.6 and 74.7) where it was close to 95 %. By contrast over a quarter of the persons employed were unpaid in architectural, engineering and technical activities (NACE Groups 74.2 and 74.3) and legal, accounting and management services (NACE Group 74.1).

According to Labour Force Survey data (see Table 22.4), male employment represented 55.8 % of the total number of persons employed in the EU-25's business services sector in 2005; this share was almost the same as the non-financial services (NACE Sections G to I and K) average (56.0 %). However, the pattern was not the same across the two NACE divisions that compose the business services sector. For other business activities (NACE Division 74) male employment (51.5 %) was somewhat lower, while for computer and related activities (NACE Division 72) it was much higher (at 77.2 %).

Table 22.4

Business services (NACE Divisions 72 and 74)
Labour force characteristics, 2005

	Male		Full-time		Breakdown by age (% share of total)		
	Proportion of those employed (%)	Index (non-financial services=100)	Proportion of those employed (%)	Index (non-financial services=100)	< 30 years	30-49 years	50+ years
EU-25	55.8	99.6	78.7	99.4	23.5	55.6	20.8
BE	58.4	99.1	80.9	103.5	23.8	57.5	18.7
CZ	55.3	101.2	91.3	97.1	24.7	48.2	27.1
DK	58.2	97.8	79.5	107.5	21.9	52.8	25.3
DE	52.8	99.9	72.0	100.8	20.8	56.6	22.6
EE	62.2	122.1	86.6	94.5	32.5	45.7	21.9
EL	52.7	86.4	95.5	99.8	25.8	57.9	16.3
ES	49.9	90.6	80.6	94.7	25.1	59.7	15.2
FR	58.0	101.9	83.2	99.2	25.3	56.4	18.3
IE	53.1	97.9	88.2	109.0	33.1	50.1	16.8
IT	54.1	90.3	78.0	93.2	19.3	63.3	17.4
CY	45.3	83.5	86.5	95.3	35.6	45.4	19.0
LV	51.7	108.1	93.7	99.5	30.0	49.3	20.7
LT	54.0	103.2	93.5	99.3	27.1	51.6	21.3
LU	51.0	88.1	79.9	94.0	23.9	62.7	13.4
HU	56.4	104.8	94.1	98.9	23.2	49.9	26.9
MT	69.4	99.0	87.7	101.3	44.2	39.8	:
NL	60.3	103.8	59.9	111.5	26.9	54.9	18.2
AT	50.6	101.5	70.2	95.1	25.7	56.9	17.3
PL	62.8	113.3	86.6	96.5	29.8	46.9	23.4
PT	52.7	95.5	88.4	95.3	29.1	55.8	15.1
SI	55.9	103.5	88.1	96.6	26.1	54.3	19.6
SK	62.0	117.3	96.9	99.9	30.1	50.0	19.9
FI	54.7	99.7	82.9	101.9	27.0	46.5	26.6
SE	60.1	98.8	79.3	103.3	22.0	51.5	26.5
UK	59.1	104.9	79.8	113.4	23.2	50.9	25.9

Source: Eurostat (LFS)

In the EU-25's business services sector just over three quarters (78.7 %) of those employed worked on a full-time basis, slightly less than the non-financial services average of 79.2 %. Again there were strong differences between the two NACE divisions that make up the activities covered by this chapter, with a full-time employment rate of 76.4 % for other business activities and 90.1 % for the computer and related activities subsector. Computer and related activities ranked fourth highest among all non-financial services NACE divisions in terms of its male employment share and full-time employment rate, behind land transport (NACE Division 60), motor trades (NACE Division 50) and water transport (NACE Division 61). In contrast, the low full-time employment rate in other business activities was the third lowest rate across non-financial services NACE divisions, higher only than in retail trade and hotels and restaurants (NACE Divisions 52 and 55).

The age structure of the EU-25's business services workforce was quite similar to that of the non-financial services sector as a whole in 2005, although the proportion of young persons (aged less than 30) and older persons (aged 50 or more) were both somewhat lower in business services, while the proportion aged between 30 and 49 was 2.9 percentage points higher than the non-financial services average. The somewhat lower share of younger workers was mainly due to other business activities where 22.9 % of the workforce was aged under 30, compared with 26.9 % for the computer and related activities workforce (which was slightly above the non-financial services average). The slightly lower share of older workers resulted from a particularly low share (11.8 %) of persons aged over 50 within the computer and related activities workforce, while for other business activities the rate was slightly above the non-financial services average at 22.6 %. The proportion of the computer and related activities workforce that

were aged 50 or over was the lowest ⁽³⁾ in the non-financial services economy by quite a large margin, while the proportion aged between 30 and 49 (61.3 %) was the second highest among the non-financial services NACE divisions, just behind air transport (NACE Division 62).

⁽³⁾ NACE Divisions 61, 62 and 71, not available.

Table 22.5

Computer and related activities; other business activities (NACE Divisions 72 and 74)**Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003**

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (1)	Personnel costs as a share of total operating costs (%) (1)	Apparent labour productivity (EUR thousand) (2)	Average personnel costs (EUR thousand) (2)	Wage adjusted labour productivity (%) (2)	Gross operating rate (%) (2)
EU-25	4.7	59.1	40.9	38.8	30.7	126.0	17.3
1	Slovakia (12.3)	Hungary (80.2)	Netherlands (56.5)	Ireland (56.6)	Sweden (47.1)	Malta (194.1)	Malta (49.5)
2	Latvia (10.0)	Poland (79.6)	Cyprus (52.2)	United Kingdom (51.9)	France (41.3)	Latvia (186.6)	Cyprus (29.4)
3	Lithuania (9.2)	Czech Republic (76.8)	Luxembourg (48.1)	Denmark (46.8)	Belgium (41.2)	Slovakia (174.5)	Latvia (24.2)
4	Portugal (8.5)	Slovenia (76.3)	Malta (46.6)	Belgium (46.8)	Denmark (38.6)	Ireland (168.5)	Germany (23.0)
5	Estonia (8.4)	Lithuania (75.2)	United Kingdom (46.5)	France (45.6)	Finland (36.0)	Lithuania (165.0)	Ireland (22.6)

(1) Malta, 2002; Greece, not available; EU-25 is an EU average based on available data for 2002 and 2003.

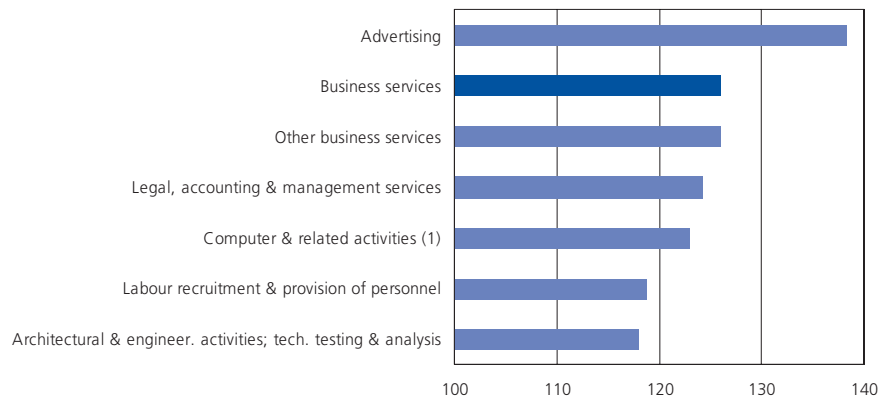
(2) Malta, 2002; Greece, not available; EU-25 rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

COSTS, PRODUCTIVITY AND PROFITABILITY

In 2003, apparent labour productivity for the EU-25's business services sector was almost the same as the non-financial services (NACE Sections G to I and K) average, with each person employed generating on average EUR 38 800 of added value. Average personnel costs were however above the non-financial services average, at EUR 30 700 per employee in business services, compared with a 2002 average for non-financial services of EUR 25 900 per employee. The combination of such levels of apparent labour productivity and average personnel costs led to a wage adjusted labour productivity ratio of 126 % for the business services sector in 2003 for the EU-25, some 20 percentage points below the non-financial services average (145.9 %, 2002). Figure 22.6 shows wage adjusted labour productivity ratios for business services as a whole and for its subsectors. This ratio was highest for the advertising subsector (NACE Group 74.4, 138.3 %), and lowest for architectural and engineering activities and technical testing subsector (NACE Groups 74.2 and 74.3, 118.0 %). Despite a relatively low wage adjusted labour productivity ratio, the gross operating rate of the EU-25's business services sector was 17.3 % in 2003, well above the 2002 non-financial services average of 11.2 %, partly because of the labour intensive nature of these activities where there is only a limited need for the gross operating surplus to cover capital costs.

Figure 22.6

Business services (NACE Divisions 72 and 74)**Wage adjusted labour productivity, EU-25, 2003 (%)**

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

Source: Eurostat (SBS)

22.1: COMPUTER AND RELATED ACTIVITIES

Computer and related activities (NACE Division 72) covers software and computing services, which include consultancy activities for hardware or software, data processing activities, database activities and the maintenance and repair of office and information technology machinery. Note that although this subchapter includes the repair of computers it does not cover their actual manufacture (NACE Class 30.02), nor their wholesaling, retailing, or renting (NACE Classes 51.84, 52.48 and 71.33).

This sector is at the forefront of the information society along with telecommunications - see Subchapter 21.2 where information on the Internet is presented. Enterprises delivering software and computer services support clients in a broad range of areas, in almost all economic activities. It is quite common for enterprises to out-source their requirements for hardware and software to specialist providers. The ability of such services to be traded across borders has been assisted by improved telecommunications, notably growing access to broadband Internet. The world's top software and IT services enterprise (groups) in 2005 are shown in Table 22.6.

This sector is affected by the development of open source technology, anti-trust rulings concerning the bundling of applications and operating systems, the protection of intellectual property rights and patentability of software, and the security of software, particularly in relation to the use of the Internet.

Free and open-source software has provided an alternative source of software to that of traditional software providers that dominate the market overall. The European Commission has encouraged interoperability of software, and the enforcement of this has been one of the main points behind its long-running dispute with Microsoft stemming from the 2004 anti-trust ruling concerning the Windows® operating system: daily fines of EUR 1.5 million were imposed by the European Commission in July 2006, backdated to December 2005. Microsoft and the European Commission are already discussing compliance with the anti-trust ruling in the context of the Vista version of Windows.

Table 22.6

World's top software and IT services enterprise (groups), 2005 (1)

	Software and IT services revenue (EUR million)	Corporate revenue (EUR million)	Number of employees (units)
IBM	49 278	77 400	329 000
Microsoft	27 304	29 608	57 086
EDS	16 614	16 614	117 000
Computer Sciences	12 208	12 208	76 000
Accenture	12 148	12 148	100 000
Hewlett-Packard	11 075	64 227	151 000
Oracle	8 163	8 163	41 658
Hitachi	7 629	67 812	347 424
SAP	7 486	7 486	32 000
Capgemini	6 897	6 897	59 324

(1) Revenue converted at USD 1.2441 = EUR 1.

Source: Software Magazine's Annual Software 500, Wiesner Publishing, Framingham, Mass., 2005.

The protection of intellectual property rights is a double issue for this sector, as software suppliers provide solutions to manage digital rights for other content providers, as well as being concerned about protecting their own rights - see Chapter 21 for information on intellectual property rights in general. In the specific area of software, in February 2002 the European Commission proposed a directive on the patentability of computer-implemented inventions (the so-called 'software patents Directive'), but this was rejected by the European Parliament in July 2005.

One of the broader issues facing the information society is the security of communication networks and IT, and computer services have a leading role to play in this area. In May 2006 the European Commission adopted a Communication ⁽⁴⁾ on a strategy for a secure information society - dialogue, partnership and empowerment. The proposed strategy emphasises the virtue of technological diversity, as well as the importance of openness and interoperability. In tackling security challenges, a three-pronged approach has been developed embracing specific network and information security measures, the regulatory framework for electronic communications (which includes privacy and data protection issues), and the fight against cyber-crime.

⁽⁴⁾ COM(2006) 251.

STRUCTURAL PROFILE

The EU-25's computer and related activities (NACE Division 72) generated EUR 150 billion of value added in 2003, therefore contributing 21.3 % to business services (NACE Divisions 72 and 74) and 5.7 % to non-financial services (NACE Sections G to I and K) value added. The computer and related activities sector employed 2.5 million persons in the EU-25 in 2003, equivalent to 13.7 % of business services employment and 3.6 % of the non-financial services workforce (both lower than equivalent value added shares).

The United Kingdom dominated this sector with three tenths of EU-25's value added and nearly one quarter of the EU-25's employment - see Table 22.7. The United Kingdom was relatively specialised within computer and related activities in so far as the contribution of this activity to national non-financial services value added was 7.8 %, the second highest proportion among the Member States, after Sweden (8.0 %) ⁽⁵⁾. The lowest levels of specialisation were recorded for Malta (2002), the Baltic Member States (Lithuania 2002), and Portugal, where value added generated by computer and related activities accounted for less than 3 % of the non-financial services total.

⁽⁵⁾ Lithuania and Malta, 2002; Greece and Cyprus, not available.

Table 22.7

Computer and related activities (NACE Division 72)**Value added and employment: ranking of the top 5 Member States, 2003**

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	United Kingdom (43 850.9)	29.2	United Kingdom (588.8)	23.6	Sweden (8.0)	Sweden (7.2)
2	Germany (29 577.0)	19.7	Germany (368.3)	14.8	United Kingdom (7.8)	Finland (5.6)
3	France (19 874.2)	13.2	Italy (356.7)	14.3	Ireland (7.2)	United Kingdom (4.6)
4	Italy (15 574.7)	10.4	France (322.6)	13.0	Finland (6.6)	Italy (4.5)
5	Spain (7 615.3)	5.1	Spain (179.5)	7.2	Italy (5.8)	Denmark (3.9)

(1) Malta, 2002; Greece, not available.

(2) Lithuania and Malta, 2002; Greece and Cyprus, not available.

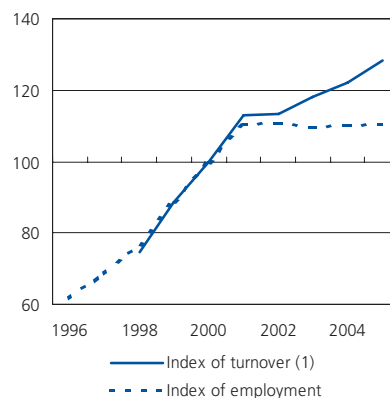
Source: Eurostat (SBS)

Annualised short-term statistics show that computer and related activities (NACE Division 72) were a very dynamic activity within the EU-25 up until 2001, as witnessed by the 14.8 % annual average growth of the index for turnover during the period 1998 to 2001 and the 12.2 % annual average growth in the employment index between 1996 and 2001. This was followed by a dramatic change in 2002, as EU-25 turnover and employment indices remained relatively unchanged (0.4 % and 0.2 % growth respectively). Since then turnover growth recovered, rising by 4.2 % on average over the next three years, about one third the rate of growth witnessed in the years up to 2001. This renewed growth for turnover since 2001 was not reflected in the employment index, which recorded a 1.0 % reduction in 2003, followed by growth of 0.5 % in both 2004 and 2005.

A PRODUCT ANALYSIS

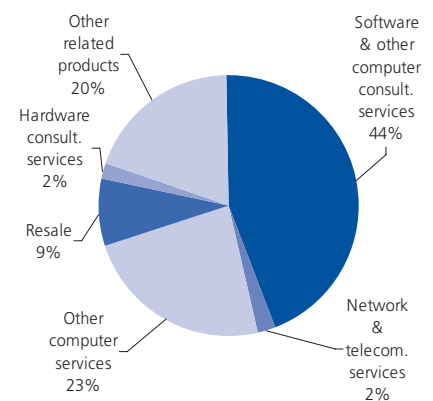
In parallel to the collection of the main SBS data provided by nearly all Member States, a number of other specific data sets are compiled on a voluntary basis by a subset of Member States, including data on turnover in business services broken down by product. The results of this special data compilation exercise show that, in 2003, software and other computer consultancy services generated the largest share (44 %) of the sector's turnover on average (weighted) among the countries with available data - see Figure 22.8 for country coverage.

Figure 22.7
Computer and related activities (NACE Division 72)
Evolution of main indicators, EU-25 (2000=100)

(1) Series starts in 1998.
Source: Eurostat (STS)**COSTS, PRODUCTIVITY AND PROFITABILITY**

Apparent labour productivity was EUR 60 300 per person employed in the EU-25's computer and related activities in 2003, the highest level among the business services sectors presented in Subchapters 22.1 to 22.6. Enterprises in the EU-25's computer and related activities sector faced relatively high average personnel costs per employee (EUR 48 900) compared with the business services average (EUR 30 700). Wage adjusted labour productivity, which can be calculated as the ratio of apparent labour productivity to average personnel costs, showed that EU-25 enterprises in computer and related activities generated enough value added per person employed to cover average personnel costs by 123 % in 2003, slightly below the business services average (126 %). At 15.7 %, the gross operating rate (calculated as the gross operating surplus divided by turnover) of the computer and related activities sector was also somewhat below the business services average (17.3 %).

Figure 22.8
Computer and related activities (NACE Division 72)
Breakdown of turnover in computing services by product, 2003 (%) (1)

(1) Weighted average based on data for Denmark, Estonia, Greece, Spain, Latvia, Luxembourg, Poland, Slovenia, Sweden, the United Kingdom and Romania.
Source: Eurostat (SBS)

22.2: LEGAL, ACCOUNTING AND MANAGEMENT SERVICES

This subchapter covers a variety of professional activities that include legal services, accounting, book-keeping, auditing, tax consultancy, market research, public opinion polling, business and management consultancy services, as well as management activities relating to holding companies; these are all classified within NACE Group 74.1.

Enterprises in this sector are generally small, and a common legal form is that of partnerships. Another characteristic of these activities is that individuals are more likely to use these services than most of the other activities within the business services sector. It should be noted that activities connected with the exercise of official authority (including part of the work of notaries) are excluded from the scope of the latest proposal for a Directive on services in the internal market.

In the wake of high-profile accounting scandals in the United States and in Europe, the European Commission proposed new legislation on auditing company accounts, with the objective of restoring the credibility of financial reporting and enhancing the EU's protection against such scandals. This legislation was agreed by the Council in April 2006. The so-called '8th Company Law Directive' aims at reinforcing and harmonising the statutory audit function throughout the EU, notably by specifying the duties of statutory auditors, their independence and ethics, and introducing requirements for external quality assurance. It also includes the creation of an Audit Regulatory Committee to allow the speedy adoption of necessary implementing measures.

Legal services cover the activities of advocates, barristers, solicitors, notaries, registered lawyers and legal consultants. According to figures from CCBE ⁽⁶⁾, there were about 736 900 lawyer members of the Bar in the EU in 2005.

STRUCTURAL PROFILE

The EU-25's legal, accounting and management services sector (NACE Group 74.1) generated EUR 213.2 billion of value added in 2003, some 30.3 % of the business services total (NACE Divisions 72 and 74), or 8.0 % of non-financial services (NACE Sections G to I and K) value added. There were 4.1 million persons employed in this sector in the EU-25 in 2003, equivalent to 22.9 % of the business services workforce, and 6.0 % of those employed within non-financial services.

⁽⁶⁾ CCBE (the Council of Bars and Law Societies of Europe), more information at: <http://www.ccbe.org>; approximate figures; excluding Malta.

The United Kingdom made the largest contribution to value added among the Member States for legal, accounting and management services, with EUR 60.9 billion of added value, equivalent to 28.6 % of the EU-25 total in 2003, while Germany was the second highest contributor with a 21.0 % share. This activity was also particularly important in Ireland and the Benelux countries, which together with the United Kingdom were the five most specialised Member States in this activity relative to non-financial services value added as a whole - see Table 22.8. The Baltic Member States (Lithuania 2002) and Poland were the least specialised Member States ⁽⁷⁾ in this activity in 2003, as legal, accounting and management services contributed less than 4 % to their non-financial services value added.

⁽⁷⁾ Lithuania and Malta, 2002; Greece and Cyprus, not available.

Table 22.8

Legal, accounting, book-keeping and auditing activities; tax consultancy; market research and public opinion polling; business and management consultancy; holdings (NACE Group 74.1)

Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	United Kingdom (60 942.5)	28.6	United Kingdom (883.0)	21.3	Luxembourg (11.2)	Netherlands (8.2)
2	Germany (44 725.2)	21.0	Germany (781.5)	18.8	United Kingdom (10.9)	Luxembourg (7.3)
3	France (28 766.7)	13.5	Italy (519.6)	12.5	Ireland (9.6)	Germany (6.9)
4	Italy (20 179.3)	9.5	France (464.0)	11.2	Belgium (8.9)	United Kingdom (6.9)
5	Netherlands (12 710.9)	6.0	Spain (364.2)	8.8	Netherlands (8.8)	Sweden (6.7)

(1) Malta, 2002; Greece, not available.

(2) Lithuania and Malta, 2002; Greece and Cyprus, not available.

Source: Eurostat (SBS)

A PRODUCT ANALYSIS

Tables 22.9 to 22.12 provide, for a limited set of countries, a product analysis for four of the five NACE classes covered by the legal, accounting and management services sector. In all of the countries shown in Table 22.9 concerning the legal activities subsector, legal services accounted for the vast majority of turnover. For enterprises in accounting, book-keeping, auditing and tax consultancy activities (Table 22.10), business and management consultancy services accounted for a large share of turnover in many countries, alongside core products relating to accounting, book-keeping, auditing and tax consultancy services. In the market research and opinion polling subsector, market research services were clearly the most important products - see Table 22.11. Business and management consultancy activities had a wider range of products, as among the countries shown in Table 22.12 only in Spain did core products account for more than nine tenths of turnover. Computer related services also generated a notable proportion of turnover in this subsector in several countries.

COSTS, PRODUCTIVITY AND PROFITABILITY

The EU-25's legal, accounting and management services sector registered apparent labour productivity of EUR 51 400 per person employed in 2003, some EUR 13 000 above the average recorded for business services (NACE Divisions 72 and 74) and the second highest value among those business services activities covered in Subchapters 22.1 to 22.6, after computer and related activities (see Subchapter 22.1). Average personnel costs were EUR 41 400 per employee in the EU-25, also well above the business services average, and again the second highest level among the business services sectors. These figures for apparent labour productivity and average personnel costs led to a wage adjusted labour productivity ratio of 124.3 % in the EU-25, a fairly typical ratio for business services. Among the Member States⁽⁸⁾ only in the Swedish legal, accounting and management services sector was this ratio below 100 % in 2003, as apparent labour productivity was 17.0 % less than average personnel costs.

The gross operating rate of the EU-25's legal, accounting and management services sector was 21.7 % in 2003, the highest rate among the business services sectors, and more than four percentage points above the business services average (17.3 %). Several Member States recorded a gross operating rate close to or in excess of 35 % in this sector, most notably Cyprus (39.0 %), Ireland (37.9 %), Italy (35.5 %) and Lithuania (34.6 %).

⁽⁸⁾ Malta, 2002; Greece, not available.

Table 22.9

Legal activities (NACE Class 74.11)

Breakdown of turnover by product, 2003 (%)

	ES	SE	UK (1)
Legal services	95.2	92.1	98.1
Legal advisory and representation services	49.9	87.2	93.6
Legal advisory & representation services in statutory procedures of quasi-judicial tribunals, boards, etc.	1.7	4.7	:
Auction services	0.3	0.0	:
Other legal advisory and information services	43.3	0.2	4.6
Other products	4.8	7.9	1.9

(1) Provisional.

Source: Eurostat (SBS)

Table 22.10

Accounting, book-keeping and auditing activities; tax consultancy (NACE Class 74.12)

Breakdown of turnover by product, 2003 (%)

	EL	ES	PL	SE	UK (1)
Accounting, book-keeping and auditing services; tax consultancy services	93.2	92.5	90.9	81.9	58.8
Auditing services	16.5	11.4	12.5	44.2	30.8
Accounting, except tax returns	10.9	17.3	38.4	19.7	5.9
Book-keeping services, except tax returns	51.4	4.7	22.8	8.2	1.2
Tax consultancy services, including tax returns	14.3	59.1	17.2	9.8	20.9
Business and management consultancy services	5.7	3.9	2.9	11.5	33.5
Business organisation consultancy services	2.1	1.0	1.2	0.2	0.3
Strategic consult. services, incl. mergers & acquis.	0.6	0.4	0.0	3.0	5.2
Financial management consulting services	1.9	1.3	0.3	2.3	18.2
Human resources mangmt. consulting services	0.3	0.5	0.2	0.5	0.0
Other business & mangmt. consultancy services	0.7	0.6	1.1	5.5	9.9
Other products	1.1	3.6	6.2	6.6	7.6

(1) Provisional.

