

European business

Facts and figures

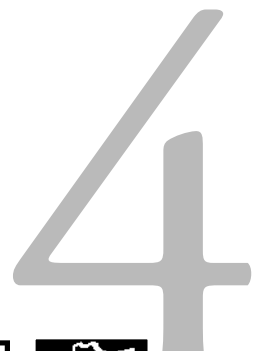
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**European business,
Facts & figures**

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GUIDE TO THE PUBLICATION

Contents of the publication	vii
Guide to the statistics	vii
Official data sources	viii
Glossary of terms	ix
Abbreviations	xvi
	xviii

OVERVIEW - THE EU'S BUSINESS ECONOMY

Introduction	1
The effects of enlargement	2
Business demography	18
Information society and intangibles	19
Statistical annex	25

SECTORAL ANALYSIS

1. Energy	35
1.1 Crude oil and natural gas	39
1.2 Electricity generation and distribution	42
1.3 Other energy activities	44
2. Non-energy mining and quarrying	51
3. Food, beverages and tobacco	57
3.1 Meat	62
3.2 Fish	64
3.3 Dairy products	66
3.4 Miscellaneous food products	68
3.5 Beverages	74
3.6 Tobacco	77
4. Textiles, clothing, leather and footwear	83
4.1 Textiles	87
4.2 Clothing, including knitted articles	89
4.3 Leather and footwear	92
5. Wood and paper	99
5.1 Wood and wood products	102
5.2 Pulp, paper and paper products	105
6. Chemicals, rubber and plastics	111
6.1 Basic industrial chemicals (including petrochemicals), pesticides and agrochemicals	115
6.2 Pharmaceuticals	117
6.3 Miscellaneous chemical products	119
6.4 Man-made fibres	122
6.5 Rubber	124
6.6 Plastics	127

7.	Non-metallic mineral products	133
7.1	Glass	137
7.2	Ceramic goods and clay products	139
7.3	Cement, concrete, stone and other non-metallic mineral products	141
8.	Metals	145
8.1	Manufacture and first processing of ferrous metals	148
8.2	Basic precious and non-ferrous metals	150
8.3	Casting	152
9.	Metal products	155
9.1	Structural metal products	159
9.2	Boilers, metal containers and steam generators	161
9.3	Miscellaneous metal products	163
10.	Machinery and equipment	171
10.1	Power machinery	175
10.2	Industrial processing machinery	177
10.3	Agricultural machines and tractors	181
10.4	Domestic appliances	184
11.	Electrical machinery and optical equipment	189
11.1	Instrument engineering	193
11.2	Computer and office equipment	197
11.3	Manufacture of electrical machinery and equipment	199
11.4	Manufacture of radio, television and communication equipment	203
12.	Transport equipment	211
12.1	Motor vehicles	215
12.2	Motor vehicle parts and accessories	217
12.3	Aerospace equipment	219
12.4	Miscellaneous transport equipment	221
13.	Furniture, other manufacturing industries and recycling	229
13.1	Furniture	229
13.2	Musical instruments, sports goods, toys and games, jewellery	232
13.3	Recycling and waste treatment	233
14.	Water supply and sewerage	239
15.	Construction and real estate	245
15.1	Site preparation and general construction	251
15.2	Installation and completion	254
15.3	Real estate services	255
16.	Motor trades	261
16.1	Sale and repair of motor vehicles	264
16.2	Retail sale of automotive fuel	266
17.	Wholesale trade	271
17.1	Wholesale on a fee or contract basis	274
17.2	Agricultural wholesaling	275
17.3	Wholesaling of consumer goods	277
17.4	Wholesaling of intermediate goods	278
17.5	Wholesaling of machinery and equipment	280
17.6	Other wholesale	282

18. Retail trade	287
18.1 Retail trade of food items in-store	291
18.2 Retail trade of non-food items in-store	293
18.3 Retail sale not in stores	296
18.4 Repair of personal and household goods	298
19. Tourism	305
19.1 Travel agencies	310
19.2 Accommodation services	312
19.3 Restaurants, bars and catering	317
20. Transport services	321
20.1 Railway transport	326
20.2 Road transport	327
20.3 Water transport	331
20.4 Air transport	335
20.5 Auxiliary transport activities	340
21. Financial services	345
21.1 Financial intermediation	346
21.2 Insurance and pension funds	351
21.3 Financial auxiliaries	355
22. Business services	363
22.1 Renting and leasing	367
22.2 Research and development	369
22.3 Legal, accountancy and management services	370
22.4 Architectural and engineering activities; technical, testing and analysis	372
22.5 Advertising and direct marketing	374
22.6 Labour recruitment and temporary work services	375
22.7 Security services	377
22.8 Industrial cleaning services	378
22.9 Miscellaneous business activities	380
23. Information and communication services	387
23.1 Postal and courier services	391
23.2 Telecommunication services	394
23.3 Software and computing services	398
24. Media	405
24.1 Production, reproduction and distribution of film, video and television	409
24.2 Publishing and reproduction of sound recordings	413
24.3 Publishing and printing	416
24.4 Other reproduction	418

Guide to the publication

CONTENTS OF THE PUBLICATION

European business aims to provide a standard set of information for industrial and service activities within the EU. The data provided in European business present a snapshot of output (in terms of value added and turnover), employment and external trade. The commentaries concentrate largely on the two- and three-digit level of the NACE Rev. 1 classification of economic activities ⁽¹⁾.

Publication format

The publication is available as a paper and electronic product (CD-ROM). The CD-ROM also contains a NewCronos database application with many additional series (longer time-series and breakdowns by Member State). The underlying statistics can be easily viewed using Eurostat's NewCronos software that is a dedicated database browser.

When the CD-ROM is started, two separate applications are launched. The first is an HTML application with the analysis and information, most of which is identical to the paper publication. The second application is the NewCronos database server, which launches a local server window from its start and close page. The start and close page should be left open at all times while using the product and should also be used to close a session when using the database application. If the start and close page or the server window are closed by accident then they can be located on the CD-ROM within the NC subdirectory (folder). This folder contains a file called setup.exe - by double-clicking on this icon the database application can be relaunched. Within NewCronos it is possible to extract and export data for manipulation within a database or spreadsheet application.

⁽¹⁾ Published by Eurostat, ISBN 92-826-8767-8, available from the usual outlets for Commission publications.

The CD-ROM also provides a large amount of additional background information on the underlying legislation, sources and classifications that have been used, as well as a glossary of terms. These can be found within the INFO component of the product.

Structure of the publication

The analysis component of the European business CD-ROM and the paper publication are divided into three main sections:

1. The first provides a general overview of the structure of the EU's business economy, looking at changes in output, employment and external trade;
2. The second provides a sectoral breakdown of industrial activities and is divided into 15 separate chapters, each of which contains a number of subchapters usually based on the three-digit level of the NACE classification. Each chapter concludes with a statistical annex presenting structural business statistics;
3. The third provides a sectoral breakdown of service activities and is divided into nine separate chapters (again with subchapters and a statistical annex, usually based on structural business statistics or alternatively a functional database specific to the subject area).

The chapters in European business are structured on the basis of their NACE coverage, starting with energy and the extractive industries and finishing with business services, the information society and media. Each chapter begins with a preliminary section explaining the sectoral coverage of the data presented.

NACE is a hierarchical classification made up of sections (one-letter codes), subsections (two-letter codes), divisions (two-digit codes), groups (three-digit codes) and classes (four-digit codes). NACE establishes a direct link between the European classification and the internationally recognised ISIC Rev. 3 developed under the auspices of the United Nations. These two classifications are directly compatible at the two-digit level and the lower levels of ISIC Rev. 3 can be calculated by aggregating the more detailed levels of NACE. Note that NACE has recently been revised, but the new NACE Rev. 1.1 classification is not yet being used for the main data sources that are presented in this publication. The external trade data are based on the CPA (classification of products by activity) rather than NACE, and this uses the 2002 version of the CPA.

The compilation of industrial data has followed a different historical development to that of other sectors of the business economy. It is generally easier to compile activity and product statistics about goods/merchandise than it is to collect information, for example, relating to knowledge or information-based services. Hence, the balance of this publication reflects to some degree the information that is currently available from official statistical sources. There has, however, been a rapid improvement in data availability for service sectors during the last few years and most EU Member States now compile annual statistics for these activities. As in previous years the proportion of the publication dedicated to services has been expanded.

For the energy and services sectors, data are often available from Eurostat's specialist databases and these have been used to complement the general sources used in most chapters.

Differences compared with the 2003 edition

This edition of European business continues the efforts made in recent years to focus this publication increasingly on official sources of information, as the European statistical system continues to make advances.