Source: Eurostat (SBS)

Table 22.11

Market research and public opinion polling activities (NACE Class 74.13)

Breakdown of turnover by product, 2003 (%)

	ES	SE	UK (1)
Market research services	89.2	96.8	94.3
Market research - qualitative surveys	11.5	19.7	8.7
Market research - quantitative ad-hoc surveys	19.9	35.7	46.0
Mkt research - quantitative continuous/regular surveys	57.8	41.5	39.6
Public opinion polling services	3.3	1.9	0.8
Business and management consultancy services	2.6	0.1	0.2
Other products	4.9	1.2	4.7

(1) Provisional.

Source: Eurostat (SBS)

Table 22.12

Business and management consultancy activities (NACE Class 74.14)

Breakdown of turnover by product, 2003 (%)

	EL	ES	PL	SE	UK (1)
Business and management consultancy services	79.1	91.7	55.5	81.1	57.1
Business organisation consultancy services	18.7	14.4	19.4	16.9	3.5
Strategic consult. services, including mergers & acquis.	6.1	10.7	2.3	9.1	10.4
Financial management consulting services	7.0	14.9	5.3	4.1	2.3
Human resources management consulting services	5.7	5.1	7.6	7.1	12.4
Other business and management consultancy services	41.6	46.7	21.0	43.9	28.6
Computer, software and computer consultancy services	4.9	1.3	3.3	5.8	1.7
Accounting, book-keeping and auditing services; tax consultancy services	4.9	2.9	2.2	1.4	0.5
Training services	1.7	1.7	2.0	2.2	0.6
Other products	9.4	2.4	37.0	9.5	40.1

(1) Provisional.

Source: Eurostat (SBS)

22.3: ARCHITECTURAL AND ENGINEERING ACTIVITIES; TECHNICAL TESTING AND ANALYSIS

Architectural and engineering activities covered by NACE Group 74.2 include architectural consulting activities (such as building design and drafting, supervision of construction, town and city planning, and landscape architecture) and various engineering and technical activities related to construction, as well as geological and prospecting activities, weather forecasting activities and geodetic surveying. Technical testing and analysis activities (NACE Group 74.3) include environmental measuring, testing of food hygiene, buildings and equipment, as well as the periodic testing of vehicles for roadworthiness.

Table 22.13 shows the ten largest architectural groups in the EU, based on information compiled by the Swedish Federation of Consulting Engineers and Architects (STD). As can be seen, even the largest groups are relatively small with only the three largest having 600 or more employees. In the case of AEDAS, now the largest architectural group in the EU, there has been recent expansion into central and eastern Europe.

STRUCTURAL PROFILE

Value added in the architectural, engineering and technical activities sector (NACE Groups 74.2 and 74.3) was EUR 105.3 billion in 2003 in the EU-25, representing 15.0 % of the value added generated in business services (NACE Divisions 72 and 74). There were 2.3 million persons employed in this sector in the EU-25 in 2003, equivalent to 12.7 % of employment in the EU-25's business services sector and 3.3 % of the non-financial services (NACE Sections G to I and K) workforce.

Table 22.13

Top ten architectural groups, EU-25, 2004

		Number of employees (units)	Turnover (EUR million)
AEDAS Architects Ltd	UK	800	69.3
Foster & Partners Ltd	UK	600	49.0
RMJM	UK	600	:
Broadway Malyan Ltd	UK	450	29.5
SWECO FFNS	SE	302	36.9
White Architects AB	SE	295	26.7
Chapman Taylor	UK	290	35.2
gmp-Architekten von Gerkan, Marg und Partner	DE	290	36.0
INBO Architects/consultants	NL	262	26.0
Aukett Fitzroy Robinson plc	UK	250	24.1

Source: Swedish Federation of Consulting Engineers and Architects (STD), Sector Review, November 2005.

As with all of the six business services sectors covered in Subchapters 22.1 to 22.6, the United Kingdom contributed the greatest share (23.2 %) of EU-25 value added in architectural, engineering and technical activities, followed closely by Germany (21.9 %). In value added terms, Slovenia was the most specialised Member State in these activities in 2003, as this sector contributed 6.5 % to Slovenian non-financial services value added. The Czech Republic was the only other Member State ⁽⁹⁾ where the architectural, engineering and technical activities sector contributed more than 5 % of the non-financial services total, while this sector contributed just 1.7 % of the total in Malta (2002) and Portugal.

⁽⁹⁾ Lithuania and Malta, 2002; Greece and Cyprus, not available.

Table 22.14

Architectural and engineering activities and related technical consultancy; technical testing and analysis (NACE Groups 74.2 and 74.3) Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	United Kingdom (24 476.0)	23.2	Germany (427.5)	18.6	Slovenia (6.5)	Slovenia (5.3)
2	Germany (23 072.3)	21.9	United Kingdom (369.5)	16.0	Czech Republic (5.1)	Sweden (5.3)
3	France (14 637.3)	13.9	Italy (327.5)	14.2	Sweden (4.8)	Czech Republic (4.8)
4	Italy (10 711.5)	10.2	France (257.6)	11.2	Finland (4.6)	Finland (4.5)
5	Spain (8 031.8)	7.6	Spain (227.6)	9.9	United Kingdom (4.4)	Italy (4.2)

(1) Malta, 2002; Greece, not available.

(2) Lithuania and Malta, 2002; Greece and Cyprus, not available.

Source: Eurostat (SBS)

A PRODUCT ANALYSIS

Tables 22.15 and 22.16 provide, for a limited set of countries, a product analysis of the two NACE groups covered by this subchapter. In all of the countries shown in Table 22.15 concerning architectural and engineering activities and related technical consultancy, the core activities generated approximately two thirds or more of turnover. In most countries, notably Sweden and Poland, construction services also generated a significant share of turnover. Among the core products, engineering design services was the most important product in all countries shown, except Poland. Table 22.16 shows a similar breakdown for the technical testing and analysis subsector where several countries reported a great concentration on the core products of testing, inspection and analysis services. Notably this was not the case in the United Kingdom, where the share of turnover from architectural and engineering services was high, and also in Luxembourg where non-core products generated two fifths of turnover.

COSTS, PRODUCTIVITY AND PROFITABILITY

In 2003, apparent labour productivity was higher in the EU-25's architectural, engineering and technical activities sector (EUR 45 700 of value added per person employed) than in business services as a whole (EUR 38 800). Average personnel costs were also relatively high in this sector at EUR 38 700 per employee compared with a EUR 30 700 average for business services. This combination of above average apparent labour productivity and high average personnel costs led to a wage adjusted labour productivity ratio for the EU-25's architectural, engineering and technical activities sector of 118.0 %, which was the lowest among the business services sectors presented in Subchapters 22.1 to 22.6. The wage adjusted labour productivity ratio fell below 100 % in the Swedish architectural, engineering and technical activities sector, where it reached just 91.7 %, and it was also below 100 % in Italy (93.2 %).

Despite the relatively low wage adjusted labour productivity in this sector, the gross operating rate was high, as it reached 19.8 % in 2003 for the EU-25, the second highest rate among the business services sectors presented in Subchapters 22.1 to 22.6, a pattern that is highly affected by the very high share of unpaid workers in this activity (28%). This was repeated in Italy, where despite a low wage adjusted labour productivity ratio, the highest gross operating rate among the Member States ⁽¹⁰⁾ was recorded (40.3 %).

⁽¹⁰⁾ Malta, 2002; Greece, not available.

Table 22.15

Architectural and engineering activities and related technical consultancy (NACE Group 74.2) Breakdown of turnover by product, 2003 (%)

	DK	EE	ES	LU	PL	SE	UK (1)	RO
Architectural and engineering activities and related technical consultancy services	82.8	75.9	96.2	74.9	71.7	78.9	66.1	84.0
Architectural services	13.2	15.4	22.1	29.7	10.4	10.1	4.6	20.2
Engineering design services including integrated engineering services for turnkey projects	39.8	36.0	31.5	29.4	28.4	49.5	58.9	47.9
Urban planning services	7.1	1.0	1.9	5.5	0.5	0.2	1.2	0.9
Project management services	6.3	7.1	17.8	2.5	1.9	6.1	1.5	0.8
Other architectural and engineering services	16.3	16.5	22.9	7.8	30.3	13.0	:	14.2
Construction	0.5	4.4	0.8	2.3	8.9	9.2	4.2	3.4
Technical testing, inspection and analysis services	0.2	0.0	0.7	1.5	1.8	1.7	1.4	0.0
Computer services	0.6	2.0	0.8	0.1	0.1	1.7	2.7	0.0
Business and management consultancy services	0.2	1.2	0.2	1.4	0.5	0.9	3.1	0.0
Other products	15.7	16.6	1.4	19.7	16.9	7.7	22.5	12.6

(1) Provisional.

Source: Eurostat (SBS)

Table 22.16

Technical testing and analysis (NACE Group 74.3) Breakdown of turnover by product, 2003 (%)

	EE	ES	LU	SE	UK (1)	RO
Technical testing, inspection and analysis services	92.0	89.5	58.1	88.6	53.3	91.2
Technical testing and analysis services	45.9	0.0	0.0	3.3	0.0	0.0
Composition and purity testing and analysis services	10.4	11.9	5.0	11.5	23.1	6.5
Testing and analysis services of physical properties	3.1	10.6	0.0	3.4	4.0	9.0
Testing and analysis services of integrated mechanical and electrical systems services	7.5	3.3	2.7	15.5	4.1	2.9
Technical automobile inspection services	7.0	20.5	38.0	27.0	0.0	4.7
Other technical testing inspection and analysis services	18.1	43.2	12.3	27.9	22.1	68.0
Architectural and engineering services	0.0	6.4	1.4	10.6	30.3	0.0
Other products	8.0	4.1	40.5	0.9	16.3	8.8

(1) Provisional.

Source: Eurostat (SBS)

22.4: ADVERTISING AND DIRECT MARKETING

Advertising and direct marketing enterprises engage in services aimed at promoting ideas, goods and services, be it to the general public, specific target groups or other enterprises. These activities are covered by NACE Group 74.4 which includes the creation and placing of outdoor advertising, the sale of advertisement time and space and the distribution or delivery of advertising material, as well as direct marketing, sponsorship and sales promotion services. Note that advertising enterprises buying and reselling sales time or space tend to have relatively high turnover, while purchases of goods and services tend to be high relative to personnel costs, reflecting the distributive nature of this part of their activity.

Advertising and direct marketing are among the activities for which expenditures tend to rapidly decrease when the economic climate is not favourable. Nonetheless, when an upturn is foreseen, expenditure on these services tends to increase faster than the general economy. One of the more recent changes in legislation was the so-called tobacco advertising Directive which came into effect on 31 July 2005. The Directive bans tobacco advertising in the print media, on radio and over the Internet; it also prohibits tobacco sponsorship of cross-border cultural and sporting events. In contrast, the European Commission has made proposals to unlock advertising in other areas, notably through its December 2005 proposal ⁽¹¹⁾ for an audiovisual media services Directive - see Subchapter 21.3. With respect to advertising in scheduled broadcasting, the proposal aims to make existing rules more flexible; it also puts forward a legal framework for product placements.

⁽¹¹⁾ COM(2005) 646.

STRUCTURAL PROFILE

The EU-25's advertising activities (NACE Group 74.4) generated EUR 32.0 billion of value added, some 4.6 % of the business services (NACE Divisions 72 and 74) total in 2003 and employed 758 300 persons (4.2 % of the business services workforce). As such, advertising activities represented 1.2 % of non-financial services (NACE Sections G to I and K) value added and 1.1 % of employment.

In 2003, EUR 7.1 billion of value added was generated in the United Kingdom in advertising activities, the highest figure among the Member States, and equivalent to 22.1 % of the EU-25 total; Germany (21.0 %) and France (18.8 %) were the next largest contributors - see Table 22.17. Despite having the largest advertising activities sector in the EU-25 in value added terms, the contribution of this sector to non-financial services value added in the United Kingdom (1.3 %) was not much above the EU-25 average of 1.2 %. By this measure, the Czech Republic (1.8 %), Sweden and Latvia (both 1.7 %) were more specialised ⁽¹²⁾, as was France (1.5 %). In contrast, Luxembourg was the least specialised Member State in this activity, as advertising activities contributed just 0.3 % to Luxembourg's non-financial services value added in 2003.

This sector was affected by the slowdown observed in the EU-25 (and global) economy in 2001 and 2002, and in particular by the collapse in 2001 of the dot.com boom, although short-term statistics indicate that there has been growth since (see Chapter overview).

⁽¹²⁾ Lithuania and Malta, 2002; Greece and Cyprus, not available.

Table 22.17

Advertising (NACE Group 74.4)

Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	United Kingdom (7 073.4)	22.1	Germany (181.4)	23.9	Czech Republic (1.8)	Sweden (2.1)
2	Germany (6 719.4)	21.0	France (103.7)	13.7	Sweden (1.7)	Denmark (1.7)
3	France (6 030.0)	18.8	Spain (92.2)	12.2	Latvia (1.7)	Germany (1.6)
4	Spain (2 636.8)	8.2	United Kingdom (85.7)	11.3	France (1.5)	Netherlands (1.4)
5	Italy (1 925.7)	6.0	Italy (50.2)	6.6	United Kingdom (1.3)	Czech Republic (1.4)

(1) Malta, 2002; Greece, not available.

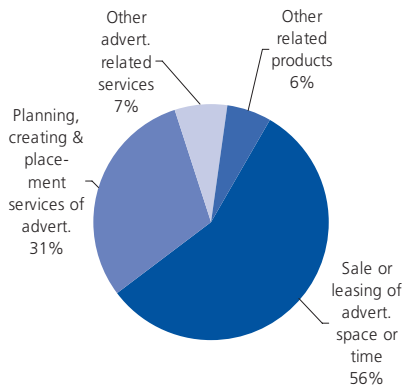
(2) Lithuania and Malta, 2002; Greece and Cyprus, not available.

Source: Eurostat (SBS)

A PRODUCT ANALYSIS

A number of Member States provided turnover data for the advertising sector broken down by product for 2003 - see Figure 22.9. This sector's turnover was dominated by the sale and leasing of advertising space/time which represented more than half of all turnover - it should be noted that this product is similar to a retail or wholesale product, in that a large proportion of the turnover represents the reselling of space/time purchased from a media organisation, rather than income for the provision of a service produced directly by advertising enterprises themselves.

Figure 22.9
Advertising activities (NACE Group 74.4)
Breakdown of turnover by product, 2003 (1)



(1) Average based on data for Denmark, Estonia, Greece, Spain, Latvia, Luxembourg, Poland, Slovenia, Sweden, the United Kingdom and Romania.
Source: Eurostat (SBS)

COSTS, PRODUCTIVITY AND PROFITABILITY

In 2003, apparent labour productivity in the EU-25's advertising activities was EUR 42 200 per person employed, which was above the business services average of EUR 38 800. Average personnel costs were EUR 30 500 per employee in the EU-25, approximately the same as the business services average. The resulting wage adjusted labour productivity ratio for EU-25 advertising activities in 2003 was 138.3 %, the highest ratio among the business services presented in this chapter. Nevertheless, this ratio was still 7.6 percentage points below the non-financial services average for 2002. Sweden, Austria and Poland recorded wage adjusted labour productivity ratios slightly below 100 % for advertising activities ⁽¹³⁾ in 2003, and Luxembourg recorded a particularly low ratio, just 48.9 %, the lowest of any Member State in any of the business services sectors.

(13) Malta, 2002; Greece, not available.

In contrast to the high wage adjusted labour productivity ratio, the gross operating rate of advertising activities was relatively low, at just 11.0 % for the EU-25 in 2003; the lowest rate among business services sectors. Unsurprisingly, given its extremely low wage adjusted labour productivity ratio, personnel costs exceeded value added in Luxembourg leading to a negative gross operating surplus and therefore a negative gross operating rate.

22.5: LABOUR RECRUITMENT AND TEMPORARY WORK SERVICES

Activities covered in this subchapter include personnel search, selection referral, head-hunting and job placement services, be they supplied to an individual looking for work or an enterprise trying to hire (NACE Group 74.5). The data presented also cover labour-contracting activities (for example, temporary work agencies); however, they do not comprise farm labouring or the performing arts.

Labour recruitment and temporary work services have grown mainly as a consequence of the outsourcing trend, using the expertise provided by enterprises in this sector (for example, knowledge of the employment market and selection procedures) instead of employing personnel directly. Activities of temporary work agencies are excluded from the

scope of the latest proposal for a Directive on services in the internal market, but not other parts of this sector, notably labour recruitment/placement services.

The issue of functioning labour markets has gained in importance as unemployment rates remained stubbornly high in several of the EU's Member States. This importance has been maintained as 'flexicurity' in labour markets has been promoted, describing flexible labour markets, strong social protection, active employment policies, active roles for the state and other parties, all alongside a restructuring of an economy. The 2005 Integrated Guidelines on Growth and Employment were adopted in July 2005, in addition to the relaunched strategy for growth and employment (also known as the Lisbon strategy). These guidelines call on the EU Member States to promote flexibility combined with employment security and reduce labour market segmentation.

STRUCTURAL PROFILE

Value added in the labour recruitment and provision of personnel sector (NACE Group 74.5) was EUR 67.8 billion in the EU-25 in 2003. This sector contributed 2.6 % of the wealth created in non-financial services (NACE Sections G to I and K) in 2003, or 9.6 % of the total for business services (NACE Divisions 72 and 74). Its contribution in terms of employment was more significant as the 2.6 million strong workforce in labour recruitment and provision of personnel in the EU-25 represented 14.3 % of the business services total in 2003 and 3.8 % of the non-financial services workforce. The relatively high proportion of the non-financial services workforce in this sector compared with its share of value added reflects the nature of many of the enterprises in this sector, namely to employ people to undertake work for clients in other sectors.

Table 22.18

Labour recruitment and provision of personnel (NACE Group 74.5)**Value added and employment: ranking of the top 5 Member States, 2003**

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	United Kingdom (23 401.4)	34.5	United Kingdom (734.4)	28.3	France (4.7)	Luxembourg (12.6)
2	France (18 701.8)	27.6	France (584.9)	22.5	United Kingdom (4.2)	Netherlands (8.1)
3	Germany (6 417.6)	9.5	Germany (278.7)	10.7	Belgium (3.5)	France (6.9)
4	Netherlands (4 878.0)	7.2	Netherlands (260.9)	10.1	Netherlands (3.4)	Belgium (6.9)
5	Spain (3 090.9)	4.6	Spain (207.1)	8.0	Luxembourg (2.3)	United Kingdom (5.7)

(1) Malta, 2002; Greece, not available.

(2) Lithuania and Malta, 2002; Greece and Cyprus, not available.

Source: Eurostat (SBS)

While the United Kingdom had the largest value added among the Member States in all of the business services sectors presented in Subchapters 22.1 to 22.6, it was in labour recruitment and the provision of personnel where its share of EU-25 value added was at its highest, reaching 34.5 % in 2003. France also recorded its largest share of EU-25 value added (among the business services sectors) in this sector, with a 27.6 % share, and as such these two Member States together dominated the labour recruitment and provision of personnel sector with a combined share of 62.1 % of EU-25 value added; none of the remaining Member States contributed more than 10 % to EU-25 value added. In terms of this sector's contribution to non-financial services (NACE Sections G to I and K) value added, the Member States ⁽¹⁴⁾ most specialised in labour recruitment and provision of personnel were unsurprisingly France and the United Kingdom, joined by Belgium and the Netherlands.

Unlike most other activities in business services, large enterprises (250 and more persons employed) accounted for more than half of the value added created in the EU-25's labour recruitment and provision of personnel sector in 2003: an analysis based on data available for 19 Member States ⁽¹⁵⁾ indicates that the value added

⁽¹⁴⁾ Lithuania and Malta, 2002; Greece and Cyprus, not available.⁽¹⁵⁾ EU average, 2003; Czech Republic, Ireland, Hungary, Slovakia and Finland, 2002; Estonia, Greece, Luxembourg, Malta, Poland and Slovenia, not available.

Table 22.19

Labour recruitment services (NACE Group 74.5)**Breakdown of turnover of by product, 2003 (%)**

	DK	EE	EL	ES	LV	LU	SI	SE	UK	RO
Placement services	12.0	9.1	59.1	10.1	56.9	51.2	3.8	4.8	8.9	46.5
Executive search	7.8	3.8	:	7.2	22.4	:	0.4	2.8	1.0	7.6
Other	4.1	5.3	:	2.8	34.5	:	3.4	2.0	7.9	38.8
Personnel supply services	84.8	85.0	19.3	89.1	13.4	39.6	71.6	91.5	84.6	39.7
Industrial	21.5	:	:	35.7	0.7	:	32.4	19.6	36.3	9.4
Commercial/trade	1.6	:	:	8.6	4.3	:	6.5	0.5	11.6	2.3
Hotels/restaurants/catering	2.6	:	:	7.0	0.0	:	11.0	0.0	0.6	0.0
Transport/warehousing/logistics	4.7	:	:	6.9	7.4	:	6.4	5.0	5.5	6.2
Office support	17.7	:	:	18.8	1.0	:	8.6	34.2	14.3	6.0
Education	:	:	:	0.3	0.0	:	0.5	3.1	2.6	0.0
Medical	33.1	:	:	0.6	0.0	:	0.4	12.1	9.9	0.1
Other	3.5	:	:	11.2	0.0	:	5.7	17.0	3.8	15.7
Other related products	3.2	5.9	21.6	0.9	29.8	9.2	24.5	3.7	6.5	13.8

Source: Eurostat (SBS)

share of large enterprises in the sector was 62.6 %. The contribution of micro and small enterprises (with less than 50 persons employed) to the sector's value added was particularly low.

A PRODUCT ANALYSIS

A number of Member States provided turnover data for the labour recruitment and temporary work services sector broken down by product for 2003 - see Table 22.19. In most of the Member States for which data are available, the supply of personnel generated the largest share of turnover, but in Greece, Latvia and Luxembourg placement services generated more than half of the sector's turnover.

A more detailed breakdown (for a limited number of Member States reveals significant differences in the importance of agency work, and in particular, a comparison of these payments with total personnel costs suggests the extent to which outsourcing is used in a particular economy. For example, the turnover generated by labour recruitment and temporary work services enterprises from supply services of personnel for industrial/manufacturing activities equated to 1.7 % of total industrial personnel costs in Spain, compared with 9.1 % in the United Kingdom in 2003.

Table 22.20

Industrial and construction expenditure on agency workers, breakdown by NACE section, 2003 (% of total)

	Average	BE	CZ	DK	DE	EE	ES	FR	IT	LV	LT	LU (1)	HU	MT (2)	NL	AT	PT	SK	FI	SE (2)	UK
Mining and quarrying	1.9	0.4	0.2	20.2	0.5	0.0	0.3	0.6	0.0	0.0	0.0	0.2	0.0	0.0	2.3	0.5	0.4	2.1	0.0	0.6	6.0
Manufacturing	85.7	91.9	87.4	39.7	97.7	100.0	90.6	97.2	93.7	71.4	96.9	99.3	95.6	100.0	77.0	68.8	89.9	93.6	81.8	77.7	65.6
Electricity, gas and water supply	4.1	0.7	0.5	0.1	1.7	0.0	0.5	2.2	2.8	0.0	0.0	0.5	2.0	0.0	7.4	6.0	4.4	0.0	9.0	13.0	9.1
Construction	8.2	7.0	11.9	40.0	0.0	0.0	8.7	0.0	3.5	28.6	3.1	:	2.4	0.0	13.3	24.7	5.3	4.3	9.3	8.6	19.3

(1) Shares calculated excluding construction.

(2) 2002.

Source: Eurostat (SBS)

EXPENDITURE ON AGENCY WORKERS

Table 22.20 provides an analysis of expenditure on agency workers by the industrial and construction sectors. The country coverage is limited to those countries with complete or nearly complete data sets for 2003. Unsurprisingly, as the largest activity analysed, enterprises in the manufacturing activity spent the greatest amount on these services in all of the Member States shown except for Denmark where construction activities accounted for a slightly larger share of the total expenditure on agency workers. Aside from Denmark, construction activities accounted for around one fifth or more of industrial and construction expenditure on agency workers in Latvia, Austria and the United Kingdom.

COSTS, PRODUCTIVITY AND PROFITABILITY

Labour and productivity indicators were generally lower in the EU-25's labour recruitment and provision of personnel sector than their average for business services (NACE Divisions 72 and 74) as a whole in 2003. Indeed, apparent labour productivity was EUR 26 100 per person employed for labour recruitment and provision of personnel, EUR 12 700 less than the business services average. Average personnel costs were EUR 22 000 per employee, which was EUR 8 700 below the business services average. Nevertheless, these ratios are to some extent influenced by the high incidence of part-time and temporary work in the labour recruitment and provision of personnel sector, as both of these measures are based on a simple count of

persons employed or employees. The wage adjusted labour productivity ratio is less affected by these characteristics of the workforce and this ratio stood at 118.8 % in 2003, compared with 126 % for business services. In most of the Member States ⁽¹⁶⁾ the wage adjusted labour productivity ratio was close to or in excess of 100 % indicating that value added covered personnel costs (after adjusting for the ratio of employees to persons employed); nonetheless, this was not the case in the Czech Republic (86.8 %) or Poland (92.8 %). The gross operating rate in the EU-25's labour recruitment and provision of personnel sector was 12.7 % in 2003, 4.6 percentage points below the business services average.

⁽¹⁶⁾ Malta, 2002; Greece, not available.

22.6: OTHER BUSINESS SERVICES

This subchapter regroups information from three subchapters in previous editions of this publication. The business services covered here include security services, such as the transport of valuables and security guard/watchman activities (NACE Group 74.6), industrial cleaning, including interior and exterior cleaning of buildings of all types as well as cleaning of public means of transport (NACE Group 74.7), and miscellaneous business activities (NACE Group 74.8) which includes professional business services such as photographic, secretarial and translation activities, and operational business services such as packaging services.

Security services are excluded from the scope of the latest proposal for a Directive on services in the internal market, but not other parts of this sector such as industrial cleaning and miscellaneous business activities.

miscellaneous business activities and 1.0 million for investigation and security activities (NACE Group 74.6). Figure 22.10 shows the relative size of the three subsectors in value added terms for the EU-25 and the Member States.

The United Kingdom contributed close to one quarter of the EU-25's value added in the other business services sector, ahead of Germany (close to one fifth). In terms of employment, the German workforce was the largest in the EU-25, with Germany and Spain particularly specialised in this sector in employment terms - see Table 22.21.

The subsectors of investigation and security activities (NACE Group 74.6) and industrial cleaning (NACE Group 74.7) had a different size class structure from most other activities within the business services sector, as large enterprises generated the highest proportion of their value added. In the security services subsector, large enterprises accounted for 58.4 % of sectoral value added in the EU ⁽¹⁷⁾, while the corresponding proportion for the EU's ⁽¹⁸⁾ industrial cleaning subsector was 49.3 %. Labour recruitment and provision of personnel sector (NACE Group 74.5, see Subchapter 22.5) was the only activity among the business services to report a higher proportion of EU-25 value added being generated by large enterprises in 2003.

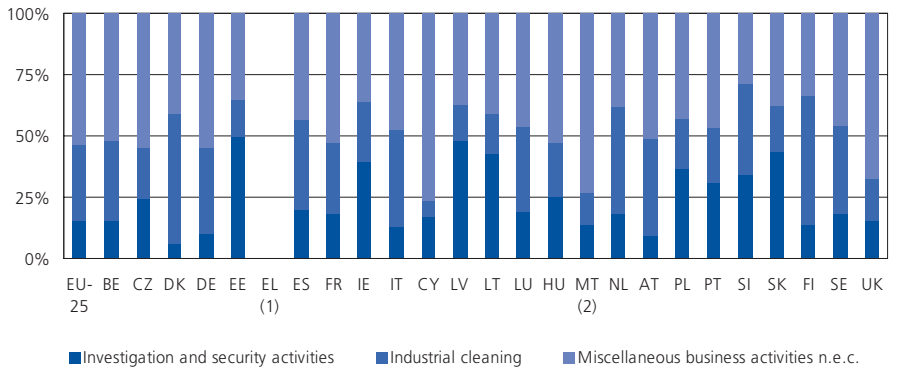
⁽¹⁷⁾ EU average, 2003; Malta, 2002; Belgium, Denmark, Greece, Cyprus, Luxembourg and Austria, not available.

⁽¹⁸⁾ EU average, 2003; Ireland, Malta and Slovakia, 2002; Estonia and Greece, not available.

STRUCTURAL PROFILE

Value added in the EU-25's other business services sector (NACE Groups 74.6 to 74.8) was EUR 134.4 billion in 2003, 19.1 % of the business services total. Its contribution to business services employment was 5.8 million persons or a 32.2 % share of the total. Of the three subsectors at the NACE group level, the miscellaneous business activities (NACE Group 74.8) subsector was the largest in value added terms (EUR 72.0 billion), with 53.6 % of the sectoral total. However, industrial cleaning (NACE Group 74.7) had the largest workforce of the three subsectors, employing 2.8 million persons, compared with 2.1 million for

Figure 22.10 Other business services (NACE Groups 74.6, 74.7 and 74.8) Breakdown of sectoral value added, 2003 (%)



(1) Not available.
 (2) 2002.
 Source: Eurostat (SBS)

Table 22.21

Other business services (NACE Groups 74.6, 74.7 and 74.8)**Value added and employment: ranking of the top 5 Member States, 2003**

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	United Kingdom (32 125.1)	23.9	Germany (1 211.7)	20.8	Italy (5.9)	Germany (10.7)
2	Germany (26 517.8)	19.7	United Kingdom (1 035.6)	17.8	United Kingdom (5.7)	Spain (10.0)
3	France (19 855.3)	14.8	Spain (726.9)	12.5	Spain (5.3)	Italy (8.9)
4	Italy (15 684.8)	11.7	Italy (697.8)	12.0	France (5.0)	Hungary (8.8)
5	Spain (12 046.8)	9.0	France (630.6)	10.8	Czech Republic (5.0)	Poland (8.5)

(1) Malta, 2002; Greece, not available.

(2) Lithuania and Malta, 2002; Greece and Cyprus, not available.

Source: Eurostat (SBS)

COSTS, PRODUCTIVITY AND PROFITABILITY

An analysis of labour and productivity ratios for the EU-25's other business services sector (NACE Groups 74.6 to 74.8) shows a situation of relatively low average personnel costs and apparent labour productivity. In 2003, apparent labour productivity was EUR 23 100 per person employed and average personnel costs were EUR 18 300 per employee, in both cases lower than any of the other business services sectors presented in Subchapters 22.1 to 22.5. Among the three subsectors, these two indicators were lowest in industrial cleaning (NACE Group 74.7) and were highest in miscellaneous business activities (NACE Group 74.8), where they nevertheless remained below the business services average.

The combination of these two indicators resulted in a wage adjusted labour productivity ratio of 126.0 % for the EU-25's other business services sector in 2003, the same rate as the business services average. The other business services sector recorded a gross operating rate of 15.1 %, which was a little below the business services average of 17.3 %. Among the three subsectors, these two indicators were lowest for investigation and security activities (NACE Group 74.6), and (once again) highest for miscellaneous business activities.

Table 22.22

Computer and related activities (NACE Division 72)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million) (2)	295 000	7 467	2 392	6 002	54 685	140	:	16 251	39 701	6 211	35 640	108	117	180	762	2 400	70
Production (EUR million)	:	7 131	1 900	5 870	47 303	119	:	13 083	37 402	5 243	34 128	95	102	140	581	1 395	66
Value added at factor cost (EUR million) (2)	150 000	3 312	953	2 889	29 577	56	:	7 615	19 874	2 361	15 575	65	64	55	283	622	40
Gross operating surplus (EUR million) (2)	46 300	844	388	638	9 894	13	:	1 685	1 973	1 332	6 165	18	25	22	19	220	21
Purchases of goods and services (EUR million)	:	4 177	1 490	3 214	26 956	82	:	8 873	20 032	3 856	20 045	42	54	131	496	1 691	30
Gross investment in tangible goods (EUR million)	:	300	71	190	2 649	5	:	493	910	103	3 151	2	9	8	6	102	2
Number of persons employed (thousands) (2)	2 490	49	49	39	368	4	:	179	323	24	357	2	5	6	5	46	2
Personnel costs (EUR million) (2)	104 000	2 468	565	2 251	19 683	43	:	5 931	17 901	1 028	9 410	48	39	33	264	401	19
App. labour productivity (EUR thous./pers. emp.) (2)	60.3	68.0	19.4	73.5	80.3	14.9	:	42.4	61.6	98.2	43.7	39.3	13.3	9.8	60.1	13.5	26.5
Average personnel costs (EUR thous./employee) (2)	48.9	63.8	16.4	60.7	58.6	12.6	:	36.6	56.0	47.7	38.5	29.0	8.4	6.5	60.7	11.1	18.9
Wage adjusted labour productivity (%) (2)	123.0	106.7	118.3	121.1	137.0	118.9	:	115.9	110.0	205.8	113.4	135.4	158.8	150.8	99.0	121.9	140.7
Gross operating rate (%) (2)	15.7	11.3	16.2	10.6	18.1	9.0	:	10.4	5.0	21.5	17.3	16.4	21.6	12.1	2.4	9.2	29.6
Investment per person employed (EUR thousand)	:	6.2	1.4	4.8	7.2	1.3	:	2.7	2.8	4.3	8.8	1.3	1.8	1.5	1.4	2.2	1.6
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million)	13 235	5 525	3 281	1 574	581	427	4 067	13 558	74 528	165	:	667	:	:	:	5 149	8 808
Production (EUR million)	12 432	4 302	2 732	1 379	430	355	3 912	11 533	69 984	147	:	517	:	:	:	4 799	8 851
Value added at factor cost (EUR million)	6 891	2 496	1 140	643	210	162	2 163	6 027	43 851	59	:	279	:	:	:	2 527	4 533
Gross operating surplus (EUR million)	1 583	690	600	120	66	57	406	487	16 076	25	:	159	:	:	:	436	380
Purchases of goods and services (EUR million)	4 989	3 055	2 105	966	356	265	1 968	7 737	30 509	107	:	414	:	:	:	2 652	4 315
Gross investment in tangible goods (EUR million)	267	184	98	116	19	13	92	379	2 777	12	:	36	:	:	:	158	:
Number of persons employed (thousands)	115	46	71	20	7	9	37	109	589	11	:	28	:	:	:	36	52
Personnel costs (EUR million)	5 308	1 806	541	523	144	106	1 757	5 539	27 775	35	:	120	:	:	:	2 091	4 153
App. labour productivity (EUR thous./pers. emp.)	59.7	54.5	16.0	32.8	30.2	17.1	58.9	55.4	74.5	5.3	:	10.0	:	:	:	70.7	86.5
Average personnel costs (EUR thous./employee)	50.6	52.1	13.7	28.6	24.3	11.4	49.0	61.9	53.1	4.0	:	4.7	:	:	:	66.2	:
Wage adjusted labour productivity (%)	118.0	104.7	117.0	115.0	124.2	150.3	120.2	89.4	140.2	131.8	:	215.1	:	:	:	106.9	:
Gross operating rate (%)	12.0	12.5	18.3	7.6	11.3	13.3	10.0	3.6	21.6	14.9	:	23.9	:	:	:	8.5	4.3
Investment per person employed (EUR thousand)	2.3	4.0	1.4	5.9	2.7	1.3	2.5	3.5	4.7	1.0	:	1.3	:	:	:	4.4	:

(1) Malta, 2002.

(2) EU-25, rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

Table 22.23

Other business activities (NACE Division 74)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million)	1 087 638	41 854	10 482	16 726	172 981	642	:	70 676	196 986	11 329	125 366	618	537	721	2 742	8 504	277
Production (EUR million)	:	37 652	10 318	15 478	159 359	604	:	53 810	189 503	8 796	113 780	611	499	734	2 388	5 249	287
Value added at factor cost (EUR million)	552 721	15 091	3 969	8 526	107 452	277	:	37 451	87 991	5 844	51 000	409	248	292	1 623	2 281	209
Gross operating surplus (EUR million)	192 644	4 580	2 042	2 022	42 384	77	:	12 630	10 002	2 637	27 737	196	133	132	412	874	151
Purchases of goods and services (EUR million)	:	26 572	6 739	8 714	75 936	358	:	34 298	114 571	5 493	74 450	197	297	454	1 093	5 656	59
Gross inv. in tangible goods (EUR million)	:	2 029	351	550	8 192	52	:	3 109	7 401	365	4 063	30	42	64	46	418	12
Number of persons employed (thousands)	15 633	345	354	205	2 881	30	:	1 618	2 041	121	1 723	11	31	36	41	275	9
Personnel costs (EUR million)	360 076	10 511	1 927	6 504	65 068	199	:	24 820	77 989	3 207	23 264	213	115	160	1 211	1 407	58
App. labour product. (EUR thous./pers. emp.)	35.4	43.8	11.2	41.6	37.3	9.2	:	23.1	43.1	48.3	29.6	36.4	8.0	8.0	39.3	8.3	24.4
Average pers. costs (EUR thous./employee)	27.7	38.0	9.1	34.3	25.5	6.9	:	18.9	38.9	30.7	24.0	23.9	4.0	4.8	31.2	7.1	11.5
Wage adjusted labour productivity (%)	127.6	115.1	123.2	121.4	146.2	132.9	:	122.3	110.8	157.5	123.3	152.2	197.1	168.0	125.8	117.4	212.2
Gross operating rate (%)	17.7	10.9	19.5	12.1	24.5	12.1	:	17.9	5.1	23.3	22.1	31.7	24.8	18.3	15.0	10.3	54.5
Investment per pers. employed (EUR thousand)	:	5.9	1.0	2.7	2.8	1.7	:	1.9	3.6	3.0	2.4	2.7	1.3	1.7	1.1	1.5	1.4
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million)	64 072	20 644	12 892	10 672	3 069	1 454	9 802	27 992	254 589	979	:	2 416	:	:	:	15 140	34 985
Production (EUR million)	63 392	16 102	12 491	10 412	2 325	1 363	9 149	28 033	253 209	925	:	2 232	:	:	:	15 029	32 782
Value added at factor cost (EUR million)	30 148	10 339	4 675	4 192	924	569	5 069	14 079	148 019	229	:	918	:	:	:	7 889	18 425
Gross operating surplus (EUR million)	6 475	3 397	2 471	803	297	263	1 306	2 734	57 953	72	:	493	:	:	:	2 058	2 738
Purchases of goods and services (EUR million)	17 332	10 884	8 572	6 752	2 128	883	4 883	14 442	105 194	778	:	1 528	:	:	:	7 337	14 334
Gross inv. in tangible goods (EUR million)	2 032	843	472	872	121	179	309	952	9 178	108	:	257	:	:	:	533	:
Number of persons employed (thousands)	895	251	632	256	47	52	127	355	3 108	99	:	183	:	:	:	155	236
Personnel costs (EUR million)	23 673	6 942	2 204	3 389	627	306	3 763	11 345	90 066	157	:	425	:	:	:	5 831	15 687
App. labour product. (EUR thous./pers. emp.)	33.7	41.2	7.4	16.4	19.8	10.9	39.8	39.7	47.6	2.3	:	5.0	:	:	:	51.0	78.1
Average pers. costs (EUR thous./employee)	27.9	33.2	6.3	14.4	16.2	5.9	32.0	42.2	32.0	2.0	:	2.4	:	:	:	42.1	:
Wage adjusted labour productivity (%)	120.7	124.0	118.3	113.7	122.0	182.9	124.4	94.0	149.0	117.4	:	206.0	:	:	:	120.9	:
Gross operating rate (%)	10.1	16.5	19.2	7.5	9.7	18.1	13.3	9.8	22.8	7.3	:	20.4	:	:	:	13.6	7.8
Investment per pers. employed (EUR thousand)	2.3	3.4	0.7	3.4	2.6	3.4	2.4	2.7	3.0	1.1	:	1.4	:	:	:	3.4	:

(1) Malta, 2002.

Source: Eurostat (SBS)

Real estate, renting and R&D



Like the business services enterprises covered in the previous chapter, real estate, renting and R&D enterprises enable their clients to focus on their own activities and reduce the need to occupy their own personnel on ancillary or supporting tasks or, in the case of real estate, renting and leasing services, to commit their own capital. It is widely believed that outsourcing of activities such as those covered by this and the previous chapter have increased within the EU and will continue to do so. While research and development enterprises provide essentially business services, a large part of real estate, renting and leasing services are provided to households.

The services included in the present chapter are covered by the European Commission's proposal for a directive on services in the internal market. The objective of the proposal is to achieve a genuine internal market in services by removing legal and administrative barriers to the development of service activities between Member States, facilitating the provision and use of cross-border services in the EU. At the time of writing, it is expected that this directive will be adopted in the near future - see Chapter 22 for more information.

STRUCTURAL PROFILE

Value added generated in 2003 by the EU-25 real estate, renting and R&D sector (NACE Divisions 70, 71 and 73) was EUR 290 billion and there were 3.3 million persons employed in this sector. As such, the real estate, renting and R&D sector accounted for just over one tenth (10.9 %) of value added in non-financial services (NACE Sections G to I and K), but less than half this much in terms of employment, just 4.8 % (see Table 23.1). Real estate (NACE Division 70) accounted for close to three quarters (72.8 %) of the sector's value added and a slightly smaller share of employment (71.7 %). Renting and leasing (NACE Division 71) generated more than one fifth

(21.0 %) of the sector's value added and also had a smaller share in employment terms (17.4 %). Consequently, the employment share of research and development activities (NACE Division 73) was considerably greater than its proportion of total value added, contributing 10.9 % of sectoral employment and just over half this level (6.2 %) in terms of sectoral value added - see Figure 23.1.

Germany, with EUR 77.3 billion of value added, accounted for the largest share (26.7 %) of the EU-25's real estate, renting and R&D sector in 2003 (see Table 23.2). The United Kingdom generated EUR 53.2 billion of value added and was the second largest contributor with a 18.3 % share. The only other Member States with a share of EU-25 value added close to or above 10 % were France (14.4 %) and Spain (9.9 %). In terms of its contribution to value added in the non-financial services sector (NACE Sections G to I and K), real estate, renting and R&D represented 18.9 % of the total in Denmark, 16.7 % in Sweden, and 14.4 % in Germany ⁽¹⁾. In most of the other Member States, real estate, renting and R&D generated between 5 % and 13 % of non-financial services value added, with Slovenia (2.9 %) well outside this range. In most Member States ⁽²⁾ real estate, renting and R&D accounted for a larger proportion of non-financial services employment than of value added, the exceptions being Latvia and Malta (2002).

⁽¹⁾ Lithuania, Luxembourg and Malta, 2002; Greece and Cyprus, not available.

⁽²⁾ Lithuania, Luxembourg and Malta, 2002; Greece and Cyprus, not available.

In this chapter, the term 'real estate, renting and R&D' is used to refer to the aggregate of three activities: real estate services (NACE Division 70), renting and leasing (NACE Division 71) and research and development (NACE Division 73), each of which are covered in turn by the three subchapters. As well as these three divisions, NACE Section K also covers computing services (NACE Division 72) and other business activities (NACE Division 74) which together form Chapter 22.

NACE

- 70: real estate activities;
- 70.1: real estate activities with own property;
- 70.2: letting of own property;
- 70.3: real estate activities on a fee or contract basis;
- 71: renting of machinery and equipment without operator and of personal and household goods;
- 71.1: renting of automobiles;
- 71.2: renting of other transport equipment;
- 71.3: renting of other machinery and equipment;
- 71.4: renting of personal and household goods n.e.c.;
- 73: research and development;
- 73.1: research and experimental development on natural sciences and engineering;
- 73.2: research and experimental development on social sciences and humanities.

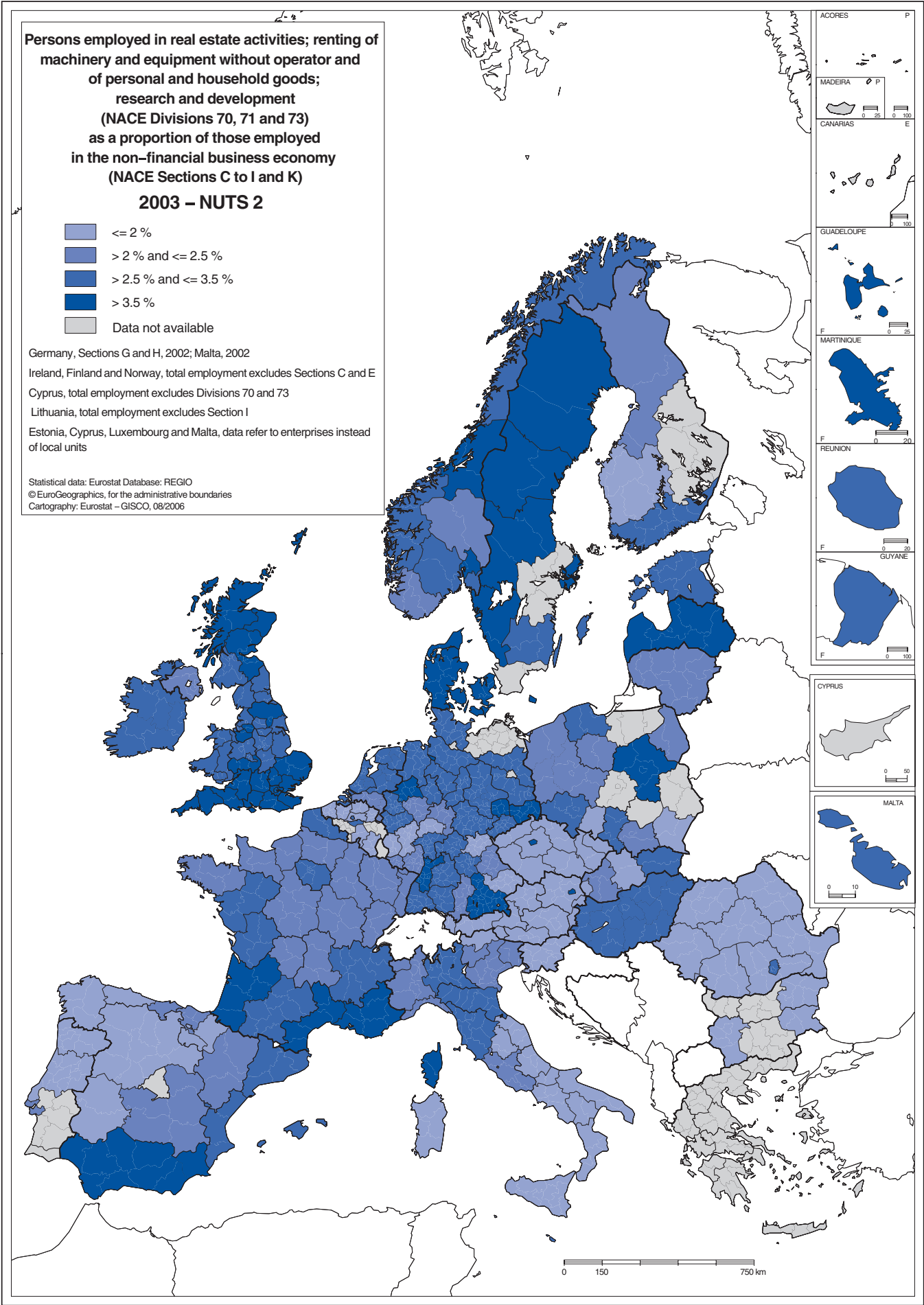


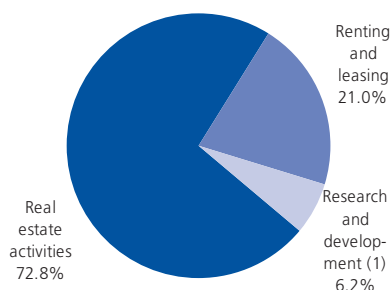
Table 23.1

Real estate, renting and research and development (NACE Divisions 70, 71 and 73)
Structural profile, EU-25, 2003

	Value added (EUR million)	Share of non-financial services value added (%)	Number of persons employed (thousands)	Share of non-financial services employment (%)
Real estate, renting and research and development (1)	290 000	10.9	3 300	4.8
Real estate activities	211 499	8.0	2 371	3.4
Renting and leasing	61 087	2.3	575	0.8
Research and development (1)	18 000	0.7	360	0.5

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

Figure 23.1

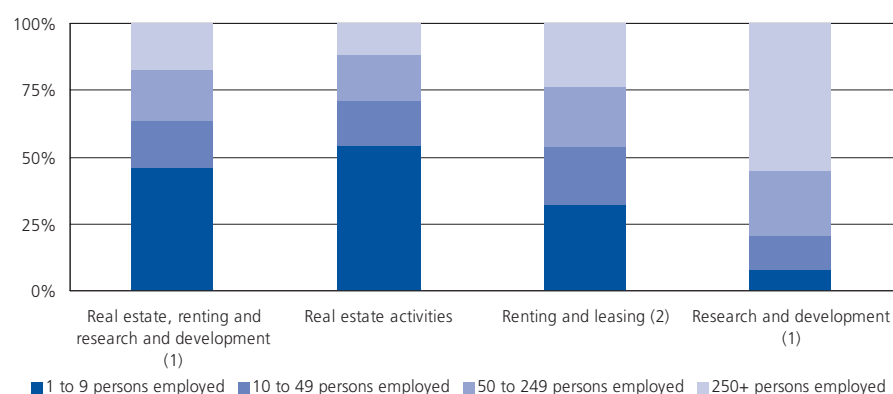
Real estate, renting and research and development (NACE Divisions 70, 71 and 73)
Breakdown of sectoral value added, EU-25, 2003 (%)


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

The regional specialisation of the real estate, renting and R&D sector is shown on the map on page 396 which is based on the non-financial business economy employment share of this sector. The most specialised regions (at the level of detail shown in the map) were Latvia (considered as one region at the level of detail in the map) and inner London. Many other regions in the United Kingdom were specialised in this sector, as were nearly all Swedish regions.