Although the activity definition of some subchapters has changed compared with previous editions, the main changes in 2004 are not in the structure, as in previous years, but in the coverage and the sources used. The most notable change is the transition from EU-15 to EU-25 as the main focus of analysis. The enlargement of the EU is presented in a special analysis on page 2 of the overview of the EU's business economy. The second change in relation to coverage is that the structural business statistics (SBS) data used in the manufacturing chapters covers enterprises of all sizes, rather than just those with 20 or more persons employed, as was the case in the past. This puts the size-class coverage of these chapters on the same basis as the services chapters which have always used this coverage, and the energy, mining and quarrying, water and construction chapters that moved to this coverage over the course of the last two editions. In terms of sources, the main change has been to stop using the SBS Ent_I database for the manufacturing chapters and to use only the SBS Enter database; this has resulted in the improvement in the size-class coverage mentioned above, but has had the drawback of reducing the time-series available. To make up for this loss of time-series, short-term business statistics (STS) have been used to show the development of industrial production in the industrial chapters and turnover in the services chapters, supplemented in some cases by an analysis of employment. As in previous years, STS is also used for an analysis of the development of domestic output prices.

GUIDE TO THE STATISTICS

Two main data sources should be distinguished when using this publication: 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 manufacturers and service providers) and other non-official bodies. Tables and graphs presenting data from non-official sources are easily recognised as they always appear in a shaded box.

Time frame

The majority of the data within this publication was extracted from various Eurostat databases during the first two weeks of February 2004. Fresher data is available on the CD-ROM. The accompanying text was written during the first and second quarters of 2004.

Data are generally available for 2001 from SBS and Prodcorn, for 2002 from external trade and the labour force survey (LFS), and for either 2002 or 2003 from STS depending on the activity and the indicator.

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-zone. 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-zone.

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 22 in the statistical annex of the overview chapter.

Geographical coverage

EU-15 totals cover the Member States up to the end of April 2004, and EU-25 totals the Member States from 1 May 2004.

It should be noted that all EU aggregates, both EU-15 and EU-25 for SBS data for services (NACE Sections G to K), exclude Greece. A footnote is added to tables, figures or analyses when a partial total is created from an incomplete set of country information.

Figures for Germany are on a post-unification basis, unless otherwise stated.

Non-availability

The colon (:) is used in tables to represent data that is not available, either because it has not been provided to Eurostat or because it is confidential. In figures (charts), missing information is footnoted as not available.

OFFICIAL DATA SOURCES

SBS

The main part of the analysis contained within European business statistics (SBS). These data have been collected within the legal framework provided by the SBS regulation⁽²⁾. Structural business statistics for the 10 new Member States and the candidate countries were collected on a comparable basis, although data were provided to Eurostat on the basis of specific agreements rather than with a legal basis. With their accession on 1 May 2004, this situation changed for the 10 new Member States and new data will be transmitted on the basis of the requirements of the SBS regulation.

There are two main SBS data sets that have been used in this publication. The first is SBS Enter⁽³⁾ which covers enterprises of all sizes and the data generally start in 1995. Not all Member States have transmitted data relating to this population. In particular, some Member States have only provided data for units with employment above a certain size threshold. Table 1 presents the main deviations from the standard population as laid down in the SBS regulation (all enterprises, regardless of their level of employment).

⁽²⁾ Council Regulation (EC, EURATOM) No 58/97 of 20 December 1996 concerning structural business statistics.

⁽³⁾ Public access to data for the Member States is available via Eurostat's NewCronos database.

Table 1

Country	Statistical unit and coverage used from 1995 onwards			
	Industry (NACE Sections C - E)	Construction (NACE Section F)	Trade (NACE Section G)	Services (NACE Sections H - K)
The Czech Republic	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 2001: several activities at the 3-digit level include results for enterprises that have only been classified at the 2-digit level, thus potentially overestimating these activities and underestimating other activities within the same 2-digit activity, but ensuring coherency between the results for the 2- and 3-digit levels			
Denmark	No major deviations	1995 to 1998: Class 45.21 includes data for Classes 45.23 and 45.24; Class 45.31 includes data for Class 45.34	No major deviations	
Germany	2001 for Sections D to F: major change in source for enterprises with less than 20 persons employed		No major deviations	1998 onwards: Class 60.24 data are not comparable with previous years 1999 for Sections I to K: the number of enterprises and turnover come from a different source than the other variables and the two groups of variables can not be compared 1999: for production value and value added Class 60.21 includes Class 60.23, Class 74.13 includes Class 74.14, Class 74.11 includes Classes 74.12 and 74.15 2000 for Sections I and K: data are not comparable with previous years
Estonia	1995: Section D data at the 2-digit level cover enterprises with 20 and more employees, except investment data which cover enterprises with 50 and more employees; data at the Section level cover all enterprises	No major deviations		1995: Division 71 includes Division 72
Greece	No data available		Covers only enterprises with a turnover of 15 million GRD or more	
Spain	1995 to 1998: enterprises with 1 employee or more	No major deviations	1995 to 1998: enterprises with 1 employee or more	
France	1995: Section D excludes Divisions 16 and 37; Subsection DA excludes Division 16; Subsection DN excludes Division 37	No major deviations		In some transport activities within Group 61.2 the coverage is only enterprises with 6 employees or more
Ireland	Enterprises with 3 persons employed or more 1995: Subsection DN includes Subsection DF	No data available	No major deviations	
Italy	Turnover from the principal activity at the 4-digit level: this data is supplied only for enterprises with 200 employees or more	No major deviations		
Cyprus	2001: 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 28.54; 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			

Table 1 continued

Country	Statistical unit and coverage used from 1995 onwards			
	Industry (NACE Sections C - E)	Construction (NACE Section F)	Trade (NACE Section G)	Services (NACE Sections H - K)
Latvia	No major deviations		It is recommended not to use 4-digit level data as the sampling plan for the survey was designed at the 3-digit level only	No major deviations
Luxembourg	1996 onwards: kind-of-activity units with 1 person employed or more	No major deviations		1995 to 1998: Class 66.01 includes Class 66.02
Hungary	Covers only enterprises with 5 or more persons employed			
The Netherlands	Number of enterprises: data for this variable are rounded to multiples of 5; a 0 therefore means 2 or less enterprises			
	Covers only enterprises with 20 employees or more for Section E; total intramural R&D expenditure and total number of R&D personnel cover only enterprises with 10 employees or more	No major deviations		Class 74.15: enterprises with 5 employees or more
Portugal	1995: Subsection DN and Section D exclude Division 37	No major deviations		
Slovakia	1995 to 1998: covers enterprises with 20 or more persons employed as well as enterprises with less than 20 persons employed which were considered statistically important			
The United Kingdom	1996: Class 14.12 includes Class 14.13; Class 15.94 includes Class 15.95; Class 17.15 includes Class 17.14; Class 17.16 includes Class 17.17; Class 21.11 includes Class 21.12 1997: Group 10.3 includes Group 10.2; Group 13.2 includes Group 13.1; Class 14.12 includes Class 14.13; Class 17.15 includes Class 17.14; Class 17.16 includes 17.17; Class 21.12 includes Class 21.11 1998: Group 10.3 includes Group 10.2; Class 14.12 includes Class 14.13; Class 51.35 includes Classes 51.36 and 51.37			
Bulgaria	1996 to 1999: investment not representative below the 2-digit level			

The second collection covers information broken down by employment size-class. Again, not all Member States have transmitted data to Eurostat that relates to this statistical unit or population. In particular, some Member States have only provided data for units with employment above a certain size threshold. Table 2 summarises the main deviations from the standard statistical unit and coverage.

Table 2

Country	Statistical units and coverage			
	Industry (NACE Sections C - E)	Construction (NACE Section F)	Trade (NACE Section G)	Services (NACE Sections H - K and M - O)
The Czech Republic	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 2001: several activities at the 3-digit level include results for enterprises that have only been classified at the 2-digit level, thus potentially overestimating these activities and underestimating other activities within the same 2-digit activity, but ensuring coherency between the results for the 2- and 3-digit levels			
Germany	1995 onwards: enterprises with 20 persons employed or more		No major deviations	
Estonia	1995: Section D data at the 2-digit level cover enterprises with 20 and more employees, except investment data which cover enterprises with 50 and more employees; data at the Section level cover all enterprises; 1995 to 1999: employment size classes are defined in terms of employees; 1995 to 1998: data for size class 500-999 includes data for size class 1000+; 1996 to 1999: the size class total is not equal to the sum of the size classes published as the total also includes data for the size class 0 employees	1995 to 1999: employment size classes are defined in terms of employees; 1995 to 1998: data for size class 500-999 includes data for size class 1000+ as well; 1996 to 1999: data for size class 1-9 employees also includes data for size class 0 employees	1995 to 1999: employment size classes are defined in terms of employees 1995 to 1998: data for size class 500-999 includes data for size class 1000+ as well 1996 to 1999: size classes 0 and 1-9 employees are provided instead of size classes 1, 2-4 and 5-9 employees; data for size class 0 are published under the size class 1 and data for size class 1-9 are published under the size class 5-9	1995 to 1999: employment size classes are defined in terms of employees; 1995 to 1998: data for size class 500-999 includes data for size class 1000+ as well; 1996 to 1999: size classes 0 and 1-9 employees are provided instead of size classes 1-4 and 5-9 employees; data for size class 0 are published under the size class 1-4 and data for size class 1-9 are published under the size class 5-9; 1995: Division 71 also includes Division 72
Spain	1995 onwards: enterprises with 1 employee or more	No major deviations		
France	1995: enterprises with 20 employees or more		No major deviations	
Ireland	1995 onwards: enterprises with 3 persons employed or more	1995 onwards: enterprises with 20 persons employed or more	No major deviations	1997: Group 60.1 includes Classes 60.21, 60.22 and 60.23; Group 74.6 includes Group 74.7
Cyprus	2001: data for size class 500-999 includes data for size class 1000+; 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			
Hungary	1998 to 2001: enterprises with 5 persons employed or more; data for size class 1-9 persons employed are not available; data for size class 5-9 persons employed have been provided; data for the total of the size classes refer to enterprises with 5 persons employed or more		1998 to 2001: enterprises with 5 persons employed or more; data for the total of the size classes refer to enterprises with 5 persons employed and more	
The Netherlands	1999 onwards: employment size classes are defined in terms of employees; size class 1-9 has been approximated with size class 0-9 employees; size class 500-999 includes size class 1000+		1999 onwards: employment size classes are defined in terms of employees; size class 1 has been approximated with size class 0 employee; size class 2-4 has been approximated with size class 1-4 employees; size class 500-999 includes size class 1000+	1999 onwards: employment size classes are defined in terms of employees; size class 1-4 has been approximated with size class 0-4 employees; size class 1-9 has been approximated with size class 0-9 employees; size class 500-999 includes size class 1000+
Portugal	1996 onwards: employment size classes are defined in terms of employees; size class 1-9 has been approximated with size class 0-9 employees		1996 onwards: employment size classes are defined in terms of employees	
Slovenia	1995 to 1998: employment size classes are defined in terms of employees, and exclude enterprises with 0 employees			
Slovakia	1995 to 1998: size classes are defined in terms of employees; data for the total of the size classes refer to enterprises with 20 and more employees			
Sweden	1996: employment size classes are defined in terms of employees; size class 1-9 has been approximated with size class 0-9 employees	No major deviations		
The United Kingdom	1995: enterprises with 20 persons employed or more; 1997: Group 10.3 includes Group 10.2; Group 13.2 includes Group 13.1	1995: enterprises with 20 persons employed or more	No major deviations	

Standard definitions of variables have been laid down. As such, the data presented are largely comparable across activities and countries. There are nevertheless some known divergences from the standard definitions. Until the reference year 1994 inclusive, EU-15 Member States transmitted their data to Eurostat according to either the legal basis preceding the SBS regulation for industry or on a voluntary basis for services. As far as possible Eurostat and the Member States worked to convert these data in line with the variable definitions as implemented following the adoption of the SBS regulation. However, the results of the conversion may not be of the same quality as the data collected from the 1995 reference year onwards. For France, this conversion is applied until the reference year 1995 inclusive. For Greece, this conversion is applied until the reference year 1996 inclusive. Table 3 presents the main discrepancies with respect to the standard variable definitions as regards data from Member States and the candidate countries.

Estimates

EU-15 and EU-25 data are estimated. Estimates are made using individual country information and short-term indicators such as indices of production and employment. The individual country estimates are not published. Data in this publication are generally available at the three-digit NACE level, while more detailed information is often available within the SBS Enter table at the four-digit NACE level. EU-15 aggregates are generally available at the four-digit level in SBS Enter and at the three-digit level in SBS Enter size-class, while EU-25 aggregates are generally available at the three-digit level in SBS Enter and at the two-digit level in SBS Enter size-class.

Table 3

SBS Enter			
Country	Year	Variable	Discrepancy
Belgium	1995-1998	Production value	The purchase of goods and services for resale are not removed, resulting in the values being overestimated
The Czech Republic	1995-1998	Number of enterprises	Average number of enterprises calculated on the basis of the length of the activity of the unit during the year; this means that an enterprise active only a part of the year is not counted as 1 but as a percentage (3 months=0.25 enterprises)
	1995-1998	Personnel costs and social security costs	Non-standard definitions
Germany	1999	Sections I to K: value added at factor cost	Does not include subsidies
Spain	1995-1998	Gross investment in tangible goods	Gross investment in land and gross investment in machinery and equipment
Ireland	1998-2000	Sections H, I and K: personnel costs	Wages and salaries
	1998/1999	Number of enterprises	Break in series due to a change in estimation method.
Cyprus	1995-1998	Change in stocks of finished products and work in progress manufactured by the unit	Includes change in stocks of all goods and services
Hungary	1998	Number of employees	Estimated as a fixed percentage (99.5%) of the number of persons employed
	2001	Total investment in tangible goods	Is inconsistent with its components as some investment is not included in the components, only in the total
Slovenia	1995-1998	Value added and wages and salaries	Non-standard definitions
Finland	1995	Value added at factor cost	Value added at market prices
		Gross operating surplus	Value added at market prices - personnel costs
Sweden	1995-1996	Number of persons employed	The number of persons employed and the number of employees are very close as self-employed persons are not included and for enterprises with less than 10 employees the number of employees is collected in full time equivalent units.
The United Kingdom	1996-1998	Gross investment in existing buildings and structures	Includes gross investment in land
	1997	Turnover from trading and intermediary activities	Turnover from trading activities of purchase and resale
Bulgaria	1996-1998	Changes in stocks	Concerns only changes in stocks of goods, and therefore excludes changes in stocks of services
	1996-1999	Investment in existing buildings and structures	Includes also investment in construction and alteration of buildings
	1999	Turnover and production value	Does not include duties and taxes on services invoiced by the unit
	2000-2001	Investment in construction and alteration of buildings	Includes also investment in existing buildings and structures
Norway	1996-1997	For Sections C and D: investment	The definitions of variables 15 13 0 and 15 14 0 (concerning investment) are non-standard, however their sum is conform with the standard definitions
SBS Enter size class data			
Country	Year	Variable	Discrepancy
The Czech Republic	1995-1998	Number of enterprises	Average number of enterprises calculated on the basis of the length of the activity of the unit during the year; this means that an enterprise active only a part of the year is not counted as 1 but as a percentage (3 months=0.25 enterprises)
Denmark	1995-1996	Sections C to G: number of employees	Employees in full-time equivalents
Hungary	1998	Sections C to F: number of employees	Estimated as a fixed percentage (99.5%) of the number of persons employed
Slovenia	1995-1998	Value added	Non-standard definition
Slovakia	1995-1998	Sections G to K: number of persons employed	Number of employees
Sweden	1996	Sections C to E: number of persons employed	The number of persons employed and the number of employees are very close as self-employed persons are not included and for enterprises with less than 10 employees the number of employees is collected in full time equivalent units.
		Sections H to K: number of persons employed Sections C to F: social security costs	Is in fact the number of employees Non-standard definition

Prodcom

In previous editions of this publication, Prodcom data was sourced from NewCronos. Recently Prodcom has been added to the Comext reference database, and the Prodcom tables on NewCronos are no longer updated. For this reason the Comext version of the database was preferred for this year's edition. As part of the move to Comext, a reprocessing of data was carried out, and for some Prodcom headings EU-15 totals are no longer available, although they were published on NewCronos. At the present time there are no EU-25 aggregates in Prodcom, as two of the new Member States do not yet compile Prodcom statistics. The legal basis of the Prodcom data is Council Regulation (EEC) No 3924/91 on the establishment of a Community survey of industrial production (Prodcom regulation). This regulation requires that production be recorded according to the product headings of the Prodcom list. The list is based on the Community's external trade classification, the Combined Nomenclature (CN). The list does not, however, cover all products. The list is divided into divisions corresponding to the (two-digit) divisions of NACE. Each Prodcom code is identified by an eight-digit code. The first six digits are the CPA code ('classification of products by activity'). The last two digits normally provide a reference to the Combined Nomenclature (CN), although there are exceptions to this rule.

The physical volume and the value of production are normally recorded for the products in the Prodcom list. Different production concepts are used in the survey, namely:

- production sold during the survey period;
- actual production (total production) during the survey period. This includes any production which is incorporated into the manufacture of other products. Such production is normally taken to mean own products which are either processed into another product or fitted into another product in the reporting unit itself, in another plant belonging to it, or under contract in another unit;
- production during the survey period which is intended for sale.