In 2003, a breakdown of EU-25 value added in

Figure 23.2

Real estate, renting and research and development (NACE Divisions 70, 71 and 73)
Share of value added by enterprise size class, EU-25, 2003 (%)


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

(2) Rounded estimates based on non-confidential data for 1 to 9 and for 10 to 49 persons employed.
Source: Eurostat (SBS)

the real estate, renting and R&D sector showed that micro enterprises (with less than 10 persons employed) generated 45.7 % of the total (see Figure 23.2), a much higher proportion than the non-financial services average (27.3 %). Micro enterprises' share of employment was higher still, at 47.5 %. Nevertheless, the size class structures of the three subsectors covered in Subchapters 23.1 to 23.3 were quite different from each other. The dominance of micro enterprises was particularly pronounced in real estate services where they generated more than half of value

added (54.0 %), whereas micro enterprises' share was closer to the non-financial services average in renting and leasing activities (32.4 %), and very low in the research and development subsector (8.0 %). Indeed, large enterprises (with 250 or more persons employed) dominated the EU-25's research and development sector, generating 55.3 % of the sector's value added and employing 47.6 % of its workforce in 2003.

Table 23.2

Real estate, renting and research and development (NACE Divisions 70, 71 and 73)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national industrial value added (%) (2)	Highest share of national industrial employment (%) (2)
1	Germany (77 342.0)	26.7	United Kingdom (674.4)	20.4	Denmark (18.9)	Latvia (11.2)
2	United Kingdom (53 208.1)	18.3	Germany (577.3)	17.5	Sweden (16.7)	Sweden (7.1)
3	France (41 730.1)	14.4	France (424.5)	12.9	Germany (14.4)	Estonia (6.6)
4	Spain (28 790.8)	9.9	Spain (377.2)	11.4	Spain (12.6)	Denmark (6.0)
5	Netherlands (16 252.7)	5.6	Italy (303.9)	9.2	Austria (11.6)	Hungary (5.4)

(1) Luxembourg and Malta, 2002; Greece and Cyprus, not available.

(2) Lithuania, Luxembourg and Malta, 2002; Greece and Cyprus, not available.

Source: Eurostat (SBS)

Table 23.3

Real estate, renting and research and development (NACE Divisions 70, 71 and 73)
Labour force characteristics, 2005

	Male		Full-time		Breakdown by age (% share of total)		
	Proportion of those employed (%)	Index (services=100)	Proportion of those employed (%)	Index (services=100)	< 30 years	30-49 years	50+ years
EU-25	54.4	98.1	81.1	101.7	19.7	51.7	28.6
BE	56.6	96.9	78.2	100.0	22.8	54.1	23.1
CZ	60.8	113.3	92.5	98.3	20.1	44.1	35.8
DK	60.6	103.8	80.3	106.8	17.9	52.3	29.9
DE	54.4	103.5	72.8	100.5	18.6	52.4	29.1
EE	49.8	100.0	76.8	84.0	11.6	36.2	52.2
EL	53.5	88.7	95.4	99.6	28.1	55.0	16.9
ES	54.1	98.2	86.7	101.3	30.9	53.5	15.6
FR	50.8	91.0	85.7	101.9	18.9	53.1	28.0
IE	57.4	108.7	87.2	106.4	34.4	46.9	18.6
IT	60.2	100.4	83.2	98.9	20.0	59.9	20.1
CY	59.8	111.1	88.8	97.0	25.6	48.1	26.3
LV	48.8	103.4	90.3	96.0	15.4	40.6	44.0
LT	56.8	110.7	93.4	99.3	:	39.5	42.8
LU	56.3	96.5	85.2	99.2	:	62.1	:
HU	45.9	87.1	90.1	94.7	14.9	47.8	37.3
MT	:	:	:	:	:	:	:
NL	59.9	103.6	65.0	118.3	20.2	54.3	25.5
AT	47.9	96.0	66.5	89.4	17.2	55.5	27.3
PL	46.7	86.8	88.7	98.8	11.8	50.3	37.9
PT	55.2	99.6	88.8	95.5	25.6	42.2	32.2
SI	58.7	111.8	87.6	95.6	20.3	58.9	20.9
SK	55.9	108.4	94.6	97.4	13.2	50.4	36.4
FI	55.6	103.7	87.3	106.7	21.3	47.2	31.6
SE	65.3	109.0	82.7	107.2	15.0	50.9	34.0
UK	54.5	98.2	78.9	110.1	20.1	48.9	30.9

Source: Eurostat (LFS)

LABOUR FORCE CHARACTERISTICS

The real estate, renting and R&D sector's (NACE Divisions 70, 71 and 73) workforce in the EU-25 can be characterised as a fairly typical services sector in terms of its share of male workers and full-time workers, although there are some considerable variations when the labour force is characterised by its age profile or when studying the subsectors in more detail.

In 2005, according to the Labour Force Survey (see Table 23.3), 54.4 % of the persons employed in the sector as a whole were male, just 1.6 percentage points lower than the non-financial services (NACE Sections G to I and K) average. However, the proportion of male workers within the renting and leasing subsector was considerably higher at 68.6 %, and in every Member State this proportion was above the respective non-financial services sector average. In contrast, only about half of the workforce (49.7 %) in the real estate subsector was male. The workforce in the research and development subsector was characterised by a high proportion of full-time employment (87.2 %), notably higher than the other two subsectors and the non-financial services average (79.2 %). In terms of age profile, there was a much higher proportion of the real estate, renting and R&D sector that were aged 50 or over (28.6 %) than the average for non-financial services (21.1 %). This difference in profile reflected, to a large degree, the fact that almost one third (32.3 %) of workers in real estate activities were aged 50 or more in 2005.

Table 23.4

Real estate, renting and research and development (NACE Divisions 70, 71 and 73)**Cost, productivity and profitability indicators, ranking of the top 5 Member States compared to EU-25 averages, 2003**

Rank	Investment in tangible goods relative to total operating costs (%) (1)	Purchases of goods and services as a share of total operating costs (%) (2)	Personnel costs as a share of total operating costs (%) (2)	Apparent labour productivity (EUR thousand) (3)	Average personnel costs (EUR thousand) (3)	Wage adjusted labour productivity (%) (3)	Gross operating rate (%) (3)
EU-25	44.1	81.6	18.4	88.0	30.8	285.0	36.7
1	Austria (119.7)	Italy (91.4)	United Kingdom (30.5)	Denmark (177.1)	Luxembourg (49.9)	Denmark (510.1)	Denmark (75.7)
2	Portugal (107.3)	Spain (91.3)	Latvia (26.7)	Austria (154.1)	Belgium (45.7)	Austria (414.9)	Germany (51.5)
3	Denmark (102.2)	Poland (88.9)	Netherlands (24.9)	Germany (134.0)	Sweden (45.4)	Germany (362.2)	Malta (50.4)
4	Lithuania (86.3)	Hungary (88.9)	Germany (22.6)	Belgium (127.4)	France (38.8)	Estonia (355.7)	Austria (43.1)
5	Finland (70.8)	Portugal (88.7)	Slovakia (22.5)	Netherlands (120.6)	Netherlands (38.8)	Malta (344.2)	Ireland (40.2)

(1) Malta, 2002; Greece, Cyprus and Luxembourg, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(2) Luxembourg and Malta, 2002; Greece and Cyprus, not available; EU-25 is an EU average based on available data for 2002 and 2003.

(3) Luxembourg and Malta, 2002; Greece and Cyprus, not available; EU-25 rounded estimate based on non-confidential data.

Source: Eurostat (SBS)

COSTS, PRODUCTIVITY AND PROFITABILITY

The three subsectors within the real estate, renting and R&D sector were all relatively capital intensive services, but to quite different degrees: this can be seen, for example, from the ratio of gross tangible investment to gross operating expenditure. In the renting and leasing subsector gross tangible investment was the equivalent to 85.5 % of operating costs in the EU ⁽³⁾. Real estate activities also had very high tangible investment, as the EU ⁽⁴⁾ average in this subsector was equivalent to 39.4 % of operating costs. Even in the research and development subsector, where the EU ⁽⁵⁾ average for this ratio was the lowest for the subsectors covered in this chapter at 9.1 %, it was still well above the non-financial services average.

⁽³⁾ EU average, 2003; Malta, 2002; excluding Greece.⁽⁴⁾ EU average, 2003; Malta, 2002; excluding Greece, Cyprus and Luxembourg.⁽⁵⁾ EU average, 2003; Cyprus and Malta, 2002; excluding Greece and Luxembourg.

In 2003, apparent labour productivity for the EU-25 real estate, renting and R&D sector was around EUR 88 000 per person employed (see Table 23.4), more than double the non-financial services average (NACE Sections G to I and K) of EUR 38 200. Average personnel costs were also high, but not to the same extent: around EUR 31 000 per employee in real estate, renting and R&D compared with EUR 25 900 (2002) for non-financial services. It should however be noted that average personnel costs for the research and development subsector were much higher, at EUR 48 500 per employee. The combination of particularly high apparent labour productivity and slightly higher than average personnel costs led to a wage adjusted labour productivity ratio of 285 % for the real estate, renting and R&D sector in 2003 for the EU-25, well above the non-financial services average (145.9 %, 2002). This ratio was highest for the renting and leasing subsector (378.2 %), lower in the real estate subsector (318.4 %), and lowest in the research and development subsector (103 %) where the value added per person employed was only just greater than average personnel costs per employee. Care has to be taken with the ratios based on value added for the renting and leasing subsector, as in this subsector enterprises are the owner of a good that they rent or lease, and their financial and depreciation charges may constitute the main element of their total costs: a similar situation is true for some parts of the real estate sector. These costs or charges are not considered when calculating gross value added and gross operating surplus.

The gross operating rate shows the percentage relationship between the gross operating surplus (value added minus personnel costs) and turnover. The gross operating rate of the EU-25's real estate, renting and R&D sector was 37 % in 2003, more than three times as high as the non-financial services average of 11.2 % in 2002. This rate was particularly high for the renting and leasing (41.4 %) and real estate (38.1 %) subsectors, while it was just 5 % in the research and development subsector, the lowest rate for this indicator among the non-financial services NACE divisions.

23.1: REAL ESTATE SERVICES

Within NACE, real estate services are covered by Division 70. Real estate activities are a service activity, classified alongside a range of business services within NACE Section K. However, some parts of the activity have a close relationship with the construction sector (Chapter 15) and others with architectural activities (Subchapter 22.3).

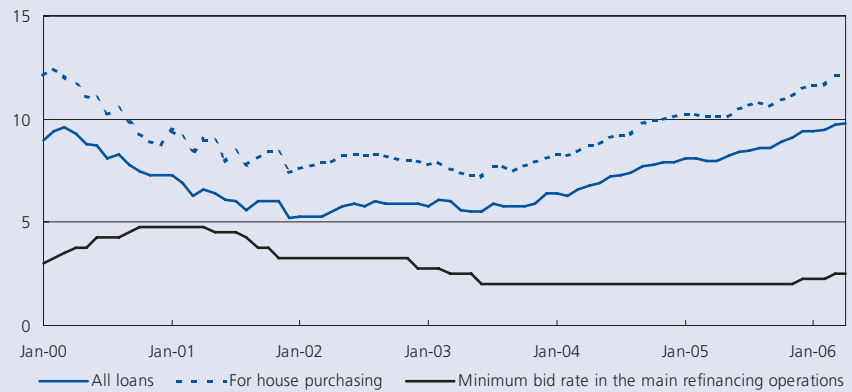
The activities of real estate services are very diverse: real estate agents sell on a commission basis; traders buy and sell property; surveyors, valuers, facilities and estate managers provide professional services; and finally owners let property. Most of these activities are related to the secondary market concerned with existing property, although some, such as property developers are active in the primary market closely related to construction. The wide range of real estate service activities have very different cost structures and revenue streams and care has to be taken when comparing them, particularly when trying to measure the size of each subsector or their labour productivity. In particular, when enterprises are the owner of a good that they rent or lease, their financial and depreciation charges may constitute the main element of their total costs, but these are not considered when calculating gross value added, gross operating surplus or indicators of productivity or profitability that are based on these.

A wide range of information is available concerning residential property and one indicator of the level of activity in this market is lending for house purchases compiled by the European Central Bank (ECB). Figure 23.3 shows how the level of such lending, although increasing, was doing so at a progressively weaker rate until it grew by 7.4 % in December 2001. It then grew to 8.3 % in August 2002, before falling back somewhat to 7.2 % by June 2003. For nearly three years after this, the growth in lending for house purchases increased, to reach an annual rate of 12.1 % by April 2006. Table 23.5 from the EMF ⁽⁶⁾ gives an indication of the level of housing market activity, through the number of housing transactions; note that some figures have been revised since previous editions of the present publication.

⁽⁶⁾ EMF (European Mortgage Federation), more information at: <http://www.hypo.org>.

Figure 23.3

Annual growth rate for national stocks of loans by other MFIs (credit institutions, money market funds and other institutions) to households and individual enterprises, euro area (%)



Source: European Central Bank (ECB)

Table 23.5

Number of housing transactions (thousands)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BE (1)	102	109	108	115	108	111	116	120	121	118
CZ	:	:	:	:	:	:	:	:	:	:
DK (2)	77	78	76	71	71	68	68	71	80	83
DE	633	569	623	567	483	498	500	492	434	424
EE	23	28	24	26	28	31	29	34	36	47
EL	:	:	:	:	:	:	:	:	:	:
ES	:	:	:	:	:	:	:	:	:	:
FR (3)	734	701	780	863	:	:	:	:	:	:
IE (4)	61	65	69	79	81	69	93	98	104	120
IT	484	524	576	640	688	661	754	807	804	833
CY	:	:	:	:	:	:	:	:	:	:
LV	:	:	:	:	22	32	41	51	64	69
LT	:	:	:	:	:	:	:	:	:	:
LU	4	4	4	5	5	5	5	5	5	:
HU	:	:	:	:	296	240	353	298	261	171
MT	:	:	:	:	:	:	:	:	:	:
NL (5)	259	281	280	292	269	265	269	260	:	:
AT	:	:	:	:	:	2	4	5	5	5
PL	294	321	293	321	270	262	243	:	:	:
PT	:	:	:	:	:	:	:	:	:	:
SI	:	:	:	:	:	:	:	:	:	:
SK	:	:	:	:	:	:	:	:	:	:
FI	83	81	90	94	69	69	68	71	74	81
SE (6)	47	55	49	57	51	51	52	54	56	58
UK (7)	1 242	1 440	1 347	1 470	1 431	1 457	1 586	1 344	1 785	1 529

(1) Excluding transactions on new dwellings and own constructions.

(2) Excluding own constructions.

(3) New apartments as principal or secondary residence or residential.

(4) Estimate based on number of mortgage loan approvals.

(5) Includes commercial transactions.

(6) One- and two-dwelling buildings.

(7) England and Wales.

Source: European Mortgage Federation and national associations.

Table 23.6

Real estate activities (NACE Division 70)**Value added and employment: ranking of the top 5 Member States, 2003**

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	Germany (57 313.0)	27.1	United Kingdom (414.2)	17.5	Denmark (17.1)	Latvia (9.7)
2	United Kingdom (33 845.4)	16.0	Germany (409.3)	17.3	Sweden (14.4)	Estonia (5.9)
3	France (28 849.9)	13.6	France (306.3)	12.9	Germany (10.7)	Sweden (5.4)
4	Spain (23 678.5)	11.2	Spain (286.5)	12.1	Spain (10.4)	Denmark (4.7)
5	Italy (12 608.6)	6.0	Italy (245.4)	10.4	Estonia (9.5)	Hungary (4.4)

(1) Luxembourg and Malta, 2002; Greece and Cyprus, not available.

(2) Lithuania, Luxembourg and Malta, 2002; Greece and Cyprus, not available.

Source: Eurostat (SBS)

STRUCTURAL PROFILE

The EU-25's real estate services sector generated EUR 211.5 billion of value added in 2003 and employed 2.4 million persons. As such, its value added was close to three quarters (72.8 %) of the real estate, renting and R&D total and 8.0 % of non-financial services value added. Its contribution to non-financial services employment was much smaller, at just 3.4 %. The largest real estate services' sector in the EU-25 was found in Germany (27.1 % of the EU-25 total), far ahead of the United Kingdom (16.0 %) and France (13.6 %), while the Spanish real estate sector contributed 11.2 % of EU-25 value added, considerably more than the Italian share of 6.0 % - see Table 23.6. As a proportion of value added in non-financial services, the real estate services sector was largest ⁽⁷⁾ in Denmark (17.1 %), Sweden (14.4 %), Germany (10.7 %) and Spain (10.4 %) in 2003. This sector contributed less to non-financial services in employment terms than in value added terms in all Member States, except Latvia and Slovakia.

⁽⁷⁾ Lithuania, Luxembourg and Malta, 2002; Greece and Cyprus, not available.

COSTS, PRODUCTIVITY AND PROFITABILITY

Average personnel costs in real estate services were EUR 28 000 per employee in the EU-25 in 2003. In the majority of the Member States ⁽⁸⁾, average personnel costs were close to the non-financial services' (NACE Sections G to I and K) average, with the Netherlands recording average personnel costs that were notably higher, while Malta (2002) recorded atypically low personnel costs within the real estate services sector. Apparent labour productivity was EUR 89 200 per person employed for real estate services in the EU-25 in 2003. The combination of high apparent labour productivity yet typical average personnel costs resulted in a very high EU-25 wage adjusted labour productivity ratio of 318.4 %, which was more than twice as high as the non-financial services average in 2002 (145.9 %). Alongside the high wage adjusted labour productivity ratio, real estate services recorded a high gross operating rate: the gross operating surplus of EUR 166.2 billion was equivalent to 38.1 % of turnover in the EU-25 in 2003; this was 3.4 times as high as the average for non-financial services (11.2 %, 2002). Indeed, the gross operating rate for real estate services was the second highest recorded for any NACE division in the non-financial services economy ⁽⁹⁾, just 3.3 percentage points below the level for renting and leasing activities (see the next subchapter).

⁽⁸⁾ Lithuania, Luxembourg and Malta, 2002; Greece and Cyprus, not available.

⁽⁹⁾ NACE Divisions 50 to 52, 2002.

23.2: RENTING AND LEASING

This subchapter covers the activities of renting of machinery and equipment without operators and the renting of personal and household goods (NACE Division 71). The most important items that are rented or leased are transport equipment (motor vehicles, ships, aircraft, etc.) and agricultural, construction or office equipment. It should be noted that a distinction is generally made between operational leasing (or long-term rental), which is included in this subchapter, and financial leasing which is considered as a special form of credit granting and is hence covered as part of the financial services sector (see Chapter 24). The renting and leasing of real estate is covered in Subchapter 23.1.

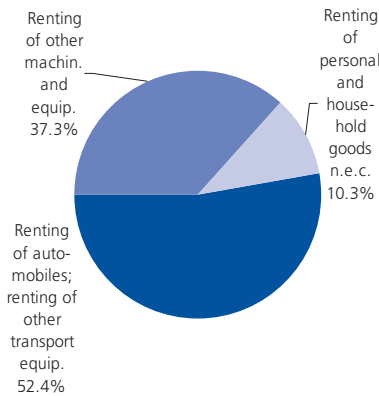
In general, durable goods can be purchased, leased or rented. In the case of leasing, the two parties involved in the transaction are the lessor and the lessee (the person or enterprise that uses the good in leasing). In exchange for the transfer of user rights, the lessor receives payments. Leasing, contrary to renting, often foresees the possibility of the acquisition of the good at the end of the leasing term; renting is also usually for shorter periods than leasing.

The use of the Internet for on-line reservation of renting has become important, for example, the renting of transport equipment for short periods.

STRUCTURAL PROFILE

Value added in EU-25 renting and leasing activities (NACE Division 71) was EUR 61.1 billion in 2003, of which 24.8 % was generated in Germany, 23.8 % in the United Kingdom and 17.5 % in France, a combined share of 66.1 % compared with a 56.4 % share for the same countries in non-financial services (NACE Sections G to I and K) value added. In 2003, EU-25 value added in renting and leasing activities accounted for 21.0 % of the wealth generated by the real estate, renting and R&D sector (NACE Divisions 70, 71 and 73) and

Figure 23.4
Renting and leasing (NACE Division 71) Breakdown of sectoral value added, EU-25, 2003 (%)



Source: Eurostat (SBS)

2.3 % of all non-financial services value added; its share of employment was much lower, accounting for 17.4 % of the real estate, renting and R&D sector and just 0.8 % of the non-financial services workforce.

Austria, was particularly specialised in the renting and leasing sector ⁽¹⁰⁾ which accounted for 3.2 % of value added in non-financial services in 2003, as were Germany, the Benelux countries and France to a lesser extent. In these terms, Slovenia was the least specialised in this sector, as value added from renting and leasing activities contributed just 0.1 % to non-financial services value added.

The renting of automobiles and other transport equipment (NACE Groups 71.1 and 71.2) generated EUR 32.0 billion of value added in the EU-25 in 2003, which was 52.4 % of the total for the renting and leasing sector. The

⁽¹⁰⁾ Lithuania and Malta, 2002; Greece and Cyprus, not available.

renting of other machinery and equipment subsector (NACE Group 71.3) generated 37.3 % of the renting and leasing total, and the renting of personal and household goods subsector (NACE Group 71.4) accounted for the remaining 10.3 % of value added.

COSTS, PRODUCTIVITY AND PROFITABILITY

The ratio of gross tangible investment to gross operating expenditure in the renting and leasing sector was 85.5 % in the EU ⁽¹¹⁾. This was, by far, the highest value for this ratio among the non-financial services NACE divisions, and also higher than for any of the industrial NACE divisions. Reflecting this high level of use of capital, an extremely high level of apparent labour productivity was reported for EU-25 renting and leasing activities, the highest across all the NACE divisions that compose non-financial services ⁽¹²⁾. Indeed, apparent labour productivity was EUR 106 300 per person employed in 2003, and was particularly high for the renting of automobiles and other transport equipment (NACE Groups 71.1 and 71.2) subsector, at EUR 194 200 per person employed. The wage adjusted labour productivity ratio was 378.2 % for the EU-25's renting and leasing sector in 2003, again the highest of any NACE division in non-financial services. These relatively high values can, in part, be explained by the specific nature of this activity, where the main costs of enterprises are likely to be financial ones covering borrowing and depreciation charges, neither of which impact on gross value added (nor on the gross operating surplus). The gross operating rate in the EU-25's renting and leasing sector in 2003 was 41.4 %, 3.7 times as high as the non-financial services average in 2002.

⁽¹¹⁾ EU average, 2003; Malta, 2002; excluding Greece.

⁽¹²⁾ NACE Divisions 50 to 52, 2002.

Table 23.7

Renting and leasing (NACE Division 71)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	Germany (15 177.1)	24.8	United Kingdom (163.2)	28.4	Austria (3.2)	Ireland (1.4)
2	United Kingdom (14 566.9)	23.8	France (84.4)	14.7	Germany (2.8)	United Kingdom (1.3)
3	France (10 661.7)	17.5	Germany (82.7)	14.4	Belgium (2.8)	Spain (1.0)
4	Spain (4 432.3)	7.3	Spain (73.4)	12.8	France (2.7)	France (1.0)
5	Netherlands (3 833.5)	6.3	Italy (34.6)	6.0	Luxembourg (2.7)	Sweden (0.9)

(1) Malta, 2002; Greece, not available.

(2) Lithuania and Malta, 2002; Greece and Cyprus, not available.

Source: Eurostat (SBS)

23.3: RESEARCH AND DEVELOPMENT

Research and development (R&D) activities are classified within NACE according to the field of investigation of the research. A distinction is made between research and experimental development within natural sciences and engineering (NACE Group 73.1) and research and experimental development within social sciences and humanities (NACE Group 73.2). Note that market research activities are not covered and that these are included as part of Subchapter 22.2. Furthermore, it should be noted that the statistics presented for the research and development sector in this subchapter concern exclusively those enterprises whose main activity consists of carrying out R&D activities, and thus excludes R&D departments of universities, public administrations and enterprises whose main activity is otherwise classified.

In 2000, the European Commission proposed to create a European Research Area and this was endorsed at the European Council in Lisbon the same year, which set the EU the objective of becoming the 'most competitive and dynamic knowledge-based economy in the world by 2010'. Increased levels of research and development expenditure are seen as one of the means to achieve this, and in 2002 it was agreed that investment in R&D should reach 3 % of GDP by 2010. To assist in reaching this goal, in October 2005 the European Commission put forward an integrated innovation and research action plan. It launches 19 initiatives (some existing) to promote innovation and research, such as redeployment of state aid and improved efficiency of intellectual property protection. It is particularly focused on improving the conditions for private sector investment in R&D and innovation.

STRUCTURAL PROFILE

Value added in the EU-25's research and development activities (NACE Division 73) was EUR 18 billion in 2003, making this the smallest of the three NACE divisions that compose the real estate, renting and R&D sector, with a 6.2 % share of sectoral value added and a 0.7 % share of non-financial services (NACE Sections G to I and K) value added. The level of employment for EU-25 research and development activities was 360 000 persons in 2003, just over one tenth of the real estate, renting and R&D workforce, a significantly higher share than that recorded for value added.

Germany had the largest research and development sector in the EU-25 in 2003, having generated 27.0 % of the EU-25's value added, slightly more than the 26.6 % share of the United Kingdom. Only in a few Member States ⁽¹³⁾ did this sector's contribution to non-financial services value added exceed or approach 1 %, notably in Luxembourg (1.8 %, 2002), the Netherlands (1.2 %), Germany, Slovenia and the United Kingdom (all 0.9 %).

⁽¹³⁾ Lithuania, Luxembourg and Malta, 2002; Greece and Cyprus, not available.

COSTS, PRODUCTIVITY AND PROFITABILITY

One characteristic of its cost structure sets the research and development sector apart from many other non-financial services, and that is the very high share of personnel costs in total operating costs (again likely to be a result of the highly qualified labour force). In 2003 this share was 42.5 % on average in the EU's ⁽¹⁴⁾ research and development sector, approximately 2.7 times higher than the non-financial services average, a level only seen in computer services and other business activities.

Apparent labour productivity in the EU-25's research and development sector was approximately EUR 50 000 per person employed in 2003, slightly higher than average personnel costs (EUR 48 500 per employee). The relatively high average personnel costs resulted in a low wage adjusted labour productivity ratio, of just 103 % in 2003, indicating that value added per person employed was just 3 % higher than average personnel costs per employee. In seven of the Member States this ratio was below 100 % in 2003, most notably in the Nordic Member States, Italy and the United Kingdom ⁽¹⁵⁾. The very low wage adjusted labour productivity ratio reflected the fact that value added was only slightly higher than personnel costs in the EU-25, so that the gross operating surplus for the EU-25's research and development sector was very small, only 5 % of the turnover generated, less than half the non-financial services average in 2002 (11.2 %). The Nordic Member States, Slovakia and the United Kingdom all recorded negative gross operating rates for this sector as personnel costs exceeded value added.

⁽¹⁴⁾ EU average, 2003; Cyprus, Luxembourg and Malta, 2002; excluding Greece.

⁽¹⁵⁾ Cyprus, Lithuania, Luxembourg and Malta, 2002; Greece, not available.

Table 23.8

Research and development (NACE Division 73)
Value added and employment: ranking of the top 5 Member States, 2003

Rank	Highest value added (EUR million) (1)	Share in EU-25 value added (%) (1)	Highest number of persons employed (thousands) (1)	Share in EU-25 employment (%) (1)	Highest share of national non-financial services value added (%) (2)	Highest share of national non-financial services employment (%) (2)
1	Germany (4 851.9)	27.0	United Kingdom (97.0)	26.9	Luxembourg (1.8)	Luxembourg (1.4)
2	United Kingdom (4 795.8)	26.6	Germany (85.3)	23.7	Netherlands (1.2)	Slovakia (1.2)
3	France (2 218.5)	12.3	France (33.9)	9.4	Germany (0.9)	Netherlands (1.0)
4	Netherlands (1 692.3)	9.4	Netherlands (33.3)	9.3	Slovenia (0.9)	Latvia (0.9)
5	Italy (992.3)	5.5	Italy (23.9)	6.6	United Kingdom (0.9)	Sweden (0.8)

(1) Cyprus, Luxembourg and Malta, 2002; Greece, not available.

(2) Lithuania, Luxembourg and Malta, 2002; Greece and Cyprus, not available.

Source: Eurostat (SBS)

Table 23.9

Real estate activities (NACE Division 70)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million)	436 586	6 193	2 717	9 492	92 403	603	:	70 745	78 358	2 999	30 143	:	440	359	523	4 462	103
Production (EUR million)	:	5 382	2 658	12 222	85 604	446	:	47 561	75 433	2 488	35 174	:	443	386	249	2 642	105
Value added at factor cost (EUR million)	211 499	2 712	1 154	9 639	57 313	230	:	23 679	28 850	1 724	12 609	:	212	187	154	1 289	62
Gross operating surplus (EUR million)	166 212	2 148	857	8 534	48 340	173	:	18 621	19 774	1 481	11 366	:	133	131	109	948	55
Purchases of goods and services (EUR million)	:	3 476	1 548	5 173	38 345	389	:	66 936	46 436	1 400	20 196	:	233	210	334	3 194	44
Gross investment in tangible goods (EUR million)	:	1 372	1 399	7 962	18 942	221	:	14 147	24 148	662	6 135	:	240	241	:	1 538	20
Number of persons employed (thousands)	2 371	25	52	47	409	11	:	286	306	15	245	:	31	16	2	61	2
Personnel costs (EUR million)	45 288	564	297	1 104	8 973	57	:	5 058	9 076	244	1 242	:	78	56	45	342	7
App. labour productivity (EUR thous./pers. emp.)	89.2	108.8	22.1	204.1	140.0	20.3	:	82.7	94.2	115.7	51.4	:	6.9	11.7	91.9	21.0	25.4
Average personnel costs (EUR thous./employee)	28.0	36.8	8.3	31.7	36.3	5.5	:	23.7	38.1	33.2	30.0	:	3.2	3.6	34.7	7.0	6.3
Wage adjusted labour productivity (%)	318.4	295.6	267.3	644.7	386.1	366.3	:	349.3	247.5	348.6	171.5	:	213.5	324.8	264.8	300.0	400.7
Gross operating rate (%)	38.1	34.7	31.6	89.9	52.3	28.7	:	26.3	25.2	49.4	37.7	:	30.2	36.4	20.9	21.2	53.4
Investment per person employed (EUR thousand)	:	55.0	26.7	168.6	46.3	19.5	:	49.4	78.8	44.4	25.0	:	7.8	15.1	:	25.1	8.1
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million)	21 969	9 414	9 163	4 500	311	391	5 200	21 329	56 350	169	:	440	:	:	:	10 317	3 497
Production (EUR million)	21 647	8 142	10 144	4 128	288	363	5 205	21 539	59 458	169	:	474	:	:	:	10 266	3 474
Value added at factor cost (EUR million)	10 727	5 032	2 442	848	102	136	2 653	10 903	33 845	69	:	229	:	:	:	5 268	2 241
Gross operating surplus (EUR million)	7 998	4 058	1 348	427	57	64	1 996	8 707	24 075	43	:	167	:	:	:	4 399	926
Purchases of goods and services (EUR million)	11 936	4 921	9 089	3 921	226	252	2 626	11 176	25 163	118	:	212	:	:	:	3 938	1 232
Gross investment in tangible goods (EUR million)	4 584	6 609	1 182	4 184	23	189	2 643	9 392	13 176	127	:	319	:	:	:	5 238	:
Number of persons employed (thousands)	74	35	155	33	3	13	22	81	414	12	:	25	:	:	:	22	19
Personnel costs (EUR million)	2 729	974	1 094	421	44	72	656	2 196	9 770	26	:	62	:	:	:	869	1 315
App. labour productivity (EUR thous./pers. emp.)	145.6	144.7	15.7	25.4	31.7	10.2	122.4	134.0	81.7	5.5	:	9.3	:	:	:	235.1	117.1
Average personnel costs (EUR thous./employee)	40.5	34.5	8.3	18.5	16.5	5.5	33.4	42.3	29.6	2.6	:	2.7	:	:	:	45.3	:
Wage adjusted labour productivity (%)	359.8	419.6	190.0	137.4	192.0	184.7	366.9	316.4	276.3	212.7	:	343.3	:	:	:	518.8	:
Gross operating rate (%)	36.4	43.1	14.7	9.5	18.4	16.4	38.4	40.8	42.7	25.2	:	37.9	:	:	:	42.6	26.5
Investment per person employed (EUR thousand)	62.2	190.1	7.6	125.1	7.1	14.2	122.0	115.4	31.8	10.2	:	13.0	:	:	:	233.8	:

(1) Luxembourg and Malta, 2002.

Source: Eurostat (SBS)

Table 23.10

Renting and leasing (NACE Division 71)
Main indicators, 2003 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Turnover (EUR million)	115 104	4 365	453	1 798	23 196	69	:	8 696	21 294	967	6 108	68	45	37	416	550	33
Production (EUR million)	:	4 085	407	1 390	20 048	64	:	7 494	21 176	672	6 441	66	43	33	333	424	32
Value added at factor cost (EUR million)	61 087	2 016	211	769	15 177	30	:	4 432	10 662	404	2 286	41	18	15	195	298	18
Gross operating surplus (EUR million)	47 690	1 707	166	554	13 185	22	:	3 180	7 962	212	1 771	27	10	11	142	256	14
Purchases of goods and services (EUR million)	:	2 310	270	1 028	8 642	37	:	4 297	12 252	566	3 508	25	27	21	216	243	14
Gross investment in tangible goods (EUR million)	:	2 517	180	429	10 609	56	:	4 794	12 454	214	3 893	17	16	17	102	216	6
Number of persons employed (thousands)	575	10	7	8	83	1	:	73	84	10	35	1	2	2	1	7	1
Personnel costs (EUR million)	13 397	309	44	216	1 992	8	:	1 252	2 699	191	515	15	9	5	52	42	5
App. labour productivity (EUR thous./pers. emp.)	106.3	197.9	28.6	96.2	183.6	24.1	:	60.4	126.3	41.2	66.1	39.2	9.9	9.5	230.0	39.7	21.5
Average personnel costs (EUR thous./employee)	28.1	42.6	9.6	29.5	29.2	7.3	:	22.1	33.7	24.3	29.2	17.9	5.8	3.3	70.0	7.6	8.5
Wage adjusted labour productivity (%)	378.2	465.0	297.6	325.8	628.1	329.4	:	273.3	374.4	169.9	226.2	219.4	170.9	290.3	328.5	520.2	254.2
Gross operating rate (%)	41.4	39.1	36.7	30.8	56.8	32.2	:	36.6	37.4	21.9	29.0	39.3	21.6	28.8	34.3	46.5	40.8
Investment per person employed (EUR thousand)	:	247.0	24.4	53.7	128.3	44.8	:	65.3	147.5	21.9	112.5	16.1	8.8	11.0	119.9	28.8	7.0
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million)	7 595	3 852	649	1 370	24	161	738	2 587	27 667	27	:	145	:	:	:	1 614	700
Production (EUR million)	7 366	2 882	675	1 317	19	147	755	2 631	26 694	22	:	148	:	:	:	1 567	644
Value added at factor cost (EUR million)	3 834	2 057	259	822	7	80	332	1 232	14 567	10	:	90	:	:	:	598	305
Gross operating surplus (EUR million)	3 155	1 792	195	681	4	69	221	837	10 232	8	:	79	:	:	:	390	115
Purchases of goods and services (EUR million)	1 254	1 856	358	556	16	79	431	1 507	12 748	19	:	54	:	:	:	1 012	332
Gross investment in tangible goods (EUR million)	3 402	3 602	119	1 236	2	118	328	1 020	10 770	17	:	79	:	:	:	525	:
Number of persons employed (thousands)	28	9	13	10	0	1	4	14	163	2	:	4	:	:	:	6	4
Personnel costs (EUR million)	678	266	63	141	3	11	112	395	4 335	2	:	11	:	:	:	208	190
App. labour productivity (EUR thous./pers. emp.)	137.9	240.5	19.2	83.0	15.0	55.1	89.6	88.9	89.2	5.1	:	25.6	:	:	:	100.0	78.9
Average personnel costs (EUR thous./employee)	28.5	37.7	9.4	15.7	12.2	8.1	32.0	39.3	28.8	1.4	:	3.5	:	:	:	40.3	:
Wage adjusted labour productivity (%)	483.8	637.2	203.2	529.2	122.6	683.4	280.3	226.3	309.9	354.8	:	734.7	:	:	:	248.1	:
Gross operating rate (%)	41.5	46.5	30.1	49.7	15.1	42.8	29.9	32.4	37.0	29.0	:	54.7	:	:	:	24.2	16.5
Investment per person employed (EUR thousand)	122.4	421.1	8.8	124.8	3.7	80.9	88.4	73.6	66.0	8.9	:	22.3	:	:	:	87.9	:

(1) Malta, 2002.

Source: Eurostat (SBS)

Table 23.11

Research and development (NACE Division 73)
Main indicators, 2003

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY (1)	LV	LT	LU (1)	HU	MT (1)
Turnover (EUR million) (2)	36 000	822	158	650	6 006	5	:	1 040	6 107	354	1 751	0	24	10	230	236	0
Production (EUR million)	:	817	156	666	5 703	5	:	889	5 432	317	1 989	0	24	10	230	186	0
Value added at factor cost (EUR million) (2)	18 000	521	72	275	4 852	2	:	680	2 219	158	992	0	16	4	113	85	0
Gross operating surplus (EUR million) (2)	1 800	92	10	-46	1 100	0	:	118	322	42	417	0	6	2	7	21	0
Purchases of goods and services (EUR million)	:	401	90	430	3 460	3	:	729	4 717	189	962	0	8	6	114	145	0
Gross investment in tangible goods (EUR million)	:	58	11	63	796	1	:	259	550	14	149	0	2	0	:	21	0
Number of persons employed (thousands) (2)	360	6	6	5	85	0	:	17	34	3	24	0	3	0	2	6	0
Personnel costs (EUR million) (2)	16 000	429	62	321	3 752	2	:	562	1 897	116	576	0	11	2	106	63	0
App. labour productivity (EUR thous./pers. emp.) (2)	50.0	85.6	12.3	54.0	56.9	9.8	:	39.2	65.5	62.6	41.5	:	5.6	9.6	69.8	13.5	19.6
Average personnel costs (EUR thous./employee) (2)	48.5	72.6	11.5	63.1	45.6	10.1	:	35.2	56.1	52.1	45.0	:	3.7	5.7	65.5	12.6	5.8
Wage adjusted labour productivity (%) (2)	103.0	117.9	107.0	85.5	124.8	97.0	:	111.2	116.8	120.0	92.2	:	151.2	169.0	106.6	107.0	337.8
Gross operating rate (%) (2)	5.0	11.2	6.3	-7.1	18.3	2.7	:	11.4	5.3	11.9	23.8	:	23.6	19.8	3.1	9.1	89.6
Investment per person employed (EUR thousand)	:	9.5	1.9	12.4	9.3	3.2	:	14.9	16.2	5.5	6.2	:	0.7	0.7	:	3.4	0.0
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Turnover (EUR million)	2 954	454	114	13	99	90	376	2 063	11 474	4	:	163	:	:	:	644	3 217
Production (EUR million)	2 819	412	114	14	91	93	330	1 957	14 449	4	:	180	:	:	:	628	3 588
Value added at factor cost (EUR million)	1 692	292	55	11	46	31	159	486	4 796	2	:	90	:	:	:	446	1 424
Gross operating surplus (EUR million)	250	65	27	3	8	-1	-24	-227	-693	0	:	10	:	:	:	15	339
Purchases of goods and services (EUR million)	1 420	359	58	7	53	65	232	1 654	6 663	3	:	104	:	:	:	350	2 384
Gross investment in tangible goods (EUR million)	136	90	7	4	7	16	31	87	1 115	1	:	47	:	:	:	20	:
Number of persons employed (thousands)	33	5	3	0	2	4	4	13	97	0	:	27	:	:	:	7	11
Personnel costs (EUR million)	1 442	227	27	8	38	32	182	713	5 488	1	:	80	:	:	:	431	1 085
App. labour productivity (EUR thous./pers. emp.)	50.8	63.9	20.2	32.5	26.0	7.0	36.8	38.5	49.4	3.8	:	3.4	:	:	:	60.4	124.3
Average personnel costs (EUR thous./employee)	42.7	53.9	13.7	25.5	22.9	7.3	43.4	65.5	58.1	3.4	:	3.1	:	:	:	58.7	:
Wage adjusted labour productivity (%)	118.8	118.5	147.9	127.6	113.6	95.5	84.8	58.7	85.0	111.6	:	108.8	:	:	:	102.8	:
Gross operating rate (%)	8.5	14.3	24.0	22.5	7.9	-1.5	-6.3	-11.0	-6.0	8.0	:	6.1	:	:	:	2.3	10.5
Investment per person employed (EUR thousand)	4.1	19.7	2.7	10.4	4.0	3.5	7.1	6.9	11.5	1.2	:	1.7	:	:	:	2.7	:

(1) Malta, 2002.

Source: Eurostat (SBS)

Financial services



Financial services provide instruments to both businesses and consumers in the form of products that are essentially savings or loans, or products to transfer and pool risk. Changes in financing techniques have increased the possibilities open to business to fund investment, while consumers have a wider array of choices for credit, savings and payment methods.

Generally financial services are not covered by the European Commission's proposal for a Directive on services in the internal market because they are already covered by sector specific legislation - see Chapter 22 for more information on the proposal. Indeed there has been considerable EU legislative activity in the sphere of financial services centred upon the creation of an internal market for financial services. This work has been conducted through the financial services action plan (FSAP), which was published by the European Commission in 1999 and by the middle of 2006 the legislative phase of the FSAP had been completed. In May 2005 the European Commission published a Green Paper on Financial Services Policy (2005-2010) which was followed in December 2005 by a White Paper ⁽¹⁾ on its post-FSAP policy. The focus is on consolidation, although further legislative steps are expected in specific areas, notably concerning retail banking, for example on consumer credit and the development of a single European area for payments - see Subchapter 24.1.

The absence of cross-border consolidation within the financial services sector has drawn attention and in November 2005 the European Commission presented an analysis as to why this is the case. Following up on this, in September 2006, the European Commission adopted a proposal for a Directive of the European Parliament and Council that would tighten the procedures that Member States' supervisory authorities have to follow when assessing proposed mergers and acquisitions in banking, insurance and securities activities. The proposal will in particular clarify the criteria against which supervisors should assess possible mergers and acquisitions in order to improve clarity and transparency in supervisory assessment and help to ensure a consistent handling of mergers and acquisitions requests across the EU.

The financial services' sector encompasses financial intermediation as offered by credit institutions, financial leasing and other credit granting enterprises, and financial intermediaries such as securities and derivatives dealers (all included within NACE Division 65), insurance and pension funding services (NACE Division 66), as well as activities providing financial auxiliary services, such as the administration of financial markets, security brokering, fund management and the various activities of brokers and agents for financial products (NACE Division 67).

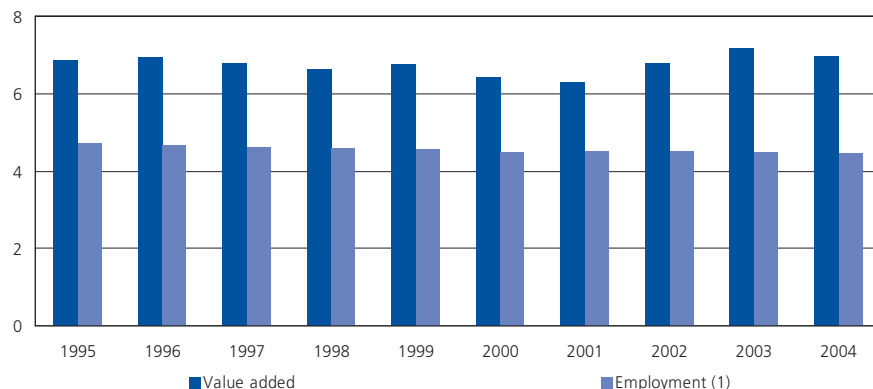
NACE

- 65: Financial intermediation, except insurance and pension funding;
- 65.1: monetary intermediation;
- 65.2: other financial intermediation;
- 66: insurance and pension funding, except compulsory social security;
- 67: activities auxiliary to financial intermediation;
- 67.1: activities auxiliary to financial intermediation, except insurance and pension funding
- 67.2: activities auxiliary to insurance and pension funding.

⁽¹⁾ COM(2005) 629.

Figure 24.1

Financial intermediation (NACE Section J)
Share of value added and employment in the business economy
(NACE Sections C to K), EU-25 (%)



(1) EU average; excluding Cyprus, Malta, Portugal and Sweden.
 Source: Eurostat (Economy and finance)

STRUCTURAL PROFILE

According to national accounts, financial services (NACE Section J) generated EUR 489.4 billion of value added in 2004, which represented 7.0 % of gross value added within the EU-25's business economy (NACE Sections C to K). Figure 24.1 shows how this sector's contribution to business economy value added developed from 1995, falling from a high of 6.9 % in 1996 to a low of 6.3 % in 2001, before rebounding to 7.2 % in 2003 and dropping back to 7.0 % in 2004. In employment terms, the contribution of financial services was considerably lower, around 4.5 % to 4.7 % in the EU ⁽²⁾ between 1996 and 2004.

In value added terms, the largest Member State in the financial services sector was the United Kingdom, which generated just over one fifth (21.0 %) of the EU-25's value added in 2004, ahead of Germany (18.8 %). The contribution of this sector to total value added within the whole business economy in 2004 was particularly high in Luxembourg (26.5 %) and Ireland (12.8 %). In all Member States with data available (see Figure 24.2) the contribution of financial services to the business economy was greater in value added terms than in employment terms, most notably in Estonia and Latvia.

⁽²⁾ EU average; excluding Cyprus, Malta, Portugal and Sweden.

According to results from the Labour Force Survey there were 6.1 million persons employed in financial services in 2005. Of these just over three fifths (62.1 %) were employed in financial intermediation activities other than insurance and pension funding (NACE Division 65), one fifth (20.8 %) in insurance and pension funding activities (NACE Division 66), while the remainder (17.0 %) were occupied in activities auxiliary to financial intermediation (NACE Division 67).

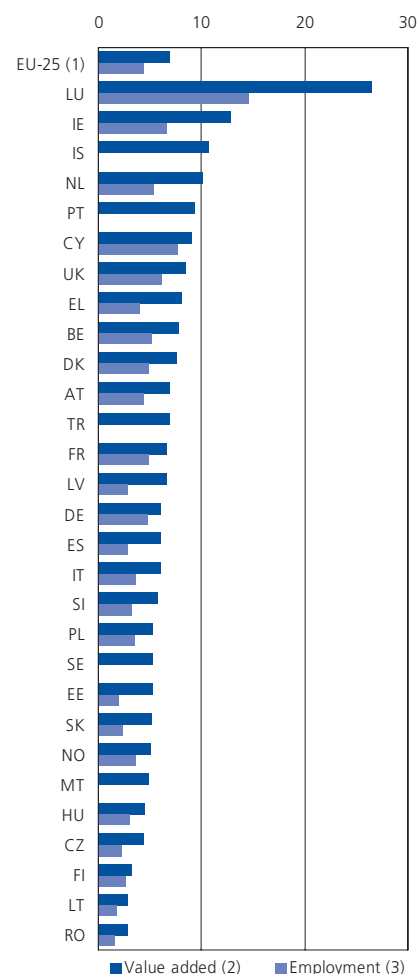
LABOUR FORCE CHARACTERISTICS

The characteristics of the labour force within the financial services sector differ considerably from those displayed by the services sector (NACE Sections G to K) as a whole - see Table 24.1. There were differences particularly in terms of the proportion of the sector's workforce that was female (51.1 %) which was above the services average (44.6 %). Only in Luxembourg and Portugal was the female proportion of the financial services workforce below the services average. In a majority of the Member States more than 50 % of the financial services workforce was female; the share of women in the workforce rose to its highest level in Estonia (82.3 %).

Unlike other services sectors where female employment was high (such as retail trade or hotels and restaurants), the rate of full-time employment in the EU-25's financial services sector was also relatively high in 2005, as 85.7 % of those employed worked on a full-time basis, compared with a services average of 79.7 %. Nevertheless, in the three Baltic Member States the rate of full-time employment in financial services was slightly below the national average for services as a whole.