The value of production sold/production intended for sale should be calculated on the basis of the ex-works selling price obtained/obtainable during the reporting period. It also includes packaging costs, even if they are charged separately. However, the following are not included: any turnover tax and consumer tax charged; separately charged freight costs; any discounts granted to customers.

The particular physical units of the CN classification have normally been adopted for recording the volume of production. In exceptional cases a different and/or supplementary unit is recorded. All units belonging to the individual Prodcom headings are specifically indicated in the data set.

Prodcom statistics normally cover all enterprises/local units which manufacture products contained in the Prodcom list. Among the rules on representativeness, the regulation stipulates that all enterprises in Sections C, D and E of NACE Rev. 1 employing at least 20 persons must be included. In addition, at least 90 % of production in each (four-digit) class of NACE Rev. 1 must also be recorded.

External trade

EU 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 analysis focuses on external trade data for 2002 (while fresher data for reference year 2003 are included in the DATABASE application). 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 there have been extensive changes to the Combined Nomenclature (CN) between reference years 2001 and 2002.). The data for EU-25 are reported in terms of trade flows with the rest of the world, in other words extra-EU trade. However, for the individual Member States total trade flows are used (in other words intra-EU and extra-EU trade). All trade figures are given in current EUR terms.

The calculation of EU-25 trade flows has been done by subtracting the value of trade of the EU-15 with the 10 new Member States from the total trade of the EU-15 with all 'extra-EU-15' partners.

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 industries grow, stagnate or decline. The legal base of the European system of quantitative short-term business statistics is Council Regulation (EC) No 1165/98, which was adopted on 19 May 1998.

Several variables from the EBT database are presented in this publication. To measure output the following are used: the industrial production index, the index of production in construction, the index of retail trade volume of sales, the services' turnover index. In manufacturing the domestic output price index is presented and in construction the construction costs index is also available. An employment index is available for many activities within industry, construction and services. In addition, indices are also available on new car registrations and on building permits.

Indices for the EU-15 and for the EU-25 have been estimated for several indicators for many activities.

Industrial production index

In line with traditional practice in business statistics, the production index should 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.

Turnover

The objective of the turnover 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.

Employment

The number of persons employed is defined as the total number of persons working in an 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 observation unit on behalf of other enterprises, as well as those on compulsory military service.

Domestic output prices

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.

Labour force 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 the SBS database) but 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 Community labour force survey ⁽⁴⁾, is based upon a sample of the population. The results are therefore 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 4). Figures below these thresholds are not published. A second threshold is applied to data that may only be published with a warning concerning their reliability. For the purpose of this publication these data have also been omitted.

EU-25 aggregates are available for LFS data; however, the analysis of these data by NACE is only possible at the section level. EU-15 aggregates are available for most subsections and divisions.

⁽⁴⁾ Council Regulation (EC) No 577/98 of 9 March 1998 on the organisation of a labour force sample survey in the Community.

Table 4

	A	B
EU-25 (1)	90 000	-
EU-15 (1)	61 500	-
Belgium	2 500	4 500
The Czech Republic	1 000	-
Denmark (2)	3 500	7 500
Germany	8 000	-
Estonia (3)	5 000	10 000
Greece	2 500	4 500
Spain	2 500	5 000
France (4)	7 000	21 000
Ireland	2 500	4 500
Italy	3 500	7 500
Cyprus	500	1 500
Latvia (5)	4 500	7 500
Lithuania	5 000	-
Luxembourg	500	1 500
Hungary	2 500	4 500
Malta	1 500	3 000
The Netherlands	4 500	10 000
Austria	2 000	-
Poland	5 000	20 000
Portugal	7 500	15 000
Slovenia	1 000	10 500
Slovakia	2 500	4 500
Finland	2 500	4 500
Sweden (6)	2 500	-
The United Kingdom	10 000	-
Bulgaria	5 500	10 000
Romania	2 000	-
Turkey	:	:

A: threshold for publishing data.

B: threshold for reliable data.

(1) The A limits applicable to data prior to 2003 are the sum of the country limit.

(2) The limits applicable to data between 1983 and 1993 are A 2 500, B 4 500.

(3) The limits applicable to data for 1997 are A 4 000, B 8 000; for 1998 and 1999 they are A 1 500, B 3 000.

(4) The limits applicable to data between 1983 and 2002 are A 3 500, B 8 500.

(5) The limits applicable to data prior to 1998 are A 2 500, B 4 500.

(6) The limits applicable to data between 1995 and 2000 are A 9 000, B -.

National accounts

The European system of national and regional accounts (1995 ESA, or simply ESA) is an internationally compatible accounting framework for a systematic and detailed description of a total economy (that is a region, country or group of countries), its components and its relations with other economies.

The 1995 ESA replaces the European system of integrated economic accounts published in 1970 (1970 ESA; a second, slightly modified, edition appeared in 1978).

The 1995 ESA is fully consistent with the revised world-wide guidelines on national accounting, the system of national accounts (1993 SNA, or simply SNA; these guidelines have been produced under the joint responsibility of the United Nations, the IMF, the Commission of the European Communities, the OECD and the World Bank). However, the ESA is focused more on the circumstances and data needs of the European Union. Like the SNA, the ESA is harmonised with the concepts and classifications used in many other, social and economic statistics. Cases in point are statistics on employment, statistics on manufacturing and statistics on external trade. The ESA can therefore serve as the central framework of reference for the social and economic statistics of the European Union and its Member States.

The ESA framework consists of two main sets of tables:

- the sector accounts;
- the input-output framework and the accounts by industry.

The sector accounts provide, by institutional sector, a systematic description of the different stages of the economic process: production, generation of income, distribution of income, redistribution of income, use of income and financial and non-financial accumulation. The sector accounts also include balance sheets to describe the stocks of assets, liabilities and net worth at the beginning and the end of the accounting period.

The input-output framework and the accounts by industry describe in more detail the production process (cost structure, income generated and employment) and the flows of goods and services (output, imports, exports, final consumption, intermediate consumption and capital formation by product group).

GLOSSARY OF TERMS

There follows a brief list of the main terms employed within this publication:

Annual average growth rate: constant rate of growth that would be required in each year to achieve the same overall growth rate as that observed between two periods.

Apparent labour productivity: value added at factor cost/number of persons employed (expressed in thousand EUR per person employed); care should be taken in the interpretation of this ratio between different activities and countries because of the use of a simple head count for the labour input measure, as a proxy for the volume of work done; values may exceptionally be negative.

Average personnel costs: personnel costs/number of employees (expressed in thousand EUR per employee).

Constant prices: data presented with the effect of price fluctuations over time removed from them (deflated series); note that, as these are expressed in EUR, time series are influenced by fluctuations in the exchange rate.

Cover ratio: exports/imports (expressed as a percentage).

Current prices: data presented including the effects of price changes.

Domestic output price index: an index of the prices of commodities produced and sold within any given country in national currency terms; output price indices are often used to deflate production and value added data (in value) in order to obtain production and value added in constant price terms; this index shows the change in ex-works selling prices of all products sold on domestic markets, excluding VAT and similar deductible taxes.

Employees: are 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; employees include part-time workers, seasonal workers, persons on strike or on short-term leave, but exclude those persons on long-term leave and voluntary workers.

Enterprise: an enterprise is the smallest combination of legal units that is an organisational unit producing goods or services, which benefits from a certain degree of autonomy in decision-making, especially for the allocation of its current resources; an enterprise carries out one or more activities at one or more locations; an enterprise may be a sole legal unit.

Extra-EU exports: goods which leave the statistical territory of a Member State bound for a non-Community country.

Extra-EU imports: goods which enter the statistical territory of a Member State from a non-Community country.

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.

Gross operating rate: gross operating surplus/turnover (profitability measure, expressed as a percentage).

Local unit: the local unit is an enterprise or part thereof (e.g. a workshop, factory, warehouse, office, mine or depot) situated in a geographically identified place. At or from this place economic activity is carried out for which - save for certain exceptions - one or more persons work (even if only part-time) for one and the same enterprise.

Number of persons employed (employment): 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 (e.g. sales representatives, delivery personnel, repair and maintenance teams); it includes persons absent for a short period (e.g. 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 pay-roll, as well as seasonal workers, apprentices and home workers on the pay-roll.

Personnel costs: 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; personnel costs also include taxes and employees' social security contributions retained by the unit as well as the employer's compulsory and voluntary social contributions.

Production value: measures in value the amount actually produced by the unit, based on sales adjusted for 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).

Simple wage adjusted labour productivity: value added at factor cost/personnel costs * 100 (expressed as a percentage).

Trade balance: exports - imports.