Figure 24.2

Financial intermediation (NACE Section J)
Share of value added and employment in the business economy
(NACE Sections C to K), 2004 (%)



(1) Employment, EU average excluding Malta, Portugal and Sweden.
 (2) Portugal, Sweden and Norway, 2003.
 (3) Romania, 2002; Norway, 2003; Malta, Portugal, Sweden, Turkey and Iceland, not available.
 Source: Eurostat (Economy and finance)

The age structure of the EU-25's financial services sector's workforce displayed a relatively low proportion of younger workers (less than 30 years of age) and older workers (aged 50 or over). Instead, some 57.8 % of the workforce was aged between 30 and 49 in 2005, which was 4.6 percentage points higher than the services average. A similar pattern was observed in nearly all Member States, as the proportion of persons aged between 30 and 49 was consistently above the national services average, except in the Baltic Member States, France and Hungary.

Table 24.1

Financial intermediation (NACE Section J)
Labour force characteristics, 2005

	Female		Full-time		Breakdown by age (% share of total)		
	Proportion of those employed (%)	Index (services=100)	Proportion of those employed (%)	Index (services=100)	< 30 years	30-49 years	50+ years
EU-25	51.1	114.6	85.7	107.4	21.8	57.8	20.4
BE	45.5	109.5	79.3	101.4	15.4	62.4	22.2
CZ	60.8	131.0	95.2	101.2	22.4	54.5	23.1
DK	53.1	127.5	87.5	116.4	17.8	56.6	25.5
DE	49.7	104.8	81.3	112.2	19.1	57.6	23.3
EE	82.3	164.0	88.0	96.1	32.3	44.0	23.6
EL	49.4	124.6	98.4	102.7	17.7	66.0	16.4
ES	45.4	100.9	92.9	108.5	23.8	56.9	19.4
FR	55.9	126.6	86.9	103.3	19.6	53.8	26.7
IE	58.4	123.7	90.5	110.4	39.0	49.3	11.7
IT	40.8	101.8	90.0	107.0	14.7	62.7	22.6
CY	49.5	107.0	96.9	105.9	15.0	70.9	14.1
LV	63.4	120.1	93.0	98.8	33.6	46.5	19.9
LT	72.9	149.7	91.1	96.9	:	55.5	26.5
LU	40.4	97.1	88.0	102.6	15.6	72.8	11.5
HU	66.8	141.0	96.6	101.5	25.8	52.7	21.5
MT	49.1	153.7	92.4	106.0	35.0	49.0	:
NL	44.7	106.2	67.6	123.0	19.2	64.0	16.8
AT	50.4	100.6	79.8	107.3	20.6	61.2	18.2
PL	68.0	147.3	92.4	102.8	28.9	57.1	14.0
PT	41.9	94.0	97.0	104.4	17.9	60.7	21.5
SI	64.1	135.1	95.1	103.9	20.0	63.7	16.3
SK	65.5	135.2	97.2	100.1	30.1	55.6	14.3
FI	68.3	147.2	89.4	109.3	16.9	49.0	34.1
SE	55.8	139.4	82.7	107.3	17.9	50.2	32.0
UK	51.4	115.7	83.5	116.4	28.5	57.0	14.5

Source: Eurostat (LFS)

24.1: FINANCIAL INTERMEDIATION

The activities covered by this subchapter include financial intermediation activities classified within NACE Division 65, whether they are monetary (NACE Group 65.1) or not (NACE Group 65.2).

In June 2006 the Capital Requirements Directive for credit institutions and investment firms ⁽³⁾ was adopted by the European Parliament and Council. This introduces a new supervisory framework in the EU reflecting the Basel II rules (a global regulatory framework designed to encourage best practice in risk management and minimum capital requirements in the banking sector) on capital measurement and capital standards; the directive is to be applied from the start of 2007.

Retail banking is one of the few areas of financial services where new legislative proposals are being prepared. In December 2005 the European Commission adopted a proposal ⁽⁴⁾ for a Directive of the European Parliament and Council for a new legal framework for payments, to create the Single Payments Area, with the objectives to make electronic payments quicker and easier, to guarantee fair and open access to payments markets, and to increase and standardise consumer protection. In October 2005 the European Commission adopted a second revised proposal ⁽⁵⁾ for a Directive of the European Parliament and Council on consumer credit, taking into account many of the

comments from the European Parliament on the original and first revised proposals. The revised proposal covers consumer credit (not mortgages) of up to EUR 50 000 and aims to introduce a harmonised method for calculating the cost of credit and to establish a set of rights for all borrowers. In July 2005 the European Commission published a Green Paper ⁽⁶⁾ on mortgage credit in the EU, and in June 2006 the European Commission announced the creation of an expert group to further examine obstacles to a single European mortgage funding market. The aim is to investigate whether the European Commission can intervene to make the mortgage market more efficient and competitive, leading to more choice and better value for EU consumers.

⁽³⁾ Directive 2006/49/EC.

⁽⁴⁾ COM(2005) 603.

⁽⁵⁾ COM(2005) 483.

⁽⁶⁾ COM(2005) 327.

Table 24.2

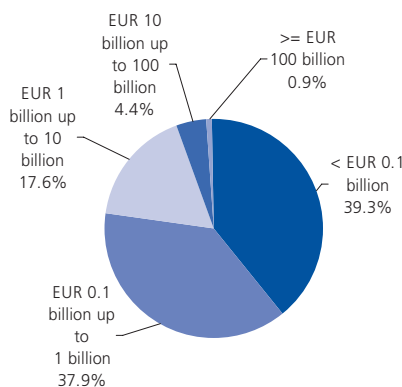
Proportion of individuals (aged 16 to 74) who in the three months prior to the survey used the Internet for financial services (Internet banking, share purchasing) (%)

	All individuals			Individuals who used the Internet in the 3 months prior to the survey		
	2003	2004	2005	2003	2004	2005
EU-25	:	18	19	:	36	38
BE	:	:	23	:	:	41
CZ	3	5	5	12	15	16
DK	38	45	49	53	59	63
DE	21	26	:	38	43	:
EE	:	35	45	:	69	75
EL	1	1	1	8	7	6
ES	10	12	14	27	30	31
FR	:	:	:	:	:	:
IE	8	10	13	26	31	34
IT	:	:	8	:	:	23
CY	:	4	6	:	13	18
LV	:	12	16	:	35	37
LT	3	7	10	14	23	30
LU	23	35	37	44	53	54
HU	:	3	6	:	10	16
MT	:	:	:	:	:	:
NL	:	:	50	:	:	63
AT	13	18	22	30	35	40
PL	:	4	6	:	14	17
PT	6	8	8	24	26	26
SI	:	9	12	:	23	25
SK	:	10	10	:	22	20
FI	43	50	56	66	72	77
SE	38	40	51	50	49	62
UK	22	22	27	37	36	41
BG	:	1	:	:	4	:
RO	:	0	:	:	3	:
TR	:	2	:	:	16	:
IS	48	54	61	59	65	71
NO	49	55	62	65	73	77

Source: Eurostat (Information society statistics)

Figure 24.3

Breakdown of number of credit institutions by balance sheet total, EU (%) (1)



(1) EU average, 2004; Latvia, Lithuania, Poland and Slovenia, 2003; Spain, Italy, Portugal, Sweden and the United Kingdom, 2002; Luxembourg, NACE Class 65.22 only; Latvia, NACE Class 65.12 only; Germany, provisional; excluding Ireland, Cyprus, Malta and Slovakia.
Source: Eurostat (SBS)

Retail banking was also chosen as part of a sector inquiry launched in June 2005 by the European Commission into competition in financial services. A sector inquiry is an information-gathering exercise that provides the European Commission with knowledge about particular markets, and it is expected that the sector inquiry will complement the efforts foreseen in the Green and White Papers by examining possible obstacles to competition that remain. The interim reports on payment cards and retail banking were published in April and July 2006 respectively, and final reports are, at the time of writing, planned for the end of 2006, including an update of the market analysis and a complete catalogue of competition barriers with recommended remedies ⁽⁷⁾.

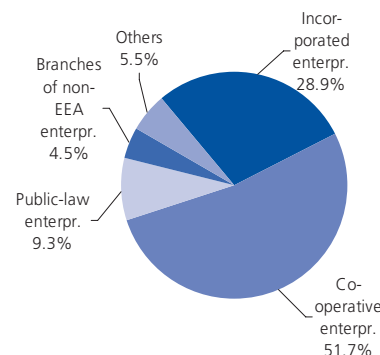
FOCUS ON INTERNET FINANCIAL SERVICES

One particular characteristic of the development of the Internet has been the use of e-banking. Table 24.2 shows results from Eurostat's information society statistics indicating the use of the Internet for financial services, notably e-banking and share purchasing. In 2005 nearly one fifth (19 %) of all persons (aged 16 to 74) used the Internet for financial services, a share that was twice as high (38 %) when limited to Internet users. In nearly all Member States with data (see Table 24.2 for availability), the proportion of persons using the Internet for financial services grew during the years studied.

⁽⁷⁾ More information at:
http://ec.europa.eu/comm/competition/antitrust/others/sector_inquiries/financial_services.

Figure 24.4

Breakdown of number of credit institutions by legal status, EU (%) (1)



(1) EU average, 2004; Latvia, Lithuania and Poland, 2003; Spain, Italy, Portugal, Sweden and the United Kingdom, 2002; Luxembourg, NACE Class 65.22 only; Latvia, NACE Class 65.12 only; excluding Ireland, Cyprus, Malta, Slovenia and Slovakia.
Source: Eurostat (SBS)

STRUCTURAL PROFILE

According to Labour Force Survey data, the number of persons employed in the EU-25's sector for financial intermediation excluding insurance and pension funding (NACE Division 65) was 3.8 million in 2005. This equated to 62.1 % of those employed in the financial services (NACE Section J) sector as a whole, or to 5.1 % of the services (NACE Sections G to K) workforce. Germany and the United Kingdom dominated this sector in employment terms, each with around three quarters of a million persons employed, around one fifth of the EU-25's workforce. In employment terms, the most specialised Member State in this sector was by far Luxembourg where 20.8 % of those employed within the service sector were working in financial intermediation excluding insurance and pension funding. The next highest share was 8.5 % in Cyprus, while the lowest shares were 1.9 % in Lithuania and 2.3 % in Estonia.

CREDIT INSTITUTIONS

Credit institutions are defined in the first indent of Article 1 of Council Directive 77/780/EEC: 'credit institution means an undertaking whose business is to receive deposits or other repayable funds from the public and to grant credits for its own account'. In terms of the NACE Rev. 1.1 classification, credit institutions mainly correspond to NACE Class 65.12 (other monetary intermediation). However, due to the different implementation of the EU directives into national law, in some Member States credit institutions might also comprise a number of enterprises whose main activity should be classified under NACE Class 65.22 (other credit granting).

An analysis of the number of credit institutions according to the size of their balance sheets in 2004 in the Member States with data available indicates that on average less than 1 % had a balance sheet total that was in excess of EUR 100 billion, while more than three quarters of credit institutions reported a balance sheet total of less than EUR 1 billion - see Figure 24.3 for country coverage.

An analysis of the legal status of credit institutions in 2004 shows that the most common legal form was a co-operative enterprise (51.7 % of all credit institutions), followed by incorporated enterprises (28.9 %) - see Figure 24.4 for country coverage.

Access to the retail banking network has changed in recent years, with a move away from services provided in branches to services provided through automatic teller machines (ATMs), phone and Internet banking. Table 24.3 indicates that there were in excess of a quarter of a million ATMs in the EU by 2004, and that in most Member States (see Table 24.3 for country coverage) there were more ATMs than local units. The three Baltic Member States recorded the highest ratios of ATMs to local units, while the lowest ratios were in Austria and Poland.

CONSUMER CREDIT

Consumer credit is a part of other credit granting (NACE Class 65.22). Eurofinas⁽⁸⁾ provide information on a number of credit markets for ten of the Member States. The outstanding value (which is defined as overall capital lent, net of due interests, before write-off) of the consumer credit and car finance market at the end of 2005 was EUR 864.5 billion in these ten Member States.

⁽⁸⁾ Eurofinas (European Federation of Finance House Associations), more information at: <http://www.eurofinas.org>; data refer to the EU-15 excluding Denmark, Greece, Ireland, Luxembourg and Austria.

Table 24.3
Network access, 2004 (units)

	Number of local units	Number of ATMs	Ratio of ATMs to local units
BE	3 528	7 237	2.1
CZ	1 128	2 393	2.1
DK	2 126	2 943	1.4
DE (1)	47 607	52 595	1.1
EE	202	779	3.9
EL	3 263	5 787	1.8
ES (2)	39 009	51 765	1.3
FR	26 152	25 667	1.0
IE	:	:	:
IT (2)	29 947	36 292	1.2
CY	500	405	0.8
LV (3)	375	868	2.3
LT (3)	431	994	2.3
LU (4)	500	379	0.8
HU	2 939	3 296	1.1
MT	:	:	:
NL	4 100	7 889	1.9
AT	5 159	2 496	0.5
PL (5)	12 336	7 585	0.6
PT (2)	5 546	11 117	2.0
SI (3)	652	1 272	2.0
SK	:	:	:
FI	1 823	3 470	1.9
SE (2)	2 240	2 647	1.2
UK (2)	15 036	31 073	2.1
BG	2 445	4 199	1.7
RO	2 900	3 406	1.2
IS (2)	186	233	1.3
NO (6)	1 167	:	:
CH	2 288	5 388	2.4

(1) Provisional and estimated.

(2) 2002.

(3) 2003; NACE Class 65.12 only.

(4) NACE Class 65.22 only.

(5) 2003.

(6) Mortgage and finance companies only.

Source: Eurostat (SBS)

FINANCIAL LEASING

Financial leasing is classified under NACE Class 65.21, and covers leasing where the term of the lease approximately covers the expected life of the asset and the lessee acquires substantially all the benefits of its use and takes all the risks associated with its ownership: the asset may or may not eventually be transferred to the lessee. No structural business statistics are available for this activity, but Leaseurope⁽⁹⁾ provide information on the value of assets leased or provided under hire purchase contracts for 20 Member States, where the value of new contracts for leased and hire purchase assets was EUR 250 billion in 2005.

⁽⁹⁾ Leaseurope (European Federation of Leasing Company Associations), more information at: <http://www.leaseurope.org>; data refer to the EU-25 excluding Ireland, Cyprus, Latvia, Lithuania and Luxembourg; estimates for Greece.

24.2: INSURANCE AND PENSION FUNDS

The activities covered by this subchapter include insurance and pension fund services, which are classified within NACE Division 66; compulsory social security services are excluded.

The European Union has worked towards the creation of a single insurance market, promoting efficiency and market integration, by allowing insurers to provide their services freely throughout the EU. Legislation has been adopted to protect customers, in particular individuals, through the safe delivery of benefits, by determining the law applicable to insurance contracts in the EU, and by providing additional information to policyholders before entering into a contract and during the contract. In November 2005 Directive 2005/68/EC of the European Parliament and of the Council on reinsurance was adopted. The directive requires that all reinsurance enterprises be authorised in their home Member State: once they have done so they are free to carry out their activity anywhere in the EU. The directive filled a gap in legislation as specialised reinsurers were not regulated, unlike the reinsurance activities carried out by direct insurers. The directive also updated the life, non-life and insurance groups directives to put them in line with the supervision rules for reinsurance enterprises.

Table 24.4

Investments of autonomous pension funds, 2004 (EUR million)

BE (1)	13 371
CZ (2)	2 477
DK	5 117
DE	:
EE (2)	64
EL	:
ES	58 979
FR	:
IE	:
IT (2)	32 550
CY	:
LV (1)	26
LT	:
LU	:
HU	2 031
MT	:
NL	531 077
AT	10 054
PL (2)	63
PT (2)	16 171
SI	218
SK (2)	265
FI	4 148
SE (2)	9 349
UK	1 095 123
IS	10 113
NO (1)	10 950
CH	311 741

(1) 2002.

(2) 2003

Source: Eurostat (SBS)

STRUCTURAL PROFILE

The number of persons employed in the EU-25's insurance and pension funding sector (NACE Division 66) was 1.3 million in 2005 according to Labour Force Survey data. This equated to 20.8 % of those employed in the financial services (NACE Section J) sector or to 1.7 % of the services (NACE Sections G to K) workforce. Germany dominated this sector in employment terms with 292 800 persons, just under one quarter (23.2 %) of the EU-25's workforce. France (15.0 %), Spain (10.4 %) and Italy (10.0 %) were the only other Member States with a double-digit share of EU-25 employment. The most specialised Member States ⁽¹⁰⁾, in terms of this sector's contribution to services employment, were Ireland (2.9 %), Slovenia (2.8 %) and Belgium (2.7 %).

The information presented in Table 24.4 indicates that the Netherlands and the United Kingdom were among the Member States where the autonomous pension funds activity was most important.

⁽¹⁰⁾ Malta, not available.

24.3: FINANCIAL AUXILIARIES

Activities auxiliary to financial intermediation have a supporting function in capital markets, performing a complementary role to banking and insurance activities. The activities covered in this subchapter are classified under NACE Division 67, covering the provision of services involved in or closely related to financial intermediation, but not themselves involving financial intermediation. Activities included are the administration of financial markets, securities and mortgage broking, and fund management (NACE Group 67.1), and activities of insurance brokers and agents (NACE Group 67.2).

Table 24.5

Total net assets of UCITS and non-UCITS, end 2005 (EUR billion)

	Total net assets	of which, UCITS
BE	116.2	109.8
CZ	4.7	4.7
DK	106.4	63.7
DE	967.2	262.4
EL	28.3	27.9
ES	275.1	268.6
FR	1 271.2	1 155.1
IE	584.5	463.0
IT	413.6	381.9
LU	1 525.2	1 386.6
HU	7.8	5.8
NL	95.8	80.0
AT	156.7	108.0
PL	15.9	15.0
PT	36.5	26.2
SK	3.3	3.3
FI	44.7	38.5
SE	105.9	103.5
UK	644.5	512.7
Total	6 403.3	5 016.7

Source: European Fund and Asset Management Association, Fact Book 2006

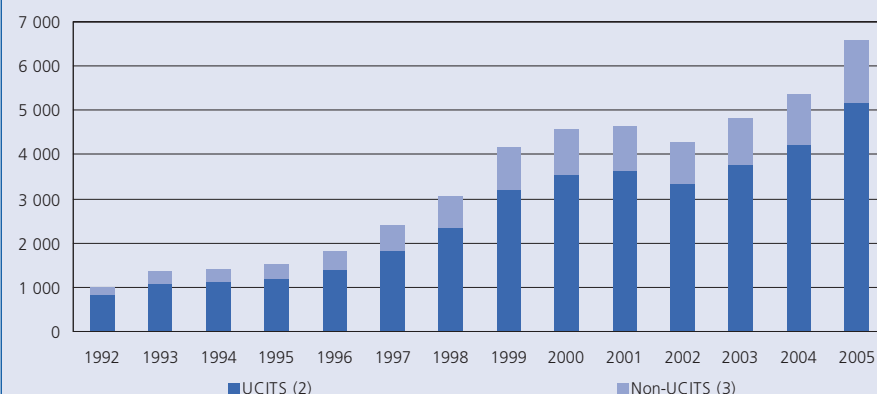
STRUCTURAL PROFILE

According to the results of the Labour Force Survey, employment in the EU-25's financial auxiliaries sector (NACE Division 67) covered 1.0 million persons in 2005. This sector was dominated by the United Kingdom and Germany in employment terms, with workforces of 377 600 and 248 700 persons respectively, together accounting for three fifths (60.7 %) of the EU-25's workforce: no other Member State ⁽¹⁾ had a double-digit share of the EU-25 financial auxiliaries

⁽¹⁾ Estonia, Lithuania and Malta, not available.

Figure 24.5

Net assets of the European investment funds industry, Europe (EUR billion) (1)



(1) EU-15, plus the Czech Republic, Hungary, Poland, Slovakia, Turkey, Liechtenstein, Norway and Switzerland.

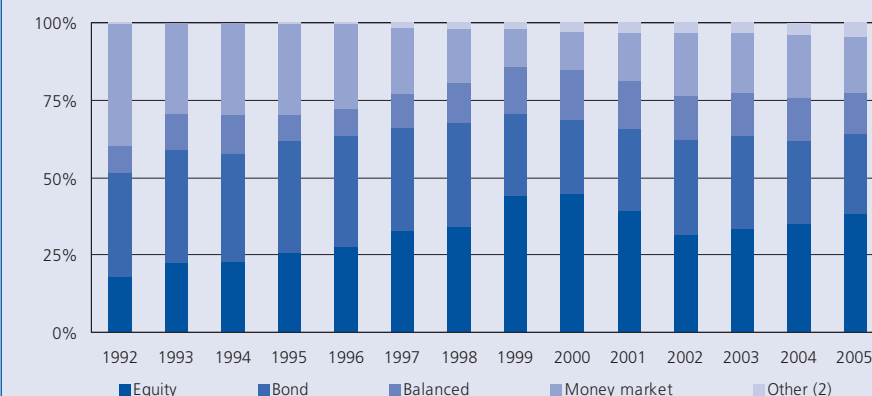
(2) Undertaking for collective investment in transferable securities: a collective investment fund that complies with Directive (85/611/EEC) of 20 October 1985.

(3) Non-UCITS regroups funds that are regulated in accordance with specific national requirements.

Source: European Fund and Asset Management Association, Fact Book 2006

Figure 24.6

Total net assets of UCITS, Europe (%) (1)



(1) EU-15 excluding Ireland, plus the Czech Republic, Hungary, Poland, Slovakia, Turkey, Liechtenstein, Norway and Switzerland.

(2) Including funds of funds.

Source: European Fund and Asset Management Association, Fact Book 2006

employment. Although in the EU-25 as a whole this sector contributed 1.4 % of services (NACE Sections G to K) employment, in most Member States the financial auxiliaries sector contributed less than 1 % to total employment in the services sector, with the relatively high EU-25 average influenced by the dominance of the United Kingdom and Germany where this sector contributed 3.2 % and 1.9 % of the services workforce respectively. Alongside the United Kingdom, only Luxembourg (3.9 %) and Ireland (2.2 %) recorded more than 2 % of their national services workforce active in this sector in 2005.

FUND MANAGEMENT

An investment fund is a financial investment vehicle aimed at private or institutional investors and spreads risks by use of a portfolio, with investments spread across shares, bonds or property. Funds can be distinguished between open-ended funds and closed-ended ones, the latter having a fixed number of shares/units that are quoted on an exchange, and the former having an unlimited number of shares/units. A major step in the development of open-ended funds within Europe came with the introduction of Council Directive 85/611/EEC of 20 December 1985 on the co-ordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS). Other funds are permitted within the EU, according to national regulations. In July 2005 the European Commission adopted a Green Paper on the enhancement of the EU framework for investment funds ⁽¹²⁾ (the UCITS review).

Figure 24.5 shows the growth in net assets over more than a decade (from 1992 to 2005) for UCITS and non-UCITS funds among 23 European countries, according to EFAMA ⁽¹³⁾. Together the two categories of assets recorded year on year growth during the whole of this period, except in 2002. Growth averaged 15.6 % per annum, which could be broken down as 16.8 % per annum for non-UCITS net assets and 15.3 % per annum for UCITS net assets. By 2005 the net assets managed in investment funds in the 23 European countries for which information are available were valued at EUR 6 587 billion, of which 78.7 % were UCITS. Table 24.5 shows the same breakdown for 2005 for most of the Member States. The largest values of UCITS funds managed in the EU were in Luxembourg and France, with more than EUR 1 000 billion of UCITS net assets each; the relatively high value of UCITS assets managed in Ireland (EUR 463 billion) is also worth noting.

As well as the classification between open and closed-ended funds, a further distinction can be made between funds specialising in investments in equities, bonds and money markets, or balanced funds with a mix of these three types of investments. Figure 24.6 shows the change in the composition of UCITS assets, notably an increase in the importance of equity funds throughout the 1990s and their subsequent decline in 2001 and 2002 as stock market indices fell, followed by a more modest increase in their share in the three most recent years for which information is available.

⁽¹²⁾ COM(2005) 314.

⁽¹³⁾ EFAMA (the European Fund and Asset Management Association), more information at: <http://www.efama.org>; data refer to the EU-15, the Czech Republic, Hungary, Poland, Slovakia, Turkey, Liechtenstein, Norway and Switzerland.

Table 24.6

Capitalisation (year end) and domestic equity trading, 2005 (EUR million)

Exchange		Market capitalisation	Electronic order book transactions	Negotiated deals	Total value of equity trading
Prague Stock Exchange	CZ	31 059	546	34 363	34 909
Deutsche Börse	DE	1 019 171	1 125 434	420 361	1 545 795
Athens Exchange	EL	123 033	42 265	9 881	52 147
Spanish Exchanges (BME)	ES	813 812	847 590	416 016	1 263 605
Irish Stock Exchange	IE	96 722	6 833	47 563	54 396
Italian exchange	IT	676 606	954 795	95 503	1 050 298
Cyprus Stock Exchange	CY	5 580	382	0	382
Luxembourg Stock Exchange	LU	43 448	207	-	207
Budapest Stock Exchange	HU	27 586	19 089	328	19 417
Malta Stock Exchange	MT	3 474	121	:	121
Euronext		2 294 828	1 783 446	562 082	2 345 528
Wiener Börse	AT	107 036	37 503	-	37 503
Warsaw Stock Exchange	PL	79 353	21 835	2 275	24 111
Ljubljana Stock Exchange	SI	6 697	403	537	941
Bratislava Stock Exchange	SK	3 729	11	44	55
OMX (Copenhagen, Tallinn, Riga, Vilnius, Helsinki, Stockholm)		680 412	544 162	213 076	757 238
London Stock Exchange	UK	2 592 623	1 540 556	3 042 611	4 583 167
Total of available data		8 605 171	6 925 179	4 844 640	11 769 819

Source: Federation of European Securities Exchange

Table 24.7

Bond turnover, 2005 (EUR million)

Exchange		Electronic order book transactions	Negotiated deals	Total
Prague Stock Exchange	CZ	2	17 906	17 907
Deutsche Börse	DE	16	307 523	307 538
Athens Exchange	EL	40	0	40
Spanish Exchanges (BME)	ES	227 268	3 075 582	3 302 850
Irish Stock Exchange	IE	-	25 595	25 595
Italian exchange	IT	124 484	n/a	124 484
Cyprus Stock Exchange	CY	5	0	5
Luxembourg Stock Exchange	LU	1 957	-	1 957
Budapest Stock Exchange	HU	982	138	1 121
Malta Stock Exchange	MT	172	:	172
Euronext		16 953	125 483	142 436
Wiener Börse	AT	343	-	343
Warsaw Stock Exchange	PL	629	55	684
Ljubljana Stock Exchange	SI	101	1 266	1 367
Bratislava Stock Exchange	SK	202	25 551	25 753
OMX (Copenhagen, Tallinn, Riga, Vilnius, Helsinki, Stockholm)		6 093	2 496 269	2 502 362
London Stock Exchange	UK	:	2 415 247	2 415 247
Total of available data		379 246	8 490 615	8 869 861

Source: Federation of European Securities Exchange

AGENTS AND BROKERS: INSURANCE, PENSION FUNDS AND MORTGAGES

The distribution channels of insurance, investment funds, pension and mortgage policies vary greatly between countries and work either through direct writing by fund, insurance or credit granting enterprises or through intermediaries. Two types of intermediaries can be distinguished, captive/exclusive agents working exclusively for one enterprise (selling only their products) and independent agents or brokers representing several enterprises. Intermediaries provide professional advice to clients to assist them in their choice of policies, and in the case of insurance policies provide assistance in making claims.

EXCHANGES

According to FESE ⁽¹⁴⁾ the main stock exchanges in the EU in 2005 in terms of capitalisation and trading were London, Euronext, the Deutsche Börse, the Spanish exchanges (BME, which include Barcelona, Bilbao, Madrid and Valencia), the Italian exchange and OMX (which has exchanges in Copenhagen, Tallinn, Riga, Vilnius, Helsinki and Stockholm) - see Table 24.6 for more details.

In turnover terms, the Spanish exchanges, OMX and London had the largest bond markets in the EU, each with more than EUR 2 000 billion of traded bonds in 2005: together these exchanges accounted for more than 90 % of the bonds traded among the exchanges listed in Table 24.7.

⁽¹⁴⁾ FESE (the Federation of European Securities Exchanges), more information at: <http://www.fese.be>.

Table 24.8

Other monetary intermediation; other credit granting (NACE Class 65.12 and Group 65.2)

Main indicators, 2004 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT
Production (EUR million)	: 13 440	3 621	10 334	114 327	263 7 554	34 779	86 860	:	68 741	1 167	453	295 9 021	4 082	:	:	:	:
Value added at factor cost (EUR million)	: 8 532	2 504	7 639	75 199	181 5 661	23 570	52 786	:	38 924	950	267	174 5 916	2 846	:	:	:	:
Gross operating surplus (EUR million)	: 3 760	1 734	4 474	37 030	115 3 062	10 673	26 421	:	17 195	529	157	81 3 961	1 940	:	:	:	:
Purchases of goods and services (EUR million)	: 4 908	1 117	2 695	39 128	82 1 893	11 209	34 074	:	29 817	217	186	121 3 105	1 236	:	:	:	:
Gross investment in tangible goods (EUR million)	: 502	122	222	3 636	8	:	2 137	913	:	37 595	53	546	24	0	181	:	:
Number of persons employed (thousands)	: 70	38	46	699	4	58	244	378	:	342	9	9	8	:	36	:	:
Personnel costs (EUR million)	: 4 772	771	3 165	38 169	66 2 599	12 897	26 365	:	21 729	421	110	93 1 955	906	:	:	:	:
App. labour productivity (EUR thous./pers. emp.)	: 122	66	165	108	47	98	97	140	:	114	110	29	23	:	80	:	:
Average personnel costs (EUR thous./employee)	: 69	21	69	55	17	:	53	70	:	:	49	12	12	:	25	:	:
Wage adjusted labour productivity (%)	: 179	316	241	197	273	:	183	200	:	:	226	243	187	:	313	:	:
Investment per person employed (EUR thousand)	: 7	3	5	5	2	:	9	2	:	110	6	59	3	:	5	:	:
	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO	TR	IS	LI	NO	CH
Production (EUR million)	26 369	13 259	6 796	7 428	1 026	:	4 329	10 103	126 692	808	:	1 861	:	728	:	9 232	:
Value added at factor cost (EUR million)	17 992	8 602	4 514	5 237	747	:	2 783	6 494	68 573	495	:	1 272	:	493	:	:	:
Gross operating surplus (EUR million)	9 387	3 953	2 511	3 087	432	:	1 685	3 642	44 508	327	:	779	:	289	:	:	:
Purchases of goods and services (EUR million)	8 377	4 656	2 283	2 191	278	:	1 546	3 609	58 119	314	:	589	:	235	:	4 156	6 790
Gross investment in tangible goods (EUR million)	1 309	1 028	393	146	0	:	-211	0	6 431	160	:	387	:	0	:	6	:
Number of persons employed (thousands)	129	73	152	56	12	:	25	:	453	22	:	47	:	4	:	24	108
Personnel costs (EUR million)	8 605	4 649	2 003	2 150	315	:	1 098	2 851	24 065	168	:	493	:	204	:	1 869	10 613
App. labour productivity (EUR thous./pers. emp.)	139	118	30	94	65	:	110	:	151	23	:	27	:	133	:	:	:
Average personnel costs (EUR thous./employee)	67	64	13	39	28	:	45	:	53	8	:	11	:	55	:	78	99
Wage adjusted labour productivity (%)	209	185	225	244	234	:	243	:	286	291	:	255	:	242	:	:	:
Investment per person employed (EUR thousand)	10	14	3	3	0	:	-8	:	14	7	:	8	:	0	:	0	:

(1) Germany, provisional; Estonia, Latvia (employment, investment and ratios thereof, provisional), Lithuania, Poland, Slovenia, 2003; Spain, Italy, Portugal, Sweden, the United Kingdom and Iceland.

Source: Eurostat (SBS)

Background information

GEOGRAPHICAL COVERAGE

This publication covers the European Union, including the 25 Member States (EU-25): Belgium (BE), the Czech Republic (CZ), Denmark (DK), Germany (DE), Estonia (EE), Greece (EL), Spain (ES), France (FR), Ireland (IE), Italy (IT), Cyprus (CY), Latvia (LV), Lithuania (LT), Luxembourg (LU), Hungary (HU), Malta (MT), the Netherlands (NL), Austria (AT), Poland (PL), Portugal (PT), Slovenia (SI), Slovakia (SK), Finland (FI), Sweden (SE) and the United Kingdom (UK). Where data availability permits, information is also included for the Candidate Countries, other EEA countries, and Switzerland. All data for Germany is provided on the basis of re-unified Germany unless otherwise stated.

EU-25 totals cover the 25 Member States from 1 May 2004 onwards, while EU-15 totals cover the 15 Member States at the end of April 2004. Wherever possible, EU-25 totals have been included and the vast majority of series have been back-calculated so that no break in series occurs.

EXCHANGE RATES

All data are reported in ECU/EUR terms, with national currencies converted using average exchange rates prevailing for the year in question. As of 1 January 1999, 11 of the Member States entered into an economic and monetary union (EMU). These countries formed what has become known as the euro area. Technically data available prior to that date should continue to be denominated in ECU terms, while data available afterwards should be denominated in euro. However, as the conversion rate was ECU 1 = EUR 1, for practical purposes the terms may be used interchangeably and this publication denotes all such monetary series in euro. On 1 January 2001, Greece also became a member of the euro area.

While the conversion to a common currency of data originally expressed in national currencies facilitates comparison, large fluctuations in currency markets are partially responsible for movements identified when looking at the evolution of a series in euro terms (especially at the level of an individual country). For the exchange rates used, please refer to Table 1.

NON-AVAILABILITY

The colon (:) is used in tables to represent data that is not available, either because it is not available in the source used or because it is confidential. In figures (charts), missing information is footnoted as not available.

The tilde (~) is used to represent information that is non-applicable (for example, exchange rates against the euro for those countries that changed currency denomination to the euro in 2004).

Table 1
Average exchange rates against the euro (1 EUR = ... national currency)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Belgian Franc (BEF)	38.5519	39.2986	40.5332	40.6207	40.3399	40.3399	40.3399	40.3399	40.3399	~	~
Czech Koruna (CZK)	34.6960	34.4572	35.9304	36.0487	36.8840	35.5990	34.0680	30.8040	31.8460	31.8910	29.7820
Danish Krone (DKK)	7.32804	7.35934	7.48361	7.49930	7.43550	7.43580	7.45210	7.43050	7.43070	7.43990	7.45180
German Mark (DEM)	1.87375	1.90954	1.96438	1.96913	1.95583	1.95583	1.95583	1.95583	1.95583	~	~
Estonian Kroon (EEK)	14.9844	15.2730	15.7130	15.7481	15.6466	15.6466	15.6466	15.6466	15.6466	15.6466	15.6466
Greek Drachma (GRD)	302.989	305.546	309.355	330.731	325.763	336.630	340.750	340.750	340.750	~	~
Spanish Peseta (ESP)	163.000	160.748	165.887	167.184	166.386	166.386	166.386	166.386	166.386	~	~
French Franc (FRF)	6.52505	6.49300	6.61260	6.60141	6.55957	6.55957	6.55957	6.55957	6.55957	~	~
Irish Pound (IEP)	0.815525	0.793448	0.747516	0.786245	0.787564	0.787564	0.787564	0.787564	0.787564	~	~
Italian Lira (ITL)	2 130.14	1 958.96	1 929.30	1 943.64	1 936.27	1 936.27	1 936.27	1 936.27	1 936.27	~	~
Cypriot Pound (CYP)	0.591619	0.591904	0.582433	0.579340	0.578840	0.573920	0.575890	0.575300	0.584090	0.581850	0.576830
Latvian Lats (LVL)	0.689537	0.699605	0.659401	0.660240	0.625600	0.559200	0.560100	0.581000	0.640700	0.665200	0.696200
Lithuanian Litas (LTL)	5.23202	5.07899	4.53615	4.48437	4.26410	3.69520	3.58230	3.45940	3.45270	3.45290	3.45280
Luxembourg Franc (LUF)	38.5519	39.2986	40.5332	40.6207	40.3399	40.3399	40.3399	40.3399	40.3399	~	~
Hungarian Forint (HUF)	164.545	193.758	211.654	240.573	252.770	260.040	256.590	242.960	253.620	251.660	248.050
Maltese Lira (MTL)	0.461431	0.457684	0.437495	0.434983	0.425800	0.404100	0.403000	0.408900	0.426100	0.428000	0.429900
Dutch Guilder (NLG)	2.09891	2.13973	2.21081	2.21966	2.20371	2.20371	2.20371	2.20371	2.20371	~	~
Austrian Schilling (ATS)	13.1824	13.4345	13.8240	13.8545	13.7603	13.7603	13.7603	13.7603	13.7603	~	~
New Polish Zloty (PLN)	3.17049	3.42232	3.71545	3.91647	4.22740	4.00820	3.67210	3.85740	4.39960	4.52680	4.02300
Portuguese Escudo (PTE)	196.105	195.761	198.589	201.695	200.482	200.482	200.482	200.482	200.482	~	~
Slovenian Tolar (SIT)	154.880	171.778	180.986	185.948	194.473	206.613	217.980	225.977	233.849	239.087	239.568
Slovak Koruna (SKK)	38.8649	38.9229	38.1129	39.5407	44.1230	42.6020	43.3000	42.6940	41.4890	40.0220	38.5990
Finnish Markka (FIM)	5.70855	5.82817	5.88064	5.98251	5.94573	5.94573	5.94573	5.94573	5.94573	~	~
Swedish Krona (SEK)	9.33192	8.51472	8.65117	8.91593	8.80750	8.44520	9.25510	9.16110	9.12420	9.12430	9.28220
Pound Sterling (GBP)	0.828789	0.813798	0.692304	0.676434	0.658740	0.609480	0.621870	0.628830	0.691990	0.678660	0.683800
New Bulgarian Lev (BGN)	0.08787	0.22515	1.90157	1.96913	1.95580	1.95220	1.94820	1.94920	1.94900	1.95330	1.95580
Croatian Kuna (HRK)	:	:	:	:	7.58046	7.64316	7.48200	7.41300	7.56880	7.49670	7.40080
New Romanian Leu (RON)	0.266181	0.392219	0.811150	0.998488	1.63450	1.99220	2.60040	3.12700	3.75510	4.05100	3.62090
New Turkish Lira (TRY)	0.059912	0.103214	0.171848	0.293736	0.447240	0.574820	1.10242	1.43968	1.69485	1.77705	1.67710
Icelandic Krona (ISK)	84.6853	84.6558	80.4391	79.6976	77.1800	72.5800	87.4200	86.1800	86.6500	87.1400	78.2300
Norwegian Krone (NOK)	8.28575	8.19659	8.01861	8.46587	8.31040	8.11290	8.04840	7.50860	8.00330	8.36970	8.00920
Swiss Franc (CHF)	1.54574	1.56790	1.64400	1.62203	1.60030	1.55790	1.51050	1.46700	1.52120	1.54380	1.54830
Japanese Yen (JPY)	123.012	138.084	137.076	146.415	121.320	99.470	108.680	118.060	130.970	134.440	136.850
United States Dollar (USD)	1.30801	1.26975	1.13404	1.12109	1.06580	0.92360	0.89560	0.94560	1.13120	1.24390	1.24410

Source: Eurostat (Economy and finance)

NOTES ON DATA SOURCES

Two types of data sources can be distinguished: those originating from official sources (collected normally by the national statistical institutes in each Member State) and those provided by professional trade associations (representative organisations of various activities) and other non-official bodies. Tables and figures presenting data from non-official sources are easily recognised as they appear in a shaded box. Both European business and its predecessor the Panorama of European industry have benefited from the co-operation of a wide variety of professional trade association bodies representing industrial and service activities within the EU. It should be noted that non-official data may be based on different standards to those used in the European Statistical System, notably in that they may not follow the NACE classification or use standard statistical units, have a different geographical coverage than the EU, reflect only the activities of members of the organisations providing the data, or be restricted in other ways. Users are recommended not to combine data from official and non-official sources.

The main official data sources used in this edition of the publication are the three main business statistics sources, namely structural business statistics, short-term statistics and Prodcum, as well as the results of the labour force survey and external trade data. In addition to these sources which are used for many chapters, use has also been made of specialist sources for particular areas, notably transport, energy, research and development, environmental, audiovisual, tourism and information society statistics, as well as national accounts.

SBS

The main part of the analysis contained within European business is derived from structural business statistics (SBS). These data have been collected within the legal framework provided by Council Regulation No 58/97 of 20 December 1996 concerning structural business statistics (hereafter referred to as the SBS Regulation). There are three main SBS data sets that have been used in this publication. The first is a set of annual enterprise statistics which covers enterprises of all sizes; these data were generally used for reference year 2003. Not all Member States transmitted data relating to this population, with some providing data for units with employment above a certain size threshold. Table 2 presents the main deviations from the standard population as laid down in the SBS Regulation (all enterprises, regardless of their size). The second collection of SBS data covers information broken down by employment size class. Again, not all Member States transmitted data to Eurostat that fully conforms to the statistical units or population requested. In particular, some Member States provided data for units with different employment thresholds. Table 3 summarises the main deviations from the standard statistical units and coverage for enterprise data by size class. The third collection of SBS data

relates to regional information; this information was used to construct the maps that appear in the overviews of most chapters.

Note that standard definitions of variables within structural business statistics are laid down in Commission Regulation (EC) No 2700/98 of 17 December 1998 concerning the definitions of characteristics for structural business statistics. As such, the data presented are largely comparable across activities and countries. There are nevertheless some known divergences from the standard definitions; Table 4 presents the main discrepancies.

Quality

SBS data are collected through statistical surveys, the business register or administrative sources. The national statistical authorities may use one or several of these sources, according to the survey strategy they have adopted, taking into account the costs, the quality and the response burden on enterprises. Non confidential national and EU data are released at the finest possible level of detail. Yet the general principle 'the higher the level of aggregation (the more aggregated the data), the better the quality' applies to SBS. Detailed data for small countries have to be used with a certain caution.

Table 2
Deviations from standard SBS survey characteristics - all enterprises

Country	Industry (NACE Sections C - E)	Construction (NACE Section F)	Distributive trades (NACE Section G)	Services (NACE Sections H - K)
Czech Republic	Until 2001 sampling errors at 3-digit level are significant (due to low coverage); the 3-digit level is only an estimation based on the sample, but the sample differs between years; the sample is only representative for data at the 2-digit level; from 2002 a new sampling plan has been introduced			
Germany	The population is enterprises with more than one person employed for 1999 and 2000; from reference year 2001 onwards the data have no major deviations		2003 data is not comparable with 2002 data	No major deviations
Greece	Sections D, E and F: the population covered is enterprises with more than 10 persons employed		No data available	
Ireland	Enterprises with 3 persons employed or more	Enterprises with 20 persons employed or more	No major deviations	
Cyprus	Class 14.11 includes Class 14.12; Class 14.22 includes Group 14.3; Class 15.13 includes Group 15.2; Class 15.71 includes Class 15.72; Class 15.91 includes Classes 15.93 and 15.96; Class 17.21 includes Class 17.54 and Group 17.6; Class 17.71 includes Class 17.72; Group 19.1 includes Group 19.2; Class 20.51 includes Class 20.52; Class 22.22 includes Classes 22.11 and 22.15; Class 24.11 includes Class 24.13 and Group 24.2; Class 24.41 includes 24.42; Class 24.62 includes Class 24.66; Class 26.11 includes Classes 26.13 and 26.15; Class 27.22 includes Classes 27.42 and 27.44; Class 28.21 includes Group 28.3; Class 28.61 includes Class 28.62; Class 28.74 includes Class 28.75; Class 29.53 includes Class 29.54; Group 31.4 includes Class 31.62; Group 32.2 includes Group 32.3; Group 33.1 includes Groups 33.2 and 33.3; Class 36.21 includes Class 36.22; Group 36.3 includes Group 36.5 and Class 36.61; Class 55.21 includes Class 55.22			
Latvia	It is recommended not to use 4-digit data as a random sampling scheme is used with stratification at the 3-digit level			
Luxembourg	2003 data is not comparable with 2002 data			
Hungary	Pre-2002: up to and including 2001, data covers only enterprises with 5 or more persons employed; from 2002 onwards all enterprises are covered			
Netherlands	Number of enterprises: data for this variable are rounded to multiples of 5; a 0 therefore means 2 or less enterprises 2003: activity aggregates including Class 74.15 do not include wages and salaries for Class 74.15			
Poland	No correction for non-response for enterprises with more than 10 persons employed			
Bulgaria	From 2002: reporting units that outsource production on a fee or contract basis are treated as production units and classified on the basis of their turnover			
Romania	2002 preliminary data: Group 27.1 includes Class 27.35 (which is not included in Group 27.3) Group 13.2 (and therefore Division 13) includes Division 12			

Table 3
Deviations from standard SBS survey characteristics - size class breakdowns

Country	Industry (NACE Sections C - E)	Construction (NACE Section F)	Distributive trades (NACE Section G)	Services (NACE Sections H - K)
Germany	No major deviations		2003 data is not comparable with 2002 data	No major deviations
Ireland	Enterprises with 3 persons employed or more	Enterprises with 20 persons employed or more	No major deviations	
Cyprus	Size class thresholds are calculated as full-time equivalents; data for size class 500-999 includes data for size class 1 000+; data for size class 100-249 includes data for size class 250-499; Group 14.2 includes Group 14.3; Group 15.1 includes Group 15.2; Group 17.2 includes Groups 17.5 and 17.6; Group 19.1 includes Group 19.2; Group 24.1 includes Group 24.2; Group 27.2 includes Group 27.4; Group 28.2 includes Group 28.3; Group 31.4 includes Group 31.6; Group 32.2 includes Group 32.3; Group 33.1 includes Groups 33.2 and 33.3; Group 36.3 includes Groups 36.5 and 36.6			
Luxembourg	2003 data is not comparable with 2002 data			
Netherlands	2003: activity aggregates including Class 74.15 do not include wages and salaries for Class 74.15			
Poland	No correction for non-response for enterprises with more than 10 persons employed			
Bulgaria	From 2002: reporting units that outsource production on a fee or contract basis are treated as production units and classified on the basis of their turnover			
Romania	Group 13.2 (and therefore Division 13) includes Division 12			

Table 4
Deviations from standard SBS variable definitions

Country	Year	Variable	Discrepancy
Czech Republic	All years	Personnel costs	Is inconsistent with its components (wages and salaries, and social security contributions) as some investment is not included in the components, only in the total
France	From 2004	Payments for agency workers	Definition has been revised
Ireland	All years	Apparent labour productivity, wage adjusted labour productivity, gross operating surplus, gross operating rate	For Group 22.3, Group 24.1, Group 24.4, Division 30 - high values may reflect foreign ownership of enterprises, outsourcing of activities, and accounting practices of multinational enterprises
Malta	Pre-2003	Purchases of goods and services	Excludes payments to subcontractors; for Section G also excludes payments for renting of buildings and equipment
Netherlands	All years	Number of employees	This is determined by the number of jobs provided; corrections for the number of secondary jobs and the number of unpaid persons employed (working proprietors, unpaid family members) may result in a number of employees actually exceeding the number of persons employed
Poland	All years	Number of persons employed	The number of persons employed is not calculated as an annual average but as the number of persons employed on the last day of the reference year; this may yield results that are incoherent with the number of employees

EU estimates

EU-25 aggregates include estimates for missing components where necessary. Individual country estimates are not published. In the absence of EU-25 aggregates, averages or sums have been calculated on the basis of information available for the Member States.

EU-25 aggregates are often missing in the SBS databases (for annual enterprise statistics and for enterprise statistics broken down by size class) due to confidentiality. With the aim of providing a more complete set of data, an exercise was conducted in the summer of 2006 to create a set of harmonised EU-25 estimates for reference year 2003.

Because the share of the confidential cells is often very low, proxies for the missing EU-25 aggregates were calculated by summing up the non-confidential information and then rounding the results (note that no attempt was made to estimate the confidential values). Rounding creates intervals, within which the 'true' value lies. It depends on the size of the missing information, how these intervals should be calculated. In case very little information is missing, simple rounding would be sufficient. If more is missing due to confidentiality, more 'noise' has to be created, and subsequently

greater intervals are needed to ensure that the result is a valid proxy for the missing EU-25 aggregate, although with reduced precision. A rounding of all figures was made to three, two and one digits, to allow for differences in precision of the proxy EU-25 figure (sum of non-confidential compared with the EU-25 figure). Of course rounding can only be applied up to a point, after which the result would be too imprecise to be useful.

These calculations were made for all basic variables in the national series and size-class series where an EU-25 aggregate had been compiled and the indicators based on these (with rounding applied after the calculation of the ratio to increase precision), down to the most detailed activity level (NACE classes/four digits), as well as for special sectoral aggregates used in the publications.

Within this publication, these rounded EU estimates based on non-confidential data are identified in the tables or graphs by the following footnote 'rounded estimates based on non-confidential data'. Indeed, the inclusion of rounded EU-25 estimates means that there may well be discrepancies between values published at different levels of the NACE hierarchy, as well as between derived indicators

and basic variables. The commentary, tables and graphs in this publication have been based on re-calculated shares that use the rounded estimates. Hence, in order to calculate the share of a particular NACE group within a NACE division, shares were re-calculated by dividing a particular NACE group by the sum of the relevant NACE groups that make-up the NACE division; by making the calculation in this way the sum of the shares for each NACE group will consistently sum to 100 % (although there may be some divergence with the figure given for the NACE division).