Turnover: comprises the totals invoiced by the observation unit during the reference period, corresponding 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.

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 extra-ordinary in company accounts is excluded from value added.

Value added specialisation: relative index that compares the value added share of a given manufacturing activity in total manufacturing value added for a given country with the same ratio for the EU (expressed as a percentage - if a country displays a ratio above 100 then it is relatively more specialised than the average for the EU).

Wage adjusted labour productivity: (value added at factor cost/personnel costs) * (number of employees/number of persons employed) * 100 (expressed as a percentage).

NON-OFFICIAL SOURCES AND ABBREVIATIONS

Professional trade associations

ACEA	European Automobile Manufacturers Association
ACI	Airports Council International (European Region)
AEA	Association of European Airlines
AECMA	European Association of Aerospace Industries
AESGP	Association of the European Self-Medication Industry
AISE	International Association of the Soap & Detergent Industry
APEAL	Association of European Producers of Steel for Packaging
APME	Association of Plastics Manufacturers in Europe
AWES/CESA	Committee of European Shipbuilders Association
CAEF	Committee of European Foundry Associations
CAOBISCO-IOCCC	Association of the Chocolate, Confectionery, Biscuit industries of the EU
CBMC	The Brewers of Europe
CECCM	Confederation of European Community Cigarette Manufacturers
CEPE	European Council of the Paint, Printing Inks and Artists' Colours Industry
CEPI	Confederation of European Paper Industries
CIAA	Confédération des Industries Agro-alimentaires de la CE (Confederation of the Food and Drink Industries of the EU)
CPDP	Association of oil refiners
EAO	European Audiovisual Observatory
EDA	European Dairy Association
EMF	European Mortgage Federation
EPF	European Panels Federation
ESBG	European Savings Bank Group
ESOMAR	European Society for Opinion and Marketing Research
ESTA	European Security Transport Association
EURATEX	European Apparel and Textile Organisation
EUROFINAS	European Federation of Finance House Associations
FBE	European Banking Federation
FEDIOL	EC Seed Crushers' and Oil Processors' Federation
FEDSA	Federation of European Direct Selling Associations
FEFSI	European Federation of Investment Funds
FEP	European Federation of Associations of the Parquet Industry
FESE	Federation of European Securities Exchanges
FIBV	International Federation of Stock Exchanges
FIEC	European Construction Industry Federation
GEBC	European Association of Cooperative Banks
IISI	International Iron and Steel Institute
IMACE	International Margarine Association of the Countries of Europe
STD	Swedish Federation of Consulting Engineers and Architects (Svensk Teknik och Design)
UIC	International Union of Railways
UNAFPA-UNIPI	Union of Organisations of Manufacturers of Pasta Products in the European Community
UNESDA-CISDA	Union of EU Soft Drinks Associations

Other organisations and publications

EITO	European Information Technology Observatory
EPO	European Patent Office
FAO	Food and Agriculture Organisation of the UN
IISI	International Iron and Steel Institute
LME	London Metal Exchange Limited
OECD	Organisation for Economic Co-operation and Development
OPEC	Organization of Petroleum Exporting Countries
UN	United Nations
USGS	US Geological Survey
WTO	World Trade Organization
WTO	World Tourism Organization
Hotels Magazine	
Meat Processing Global	
Media Salles	
PricewaterhouseCoopers	
The London Metal Exchange Limited	

Statistical abbreviations

AUVIS	Audiovisual Services
CIS	Community Innovation Survey
CIS	Commonwealth of Independent States
CN	Combined Nomenclature
CPA	Classification of Products by Activity
CVTS	Continual Vocational Training Survey
ECHP	European Community Household Panel
FDI	Foreign Direct Investment
LFS	Labour Force Survey
NACE	Nomenclature statistique des Activités économiques dans la Communauté Européenne (Statistical classification of economic activities in the European Community)
n.e.c.	not elsewhere classified
PRODCOM	PRODucts of the European COMmunity
SBS	Structural Business Statistics
STS	Short-Term Statistics
SME	Small and medium-sized enterprises

Other abbreviations

ADSL	Asymmetric Digital Subscriber Line
AM	After-Market
ATMs	Automatic teller machines
BER	Block Exemption Regulations
BME	Bolsas y Mercados Españoles
BSE	Bovine Spongiform Encephalopathy (Mad-cow disease)
B2B	Business-to-Business
B2C	Business-to-Consumer
CAP	Common Agricultural Policy
CDs	Compact discs
CD-ROM	Compact disc read-only memory
CFP	Common Fisheries Policy
CPD	Construction Products Directive
CPO	Competing Postal Operators
DTP	Desk-top Publishing
DVD	Digital Versatile Disc
EAMs	European Approvals of Materials
ECSC	European Coal and Steel Community
EDI	Electronic Data Interchange
EIB	European Investment Bank
FSAP	Financial Services Action Plan
F/OSS	Free and Open Source Software
GDP	Gross Domestic Product
ICT	Information and Communications Technologies
IT	Information Technology
JIT	Just In Time
JRC	Joint Research Centre
LAN	Local Area Network
LIFFE	London International Financial Futures and Options Exchange
MDF	Medium Density Fibreboard
MP3	MPEG-1/2 Audio Layer 3 (audio compression algorithm)
NASDAQ	National Association of Securities Dealers' Quotation System
NYSE	New York Stock Exchange
OE	Original Equipment
OJ	Official Journal (of the European Communities)
OPA	Other Postal Agents
OSB	Oriented Strand Board
PC	Personal Computer
PWS	Public Water Supply
R & D	Research and Development
REACH	System of Registration, Evaluation, and Authorisation of Chemicals
SARS	Severe Acute Respiratory Syndrome
SMS	Short Message Service
TV	Television
UCITS	undertakings for collective investment in transferable securities
USPs	Universal Services Providers
VAT	Value Added Tax

Guide to the publication

VCR	Videocassette Recorder
VHS	Video Home System

Weights and measures

DWT	Dead-weight-tonnes
GRT	Gross Registered Tonnage
GW	Gigawatt (10 ⁶ kW)
Kg	Kilogram(s)
kgoe	Kilogram of oil equivalent
Km	Kilometre
Km ²	Square kilometre
MW	Megawatt (10 ³ kW)
PPS	Purchasing Power Standard
pkm	Passenger-kilometre
t	Tonnes
tkm	tonnes-kilometre
TEU	Twenty Foot Equivalent Unit
Toe	Tonne of Oil Equivalent (41 868 kilojoules net calorific value per kilogram)
tU	Tonnes of contained Uranium
TW	Terawatt (10 ⁹ kW)
TWh	Terawatt per hour (10 ⁹ kW)

Countries

EU-25	25 Member States of the European Union
EU-15	BE, DK, DE, EL, ES, FR, IE, IT, LU, NL, AT, PT, FI, SE and UK
10 NMS	Ten new 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
EEA	European Economic Area
BG	Bulgaria
RO	Romania
TR	Turkey
CN	China
HK	Hong Kong
JP	Japan
RU	Russia
US	United States (of America)

Currencies

EUR	Euro
BEF/LUF	Belgian Franc
CZK	Czech Koruna
DKK	Danish Krone
DEM	German Mark
EEK	Estonian Kroon
GRD	Greek Drachma
ESP	Spanish Peseta
FRF	French Franc
IEP	Irish Pound
ITL	Italian Lira
CYP	Cyprus Pound
LVL	Latvian Lats
LTL	Lithuanian Litas
HUF	Hungarian Forint
MTL	Malta Lira
NLG	Dutch Guilder
ATS	Austrian Schilling
PLN	New Polish Zloty
PTE	Portuguese Escudo
SIT	Slovenian Tolar
SKK	Slovak Koruna
FIM	Finnish Markka
SEK	Swedish Krone
GBP	Pound Sterling
BGN	New Bulgarian Lev
ROL	Romanian Leu
TRL	Turkish Lira
JPY	Japanese Yen
USD	United States dollar

Symbols

:	not available
-	not applicable

Overview - the EU's business economy

INTRODUCTION

The Lisbon European Council of 23–24 March 2000 set the EU the objective of becoming 'the most competitive and dynamic knowledge-based economy in the world, capable of sustained economic growth with more and better jobs and greater social cohesion'.

In response, the European Commission laid out a proposal for a multiannual programme for enterprise policy, which was adopted by the European Council at the end of 2000. In a communication ⁽¹⁾ entitled *Industrial policy in an enlarged Europe*, the European Commission outlined a three-pronged strategy to improve the competitiveness of the EU:

- by increasing efforts in the areas of education, vocational training and research, to spread knowledge, increase the use of new technologies and endow the labour force with necessary skills;
- by encouraging innovation to improve efficiency and competitiveness, as enterprises initiate, refine and improve their products, services and processes;
- by developing an entrepreneurial spirit and encouraging people to take risks and start new businesses, so as to stimulate innovative ideas and create employment opportunities.

⁽¹⁾ COM(2002) 714 final.

The topics of business demography (the creation, survival and death of enterprises) is treated in the second part of this overview, while the final section deals with information and communication technologies (ICTs) and intangibles, identified above as key elements for improving the competitiveness of the EU.

However, besides the challenge of stimulating economic growth, the EU also faces another major challenge during 2004, namely the smooth transition of moving from 15 to 25 Member States. The enlargement process is the first subject treated within this overview. The data presented concentrate on a comparative analysis of EU-15 and EU-25 data, looking at changes within the business economy ⁽²⁾ that resulted out of the accession of the 10 new Member States in May 2004.

⁽²⁾ Defined for the purposes of this publication as NACE Sections C to K, covering mining and quarrying, manufacturing, electricity, gas and water supply, construction, distributive trades, hotels and restaurants, transport, storage and communications, financial intermediation, real estate, renting and business activities.

THE EFFECTS OF ENLARGEMENT

Rapid economic integration between the EU-15 and most of the 10 new Member States ⁽³⁾ started at the beginning of the 1990s, when market reforms were accompanied by the realignment of external trade relations. Up until this point the majority of the 10 new Member States (as well as Bulgaria and Romania) had planned economic systems and were characterised by geographic specialisation that focused on traditional, heavy industrial sectors, with ownership largely in the hands of the State.

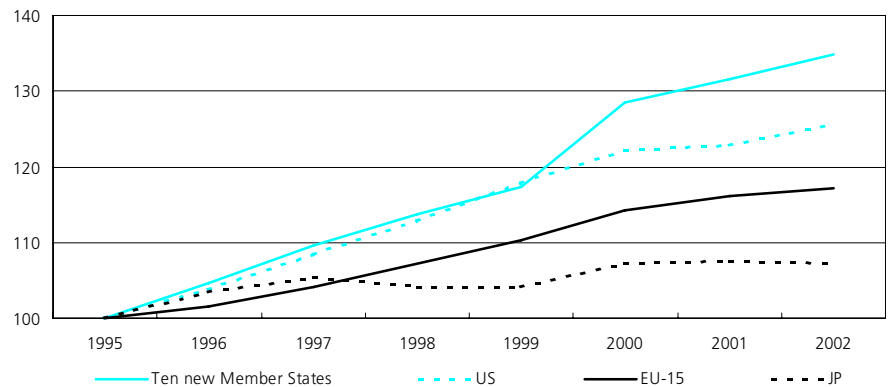
During the 1990s the new Member States faced two challenges: privatisation of existing production structures (which had formerly been publicly owned) and providing economic stimuli to encourage the creation of new enterprises. Privatisation programmes were initiated alongside investment liberalisation, the elimination of administered prices and the creation of institutions to promote a business-orientated economy. The scale of these programmes was unparalleled, often covering thousands of enterprises. Frequently foreign direct investment (FDI) was seen to speed up this process of structural change, in particular in the Czech Republic, Hungary and Poland.

During the same period, there were increasing links between enterprises from EU-15 Member States and those in the new Member States. The predominant feature of cooperation agreements during the early 1990s was the outward processing of labour-intensive activities by EU-15 enterprises, allowing them to obtain substantial cost reductions and to remain competitive ⁽⁴⁾. This strategy also benefited local producers from the 10 new Member States who obtained knowledge and technology transfers. Nevertheless, most commentators agree that as wages in the new Member States start to converge (at least to some degree) with those in the EU-15, standardised labour-intensive tasks will probably be driven to re-localise further east to countries such as the Ukraine and other members of the Commonwealth of Independent States (CIS). As a result, new economic models are starting to emerge regarding the industrial organisation of enterprise groups that have interests both in the EU-15 and the new Member States.

⁽³⁾ Excluding Cyprus and Malta, and to a lesser degree Slovenia.

⁽⁴⁾ For more information on foreign ownership, see *Characteristics of foreign-controlled enterprises*, Statistics in Focus 21/2004, Eurostat, KS-NP-04-021-EN-N..

Figure 1
Development of GDP in constant prices (1995=100)



Source: Eurostat, National Accounts - Breakdowns by branch of activity (theme2/aggs).

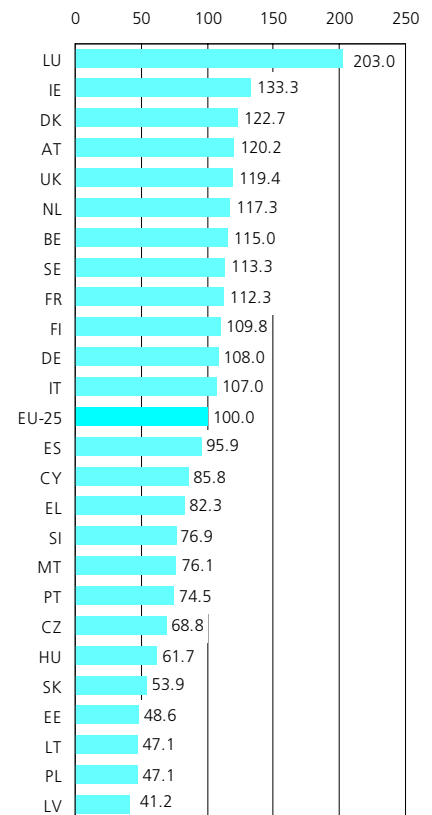
GDP AND POPULATION

EU-15 gross domestic product (GDP) in market prices was forecast at EUR 9 582 billion in 2004. The addition of the 10 new Member States added a further EUR 467 billion, such that EU-25 GDP was estimated to have totalled EUR 10 049 billion in 2004. This figure was just higher than the forecast for GDP in the United States, while it was more than 2.5 times greater than the forecast for GDP in Japan.

Constant price data for the period 1994–2004 show that GDP rose at an annual average rate of 2.1 % per annum in the EU-15, while the 10 new Member States reported average growth of 4.3 % per annum (see Figure 1). There were only five EU-15 Member States that reported GDP growth below the EU-15 average during the period considered; they were Belgium, Germany, France, Italy and Austria. The Baltic States and Poland were the only countries to report above average GDP growth among the 10 new Member States.

There were an estimated 380.7 million inhabitants in the EU-15 at the start of 2004 compared with 74.1 million within the 10 new Member States. As such, the 10 new Member States represented 16.3 % of the total EU-25 population, slightly less than the share recorded by Germany (18.1 %). The number of inhabitants in the EU-15 grew by 0.3 % between January 2003 and January 2004, while there was a contraction of 0.1 % in the number of inhabitants in the 10 new Member States. Poland had by far the largest population of the 10 new Member States, some 38.2 million persons (or 51.5 % of the total for the new Member States), while the Czech Republic and Hungary were the only other countries to report double-digit shares (just under 14 %).

Figure 2
GDP per inhabitant in relation to the EU average, 2004 (EU-25=100) (1)



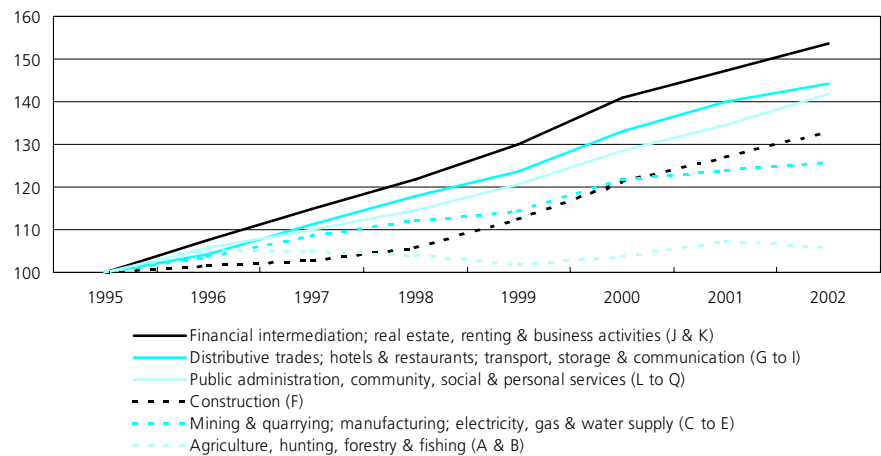
(1) At current market prices using PPS; estimates. Source: Eurostat, National Accounts - ESA95 - aggregates (theme2/aggs).