In those cases where neither an EU-25 total nor a rounded EU-25 estimate were available, a partial EU total, or a ratio for a partial EU average was created. In the event that this method was used then a footnote has been systematically added to both the commentary and the tables and graphs to show the coverage of the partial total/average used. When a partial total/average was created from an incomplete set of country information (no data for certain Member States, or only data for an older reference period), these partial totals are referred to simply as the EU, with a footnote explaining the coverage.

Observation unit

The observation unit is generally the enterprise. An enterprise carries out one or more activities at one or more locations. Enterprises are classified into sectors (by NACE) according to their main activity. The enterprise should not be confused with the local unit, which is an enterprise or part thereof situated in one geographically identified place. Note that the main exception to the use of the enterprise as the observation unit is with respect to the information published in the maps, which are generally based on local units.

Main definitions

The following standard definitions are taken from Commission Regulation (EC) No 2700/98 of 17 December 1998 concerning the definitions of characteristics for structural business statistics.

Turnover: comprises the totals invoiced by the observation unit during the reference period, and this corresponds to market sales of goods or services supplied to third parties. Turnover includes all duties and taxes on the goods or services invoiced by the unit with the exception of the VAT invoiced by the unit vis-à-vis its customer and other similar deductible taxes directly linked to turnover. It also includes all other charges (transport, packaging, etc.) passed on to the customer, even if these charges are listed separately in the invoice. Reductions in prices, rebates and discounts as well as the value of returned packing must be deducted. Income classified as other operating income, financial income and extraordinary income in company accounts is excluded from turnover. Operating subsidies received from public authorities or the institutions of the European Union are also excluded.

Production value: measures the amount actually produced by the unit, based on sales, including changes in stocks and the resale of goods and services. The production value is defined as turnover, plus or minus the changes in stocks of finished products, work in progress and goods and services purchased for resale, minus the purchases of goods and services for resale, plus capitalised production, plus other operating income (excluding subsidies). Income and expenditure classified as financial or extraordinary in company accounts is excluded from production value. Included in purchases of goods and services for resale are the purchases of services purchased in order to be rendered to third parties in the same condition.

Value added at factor cost: can be calculated from turnover, plus capitalised production, plus other operating income, plus or minus the changes in stocks, minus the purchases of

goods and services, minus other taxes on products which are linked to turnover but not deductible, minus the duties and taxes linked to production. Alternatively it can be calculated from gross operating surplus by adding personnel costs. Income and expenditure classified as financial or extraordinary in company accounts is excluded from value-added. Value added at factor costs is calculated gross, as value adjustments (such as depreciation) are not subtracted.

Gross operating surplus: is the surplus generated by operating activities after the labour factor input has been recompensed. It can be calculated from value added at factor cost less personnel costs. It is the balance available to the unit which allows it to recompense the providers of own funds and debt, to pay taxes and eventually to finance all or a part of its investment. Income and expenditure classified as financial or extraordinary in company accounts is excluded from the gross operating surplus.

Personnel costs: are defined as the total remuneration, in cash or in kind, payable by an employer to an employee (regular and temporary employees as well as home-workers) in return for work done by the latter during the reference period. All remuneration paid during the reference period is included, regardless of whether it is paid on the basis of working time, output or piecework, and whether it is paid regularly or not. Included are all gratuities, workplace and performance bonuses, ex gratia payments, 13th month pay (and similar fixed bonuses), payments made to employees in consideration of dismissal, lodging, transport, cost of living and family allowances, commissions, attendance fees, overtime, night work, etc., as well as taxes, social security contributions and other amounts owed by the employees and retained at source by the employers. Also included are the social security costs for the employer. These include employer's social security contributions to schemes for retirement pensions, sickness, maternity, disability, unemployment, occupational accidents and diseases, family allowances as well as other schemes. These costs are included regardless of whether they are statutory, collectively agreed, contractual or voluntary in nature. Payments for agency workers are not included in personnel costs.

Purchases of goods and services: include the value of all goods and services purchased during the reference period for resale or consumption in the production process, excluding capital goods the consumption of which is registered as consumption of fixed capital. The goods and services concerned may

be either resold with or without further transformation, completely used up in the production process or, finally, be stocked. Included in these purchases are the materials that enter directly into the goods produced (raw materials, intermediary products, components), plus non-capitalised small tools and equipment. Also included is the value of ancillary materials (lubricants, water, packaging, maintenance and repair materials, office materials) as well as energy products. Included in this variable are the purchases of materials made for the production of capital goods by the unit. Services paid for during the reference period are also included regardless of whether they are industrial or non-industrial. In this figure are payments for all work carried out by third parties on behalf of the unit including current repairs and maintenance, installation work and technical studies. Amounts paid for the installation of capital goods and the value of capitalised goods are excluded. Also included are payments made for non-industrial services such as legal and accountancy fees, patents and licence fees (where they are not capitalised), insurance premiums, costs of meetings of shareholders and governing bodies, contributions to business and professional associations, postal, telephone, electronic communication, telegraph and fax charges, transport services for goods and personnel, advertising costs, commissions (where they are not included in wages and salaries), rents, bank charges (excluding interest payments) and all other business services provided by third parties. Included are services which are transformed and capitalised by the unit as capitalised production. Expenditure classified as financial expenditure or extraordinary expenditure in company accounts is excluded from the total purchases of goods and services. Purchases of goods and services are valued at the purchase price excluding deductible VAT and other deductible taxes linked directly to turnover. All other taxes and duties on the products are therefore not deducted from the valuation of the purchases of goods and services.

Gross investment in tangible goods: includes all new and existing tangible capital goods, whether bought from third parties or produced for own use (in other words capitalised production of tangible capital goods), having a useful life of more than one year including non-produced tangible goods such as land. The threshold for the useful life of a good that can be capitalised may be increased according to company accounting practices where these practices require a greater expected useful life than the one-year threshold indicated above. All investments are valued prior to (in other words gross of) value adjustments, and before

the deduction of income from disposals. Purchased goods are valued at purchase price, in other words transport and installation charges, fees, taxes and other costs of ownership transfer are included. Own produced tangible goods are valued at production cost. Goods acquired through restructuring (such as mergers, take-overs, break-ups, split-off) are excluded. Purchases of small tools which are not capitalised are included under current expenditure. Also included are all additions, alterations, improvements and renovations which prolong the service life or increase the productive capacity of capital goods. Current maintenance costs are excluded as is the value and current expenditure on capital goods used under rental and lease contracts. Investment in intangible and financial assets is excluded. Concerning the recording of investments where the invoicing, delivery, payment and first use of the good may take place in different reference periods, the following method is proposed as an objective:

1. investments are recorded when the ownership is transferred to the unit that intends to use them;
2. capitalised production is recorded when produced;
3. concerning the recording of investments made in identifiable stages, each part-investment should be recorded in the reference period in which they are made.

In practice this may not be possible and company accounting conventions may mean that the following approximations to this method need to be used:

1. investments are recorded in the reference period in which they are delivered;
2. investments are recorded in the reference period in which they enter into the production process;
3. investments are recorded in the reference period in which they are invoiced;
4. investments are recorded in the reference period in which they are paid for.

Number of persons employed: is defined as the total number of persons who work in the observation unit (inclusive of working proprietors, partners working regularly in the unit and unpaid family workers), as well as persons who work outside the unit who belong to it and are paid by it (for example, sales representatives, delivery personnel, repair and maintenance teams). It includes persons absent for a short period (for example, sick leave, paid leave or special leave), and also those on strike, but not those absent for an indefinite period. It also includes part-time workers who are regarded as such under the laws of the country concerned and who are on the payroll, as well as seasonal workers, apprentices and home workers on the payroll. The number of persons

employed excludes manpower supplied to the unit by other enterprises, persons carrying out repair and maintenance work in the unit on behalf of other enterprises, as well as those on compulsory military service. Unpaid family workers refer to persons who live with the proprietor of the unit and work regularly for the unit, but do not have a contract of service and do not receive a fixed sum for the work they perform. This is limited to those persons who are not included on the payroll of another unit as their principal occupation.

Number of employees: is defined as those persons who work for an employer and who have a contract of employment and receive compensation in the form of wages, salaries, fees, gratuities, piecework pay or remuneration in kind. The relationship of employer to employee exists when there is an agreement, which may be formal or informal, between an enterprise and a person, normally entered into voluntarily by both parties, whereby the person works for the enterprise in return for remuneration in cash or in kind. A worker is considered to be a wage or salary earner of a particular unit if he or she receives a wage or salary from the unit regardless of where the work is done (in or outside the production unit). A worker from a temporary employment agency is considered to be an employee of the temporary employment agency and not of the unit (customer) in which they work. In particular the following are considered as employees: paid working proprietors; students who have a formal commitment whereby they contribute to the unit's process of production in return for remuneration and/or education services; employees engaged under a contract specifically designed to encourage the recruitment of unemployed persons; home workers if there is an explicit agreement that the home worker is remunerated on the basis of the work done and they are included on the payroll. The number of employees includes part-time workers, seasonal workers, persons on strike or on short-term leave, but excludes those persons on long-term leave. The number of employees does not include voluntary workers. The number of employees is calculated in the same manner as the number of persons employed, namely as the number of jobs and is measured as an annual average.

Investment in tangible goods relative to total operating costs: is defined as gross tangible investment divided by the sum of personnel costs and purchases of goods and services; the result is expressed as a percentage.

Purchases of goods and services as a share of total operating costs: is defined as purchases of goods and services divided by the sum of personnel costs and purchases of goods and

services; the result is expressed as a percentage.

Personnel costs as a share of total operating costs: is defined as purchases of goods and services divided by the sum of personnel costs and purchases of goods and services; the result is expressed as a percentage.

Apparent labour productivity: is defined as value added divided by the number of persons employed; the result is usually expressed in terms of thousand of euro per person employed.

Average personnel costs: are defined as personnel costs divided by the number of employees; the result is usually expressed in terms of thousand of euro per employee.

Wage adjusted labour productivity ratio: is defined as the ratio of value added divided by personnel costs (the latter having been divided by the share of employees in the number of persons employed); the result is expressed as a percentage. The ratio can also be calculated by dividing the apparent labour productivity by the average personnel costs and expressing the result as a percentage.

Gross operating rate: is defined as gross operating surplus divided by turnover; the result is expressed as a percentage.

Investment per person employed: is defined as gross investment in tangible goods divided by the number of persons employed; the result is expressed in thousands of euros per person employed.

PRODCOM

For data on industrial products, a selection of information was made. The process to do this was based on available EU-25 totals. In other words, for each CPA group all of the available EU-25 totals were extracted from the PRODCOM database. These products were then ranked according to their value, with only the most important products being selected for specific tables. Note that any ancillary categories (others, not elsewhere specified, etc.) were not included in the selection process.

The data on industrial products from PRODCOM (List of PROducts of the European COMMunity) are provided for EU-25 totals. The legal basis of the PRODCOM data is Council Regulation (EEC) No 3924/91 on the establishment of a Community survey of industrial production (the PRODCOM regulation). This regulation requires that production be reported to Eurostat according to the product headings of the PRODCOM list. Each PRODCOM code is identified by an eight-digit code. The first six digits are the CPA code

(classification of products by activity) for the activity that normally manufactures the product. The last two digits provide a further breakdown of the products. Normally each PRODCOM heading also corresponds to one or more Combined Nomenclature (CN) headings, thus enabling the external trade corresponding to one PRODCOM heading to be calculated.

The production concept used is production sold during the survey period, although total production is also required for some headings (total production includes production that is retained by the enterprise, as well as production that is sold). PRODCOM statistics aim to cover enterprises classified to NACE Sections C, D and E which manufacture products contained in the PRODCOM list. Among the rules on representativeness, the regulation stipulates that the reported production should account for all enterprises employing at least 20 persons. In addition, at least 90 % of production in each (four-digit) class of NACE must be recorded. The data presented in European business are usually in value terms, although information is also collected on quantities for many headings.

SHORT-TERM BUSINESS STATISTICS

Tracking the business cycle is indispensable for many economic actors. Short-term business statistics provide politicians, government agencies, bankers, business owners, consumers and trade unionists with information that is crucial when making decisions on whether activities and output prices grow, stagnate or decline. The legal basis of the European system of quantitative short-term business statistics is Council Regulation (EC) No 1165/98, which was adopted on 19 May 1998, and Regulation (EC) No 1158/2005 of the European Parliament and of the Council of 6 July 2005 amending Council Regulation (EC) No 1165/98 concerning short-term statistics.

Several variables from the short-term business statistics database are presented in this publication. To measure output the following indices are used: the industrial production index, the index of production for construction, the volume of sales for retail trade, the services' turnover index. In industry, the domestic output price index is presented, while a construction costs index is available for construction. An employment index is also available for most activities within industry, construction and services. Eurostat estimate EU-25 aggregates and have also back-calculated these so that they are available in some activities for a lengthy time-series; data in this edition of European business are generally presented from 1995 to 2005 (subject to availability).

Main definitions

Index of production for industrial activities: is defined to show the evolution of value added at factor cost, at constant prices. Value added at factor cost can be calculated from turnover (excluding VAT), plus capitalised production, plus other operating income, plus or minus the changes in stocks, minus the purchases of goods and services, minus other taxes on products and taxes linked to production. This index of production should take account of: variations in type and quality of the commodities and of the input materials; changes in stocks of finished goods and work in progress; changes in technical input-output relations (processing techniques); and services such as the assembling of production units, mounting, installations, repairs, planning, engineering, creation of software.

Index of production for construction: the objectives and characteristics of production indices for industrial activities also apply to the indices for building construction and civil engineering. The division of production between building construction and civil engineering is based on the classification of types of construction (CC). These indices aim to show the evolution of value added for each of the two main sections in construction, namely buildings and civil engineering works. The indices are calculated by assigning the basic information (for example, deflated output, hours worked, authorisations/permits) to products in the CC and then aggregating the product indices in accordance with the CC.

Volume of sales index for retail trade: represents the value of turnover in constant prices and as such is a volume index. It is generally calculated as turnover at current prices, deflated by the deflator of sales.

Turnover index services (other than retail trade): the objective of this index is to show the evolution of the market for goods and services. Turnover comprises the totals invoiced by the observation unit during the reference period. This corresponds to market sales of goods or services supplied to third parties. It includes all duties and taxes on the goods or services invoiced by the unit with the exception of the VAT invoiced by the unit vis-à-vis its customer and other similar deductible taxes directly linked to turnover.

Domestic output price index: all price-determining characteristics of the products should be taken into account when compiling these indices, including the quantity of units sold, transport provided, rebates, service conditions, guarantee conditions and destination. The specification must be such that

in subsequent reference periods, the observation unit is able to identify the product and to provide the appropriate price per unit. The appropriate price is the ex-factory price that includes all duties and taxes on the goods and services invoiced by the unit but excludes VAT invoiced by the unit vis-à-vis its customer and similar deductible taxes directly linked to turnover.

Construction costs index: the objective of this index is to show the evolution of costs incurred by the contractor to carry out the construction process. The component costs index (material costs and labour costs) shows the price developments of production factors used in the construction industry. Costs that constitute components of the construction costs are also plant and equipment, transport, energy and other costs. Architect's fees are not part of the construction costs.

Index of employment: is based on the total number of persons working in an observation unit (inclusive of working proprietors, partners working regularly in the unit and unpaid family workers), which also includes persons who work outside the unit who belong to it and are paid by it (for example, sales representatives, delivery personnel, repair and maintenance teams). It includes persons absent for a short period (for example, sick leave, paid leave or special leave), and also those on strike, but not those absent for an indefinite period. It also includes part-time workers who are regarded as such under the laws of the country concerned and who are on the payroll, as well as seasonal workers, apprentices and home workers on the payroll. The number of persons employed excludes manpower supplied to the unit by other enterprises, persons carrying out repair and maintenance work in the unit on behalf of other enterprises, as well as those on compulsory military service.

EXTERNAL TRADE

EU-25 external trade statistics are available in the Comext database, and can be compiled according to various classifications. For the purpose of this publication the classification of products by activity (CPA) has been used; the 2002 version is currently in use.

The focus of the external trade data presented in European business is for reference year 2005. No estimates are made for external trade statistics, although it is possible that subsequent revisions may occur. The data are processed by summing together product statistics (using a conversion table from CN to CPA - note that the table can change between reference years).

The data for EU-25 are reported in terms of trade flows with the rest of the world, in other words EU-25 trade with non-member countries (extra-EU trade). However, for the individual Member States total trade flows are used, in other words, intra- and extra-EU trade combined. All trade figures are given in current price euro terms.

LABOUR FORCE SURVEY

The legal basis for the collection of data is Council Regulation (EC) No 577/98 of 9 March 1998 on the organisation of a labour force sample survey in the Community, which was subsequently amended by Regulation (EC) No 1991/2002 of the European Parliament and of the Council of 8 October 2002. Regulation 1991/2002 of the European Parliament and of the Council introduced a deadline for the period of transition given to the Member States to introduce a continuous quarterly survey. The methodological basis and the contents of this survey are described in the publication Labour Force Survey - Methods and definitions, 2001 edition.

The main statistical objective of the Labour Force Survey is to divide the population of working age (generally 15 years and above) into three mutually exclusive and exhaustive groups: persons in employment, unemployed persons, and inactive persons, and to provide descriptive and explanatory data on each of these categories. Respondents are assigned to one of these groups on the basis of the most objective information possible, obtained through a survey questionnaire, which relates principally to their actual activity within the reference period. It is important to note that the information is not collected from enterprises (as with most of the business statistics presented in this publication), but instead through a survey addressed to individual households.

The national statistical institutes are responsible for selecting the sample, preparing the questionnaires, conducting the interviews and forwarding the results to Eurostat in accordance with a common coding scheme. Eurostat devises the programme for analysing the results and is responsible for processing and disseminating the information. The results are subject to the usual types of errors associated with sampling techniques. Eurostat implements basic guidelines intended to avoid the publication of figures which are statistically unreliable (see Table 5); and figures below these thresholds are not published. A second threshold is applied to data that may only be published with a warning concerning its reliability; for the purpose of this edition of European business these data have also been omitted.

Main definitions

Employed persons: are persons aged 15 years and over (16 and over in Spain and the United Kingdom; 15 to 74 years old in Denmark, Estonia, Hungary, Latvia, Finland and Sweden; 16 to 74 years old in Iceland and Norway) who during the reference week performed work, even for just one hour a week, for pay, profit or family gain or were not at work but had a job or business from which they were temporarily absent because of, for example, illness, holidays, industrial dispute and education and training.

Gender breakdown: information shown on those in employment is broken down according to the proportion of the workforce that is male or female.

Full-time/part-time: this variable refers to the main job. The distinction between full-time and part-time work is based on a spontaneous response by the respondent (except in the Netherlands, Iceland and Norway where part-time work is determined to be the case if the usual hours are fewer than 35 hours and full-time if the usual hours are 35 hours or more, and in Sweden where this criterion is applied to the self-employed). It is impossible to establish a more precise distinction between full-time and part-time employment, since working hours differ from one Member State to the next and from one activity to the next.

Age: the age of the respondent is calculated from the year of birth. For persons born in the same year, those whose birthdays fall between 1 January and the end of the reference week are, for the purposes of survey results analysis, regarded as being one year older than those whose birthdays fall after the end of the reference week. The presentation of data is made according to a breakdown of the proportion of those in employment according to three age groups, defined as follows: those aged less than 30 years; those aged 30 to 49 years old; and those aged 50 or more.

Table 5
Reliability limits for publishing Labour Force Survey (LFS) data, 2005
(number of observations)

	A	B
EU-25	60 150	60 150
Belgium	2 500	4 500
Czech Republic	700	700
Denmark	2 000	3 500
Germany	5 000	5 000
Estonia	1 250	2 500
Greece	2 500	4 500
Spain	2 000	4 000
France	3 500	8 500
Ireland	2 500	4 500
Italy	1 500	2 500
Cyprus	500	1 500
Latvia	1 200	2 000
Lithuania	4 000	7 500
Luxembourg	500	1 500
Hungary	2 000	3 500
Malta	1 500	3 000
Netherlands	1 500	4 500
Austria	3 000	6 000
Poland	5 000	15 000
Portugal	4 500	4 500
Slovenia	500	4 000
Slovakia	2 000	3 000
Finland	2 500	4 500
Sweden	2 000	2 000
United Kingdom	6 000	6 000

A: threshold for publishing data.

B: threshold for reliable data.

Source: Eurostat (Labour market)

ABBREVIATIONS**COUNTRIES**

EU-25	European Union of 25 Member States
EU-15	European Union of 15 Member States
BE	Belgium
CZ	the Czech Republic
DK	Denmark
DE	Germany
EE	Estonia
EL	Greece
ES	Spain
FR	France
IE	Ireland
IT	Italy
CY	Cyprus
LV	Latvia
LT	Lithuania
LU	Luxembourg
HU	Hungary
MT	Malta
NL	the Netherlands
AT	Austria
PL	Poland
PT	Portugal
SI	Slovenia
SK	Slovakia
FI	Finland
SE	Sweden
UK	the United Kingdom
BG	Bulgaria
HR	Croatia
MK	the former Yugoslav Republic of Macedonia
RO	Romania
TR	Turkey
IS	Iceland
NO	Norway
CH	Switzerland
CIS	Commonwealth of Independent States
CN	China
JP	Japan
RU	Russia
US	United States (of America)

INTERNATIONAL ORGANISATIONS AND TRADE ASSOCIATIONS

ACEA	European Automobile Manufacturers Association
AEA	Association of European Airlines
APPE	Association of Petrochemicals Producers in Europe
CBMC	The Brewers of Europe
CCBE	Council of the Bars and Law Societies of the European Community
CEFIC	European Chemical Industry Council
CEFS	European Committee of Sugar Industry
CIAA	Confédération des Industries Agro-alimentaires de la CE
EAO	European Audiovisual Observatory
EFAMA	European Fund and Asset Management Association (formerly European Federation of Investment Funds FEFSI)
EFBW	European Federation for Bottled Waters
EFPIA	European Federation of Pharmaceutical Industries' Associations
EMF	European Mortgage Federation
ERA	European Regional Airlines Association
EUROFINAS	European Federation of Finance House Associations
FEDIOL	Fediol - EC Seed Crushers' and Oil Processors' Federation
FEFAC	European Feed Manufacturers Federation
FESE	Federation of European Securities Exchanges
FIEC	European Construction Industry Federation
IFPI	International Federation of the Phonographic Industries
IISI	International Iron and Steel Institute
LEASEEUROPE	European Federation of Leasing Company Associations
STD	Swedish Federation of Consulting Engineers and Architects (Svensk Teknik och Design)
UPU	Universal Postal Union
VDA	German automobile producers association
WTO	World Tourism Organization

WEIGHTS AND MEASURES

DWT	Dead weight tonnes
EUR	euro
KG	Kilogramme
Km	Kilometre
Km ²	Square kilometre
TOE	Tonnes of oil equivalent
TWh	Terawatt-hours
USD	United States dollar
%	Percentage

OTHER ABBREVIATIONS

AAGR	Average annual growth rate
ATC	Agreement on Textiles and Clothing
ATM	Automatic teller machine
CAP	Common Agricultural Policy
CD	Compact disc
CFP	Common Fisheries Policy
CO ₂	Carbon dioxide
COICOP	Classification of Individual Consumption According to Purpose
CPA	Classification of products by activity
DTP	Desktop publishing
DVD	Digital video disc / Digital versatile disc
EAP	Environment Action Programme
FDI	Foreign direct investment
FSAP	Financial Services Action Plan
GATS	General Agreement on Tariffs in Services
GATT	General Agreement on Tariffs and Trade
GDP	Gross domestic product
GM	Genetically-modified
GMO	Genetically-modified organisms
GSM	Global system for mobile communication
HICP	Harmonised index of consumer prices
HRST	Human resources in science and technology
ICT	Information and communication technologies
IT	Information technology
LAN	Local area network
LCD	Liquid crystal display
LFS	Labour Force Survey
LPG	Liquefied petroleum gas
MFA	Multifibre Arrangement
MIGs	Main Industrial Groupings
NACE	Statistical classification of economic activities in the European Community
n.e.c.	Not elsewhere classified
OPT	Outward processing trade
PC	Personal computer
PBX	Private branch exchange
PWS	Public water supply
REACH	Registration, Evaluation and Authorisation of CHemicals
RTD	(framework programme for) Research, Technological development and Demonstration
R&D	Research and development
SARS	Severe acute respiratory syndrome
S&T	Science and technology
SBS	Structural business statistics
SGEI	Services of general economic interest
SME	Small and medium-sized enterprise (employing from 1 to 249 persons)
STS	Short-term business statistics
TEN-T	Trans-European transport network
UCITS	Undertakings for collective investment in transferable securities
VAT	Value added tax
VHS	Video home system
VoIP	Voice over Internet protocol