The level of GDP per inhabitant expressed in terms of purchasing power standards (PPS) is often used to compare the living standards of different countries. This indicator was forecast to be approximately twice as high in the EU-15 Member States (PPS 24 990) as in the 10 new Member States (PPS 12 330) in 2004. There were wide variations in living standards in the EU-15, from a high of PPS 46 560 in Luxembourg to PPS 17 100 in Portugal (see Figure 2). As such, GDP per inhabitant in Luxembourg was forecast to be 2.7 times more than in Portugal in 2004, while the same comparison made some ten years earlier in 1994 showed that living standards were 2.5 times higher in Luxembourg. Within the 10 new Member States the range in living standards was forecast to be between PPS 19 690 in Cyprus and PPS 9 460 in Latvia. A similar analysis of the ratio of highest to lowest GDP per inhabitant reveals that between 1994 and 2004 the gap in living standards was reduced from 2.9 times higher to 2.1 times higher.

The economic structure of output has experienced marked changes in the last few decades within Europe. A complete time-series for EU-25 is only available back to the mid-1990s. However, even over this relatively short period, the share of the services sector (NACE Sections G to P) in EU-25 total value added increased from 67.6 % in 1995 to 70.7 % by 2002. Financial intermediation, real estate, renting and business activities (NACE Sections J and K) reported the most rapid growth of value added (see Figure 3). On the other hand, the relative importance of the industrial sector (NACE Sections C to E) declined from 24.1 % of total value added to 21.7 % during the same period.

The rate at which the structure of the economies of the 10 new Member States changed was even more rapid. The share of services in total value added rose by 7.8 percentage points to 64.9 % between 1995 and 2002, while the relative share of the industrial sector contracted by 5.1 percentage points to 25.3 %. The changes in the new Member States could also be associated with rapid growth within the business services sector. This was likely to have resulted from an increase in outsourcing, as well as changes in the business paradigm, whereby the creation of value added is increasingly linked to the use of intangible assets.

Figure 3
Breakdown of development of GDP in current prices, EU-25 (1995=100)



Source: Eurostat, National Accounts - Breakdowns by branch of activity (theme2/brkdowns).

ECONOMIC STRUCTURE OF THE EU-25'S BUSINESS ECONOMY BREAKDOWN BY ACTIVITY

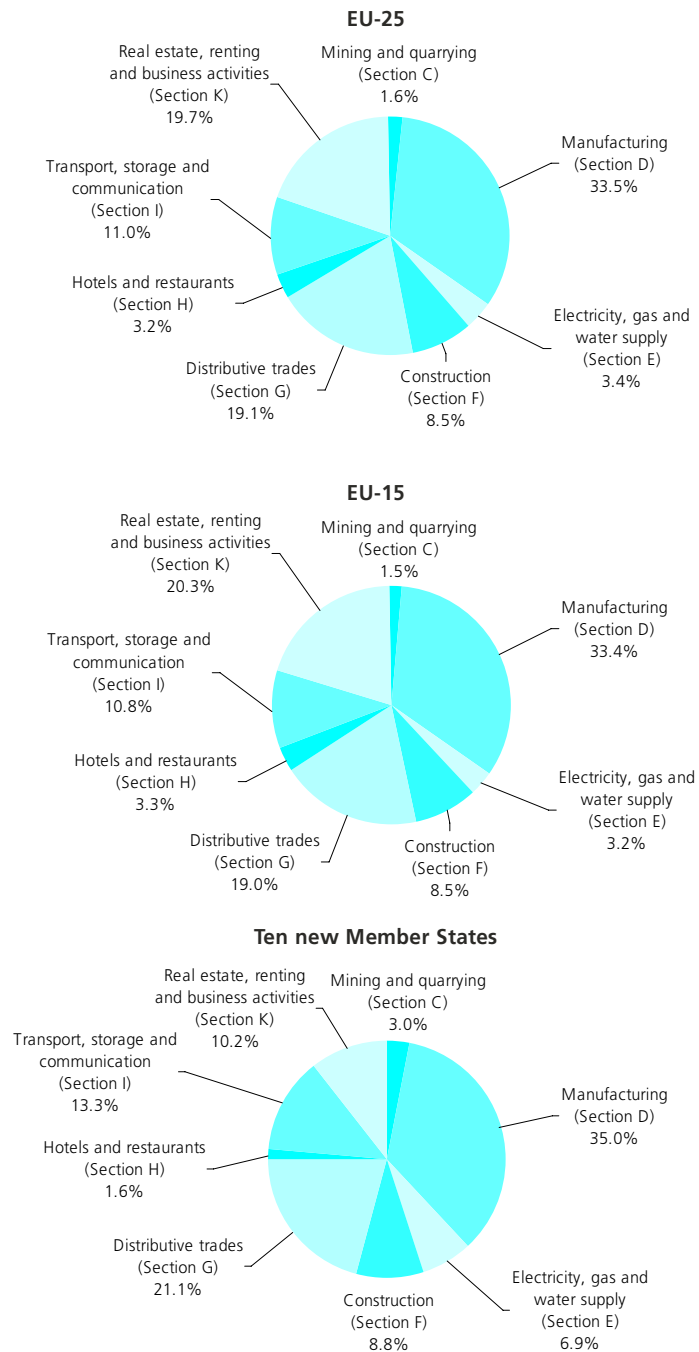
Value added in the EU-25's non-financial business economy (as defined by NACE Sections C to I and K) totalled EUR 4 585 billion in 2001. This figure could be broken down into EUR 4 341 billion among the EU-15 Member States (or 94.7 % of the EU-25 total) and EUR 244 billion among the 10 new Member States (or 5.3 % of the EU-25 total).

After more than a decade of reorganisation, the economic structure of the 10 new Member States resembled more closely those of the EU-15 Member States than they had done at the start of the 1990s. Nevertheless, there were still some notable differences that emerged when comparing the composition of value added in the non-financial business economies of the EU-15 and the 10 new Member States. Figure 4 provides a snapshot of the breakdown of value added in 2001. The 10 new Member States reported a higher proportion of their total value added being generated in six of the eight NACE sections for which data are available, when compared with the corresponding shares for the EU-15. The largest difference was recorded in the electricity, gas and water supply sector (Section E), where 6.9 % of total value added was generated in the non-financial business economy in the 10 new Member States (compared with 3.2 % in the EU-15). Transport, storage and communication (Section I), and real estate, renting and business activities (Section K) were the two NACE sections that were comparatively under-represented in the economies of the 10 new Member States. They accounted for 1.6 % and 10.2 % of total value added in the non-financial business economy in the 10 new Member States, compared with shares of 3.3 % and 20.3 % in the EU-15.

Looking at the importance of the largest mining and manufacturing sectors, it is possible to conclude that industrial activity was more diversified within the 10 new Member States than it was within the EU-15. The top five mining and manufacturing NACE subsections in the 10 new Member States accounted for 51.8 % of total mining and manufacturing value added in 2001, compared with a share of 56.1 % in the EU-15.

A more detailed comparison of the industrial structures of the EU-15 and new Member States economies reveals that industrial specialisation in several of the new Member States was centred on highly labour-intensive sectors. This was the case, for example, in the activities of mining and quarrying, the processing of food, beverages and tobacco, as well as the manufacture of textiles, wood products, and other non-metallic mineral products (see Figure 5). On the other hand, the EU-15 Member States reported a relatively high contribution to value added from the activities of

Figure 4 Breakdown of value added, 2001 (% share of non-financial business economy) (1)



(1) Based on NACE Sections C to I and K; estimates. Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms).

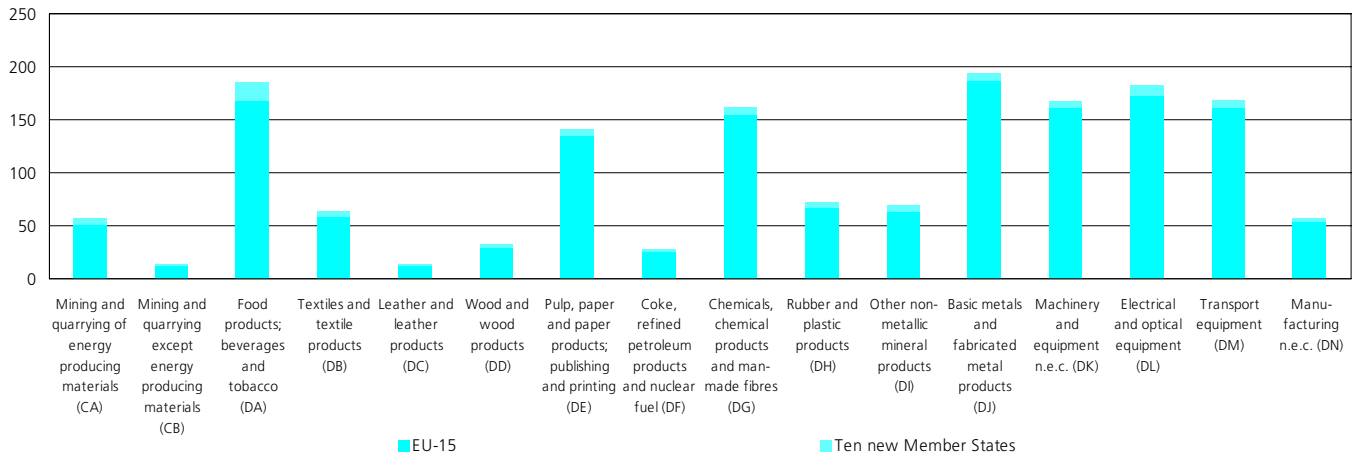
chemicals, basic metals and fabricated metal products, machinery and equipment, and transport equipment.

Although it did not generate the highest amount of value added in the EU-25 in 2001, the food products, beverages and tobacco sector was the largest single mining and manufacturing NACE subsection in 11 of the 25 Member States in 2001. There were six Member States where the basic metals and fabricated metal products sector was largest in 2001 and these helped make this

sector the largest mining and manufacturing NACE subsection in the EU-25 in 2001. Electrical and optical equipment was the largest sector in three countries, and chemicals, chemical products and man-made fibres in two countries. Three Member States reported a unique activity as their largest contributor to mining and manufacturing value added: they were Germany with the transport equipment sector, Portugal with textiles, and Sweden with pulp, paper, publishing and printing.

Figure 5

Breakdown of value added in mining and manufacturing sectors of the EU, 2001 (EUR billion)



Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms).

Table 1

Three largest manufacturing sectors, 2001 (1)

	Largest	Second largest	Third largest
EU-25	Basic metals and fabricated metal products	Food products; beverages and tobacco	Electrical and optical equipment
BE	Chemicals, chemical products and man-made fibres	Basic metals and fabricated metal products	Food products; beverages and tobacco
CZ	Basic metals and fabricated metal products	Transport equipment	Electrical and optical equipment
DK (2)	Food products; beverages and tobacco	Machinery and equipment n.e.c.	Electrical and optical equipment
DE	Transport equipment	Machinery and equipment n.e.c.	Electrical and optical equipment
EE (2)	Food products; beverages and tobacco	Textiles and textile products	Wood and wood products
EL	Food products; beverages and tobacco	Basic metals and fabricated metal products	Coke, refined petroleum products and nuclear fuel
ES	Food products; beverages and tobacco	Basic metals and fabricated metal products	Chemicals, chemical products and man-made fibres
FR	Food products; beverages and tobacco	Electrical and optical equipment	Transport equipment
IE (3)	Chemicals, chemical products and man-made fibres	Electrical and optical equipment	Food products; beverages and tobacco
IT	Basic metals and fabricated metal products	Machinery and equipment n.e.c.	Electrical and optical equipment
CY	Food products; beverages and tobacco	Other non-metallic mineral products	Pulp, paper and paper products; publishing and printing
LV (4)	Food products; beverages and tobacco	Wood and wood products	Textiles and textile products
LT (2)	Food products; beverages and tobacco	Textiles and textile products	Electrical and optical equipment
LU	Basic metals and fabricated metal products	Rubber and plastic products	Other non-metallic mineral products
HU (2)	Food products; beverages and tobacco	Electrical and optical equipment	Transport equipment
MT (5)	Electrical and optical equipment	Food products; beverages and tobacco	Textiles and textile products
NL	Food products; beverages and tobacco	Pulp, paper and paper products; publishing and printing	Chemicals, chemical products and man-made fibres
AT (2)	Basic metals and fabricated metal products	Electrical and optical equipment	Machinery and equipment n.e.c.
PL (6)	Electrical and optical equipment	Transport equipment	Machinery and equipment n.e.c.
PT (7)	Textiles and textile products	Food products; beverages and tobacco	Other non-metallic mineral products
SI (2)	Basic metals and fabricated metal products	Electrical and optical equipment	Chemicals, chemical products and man-made fibres
SK (2)	Basic metals and fabricated metal products	Transport equipment	Electrical and optical equipment
FI	Electrical and optical equipment	Pulp, paper and paper products; publishing and printing	Machinery and equipment n.e.c.
SE	Pulp, paper and paper products; publishing and printing	Transport equipment	Basic metals and fabricated metal products
UK	Food products; beverages and tobacco	Pulp, paper and paper products; publishing and printing	Transport equipment

(1) Based on value added for NACE Subsections within Section D.

(2) NACE Subsections DC and DF, not available.

(3) NACE Subsections DF and DN, not available.

(4) NACE Subsections DA, DC and DF, not available.

(5) NACE Subsections DA and DF, not available.

(6) NACE Subsections DA and DI, not available.

(7) NACE Subsections DF and DH, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms).

Table 1 confirms that several of the new Member States (in particular, the Baltic States, Cyprus and Malta) were reliant on traditional manufacturing sectors such as food processing, textiles, and wood processing. On the other hand, the Czech Republic, Hungary, Poland, Slovenia and Slovakia all had economic structures that more closely resembled that of the EU-15, with basic metals and fabricated metal products, electrical and optical equipment, and transport equipment often among the largest mining and manufacturing NACE subsections.

Relative specialisation ratios go a step further by looking within a particular country at the contribution of each activity to total manufacturing value added and comparing this to the same ratio for the whole of the EU-25 (in this case at the NACE group level). Table 2 shows that as well as being the largest sectors in a number of the new Member States, food processing, textiles, and wood processing

activities also recorded some of the highest specialisation ratios; this was particularly true in the Baltic States. Hungary reported a relatively high degree of specialisation (compared with the EU-25 average) in the lighting equipment and electric lamps sector, and the manufacture of TV and radio receivers, sound or video recording equipment sector. Slovenia was relatively specialised in the manufacture of domestic appliances.

Among the EU-15 Member States, a similar pattern was seen, with the largest sector (in terms of value added) often one of the activities in which a country was most specialised. For example, Germany was relatively specialised in the manufacture of motor vehicles in 2001, while both Finland and Sweden were specialised in paper and wood activities. The three mining and manufacturing activities where Spain recorded its highest relative specialisation were all from the other non-metallic minerals sector. Italy and Portugal were

both relatively specialised in the manufacture of leather products, while Portugal was also specialised in the textiles sector. As regards high-technology sectors, Finland was specialised in the manufacture of TV and radio transmitters and telephone apparatus and the United Kingdom was specialised in the manufacture of aircraft and spacecraft.

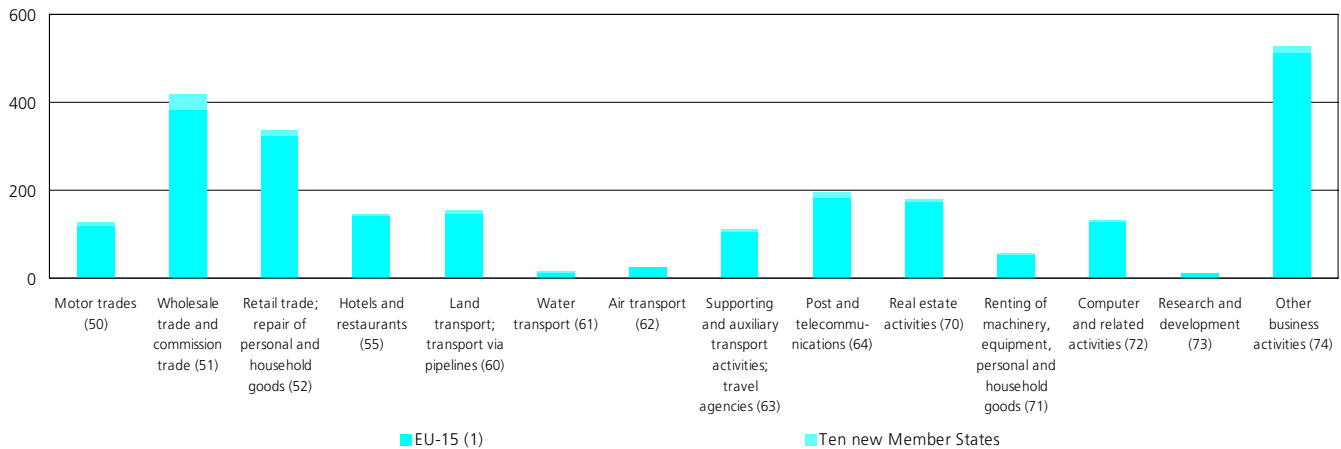
Table 2
Relative specialisation ratios for value added in the manufacturing sector, 2001 (1)

BE Other textiles Other first processing of iron and steel non-ECSC ferro-alloys TV and radio receivers, sound or video recording	CZ Railway, tramway locomotives, rolling stock Glass and glass products Textile weaving	DK Processing and preserving of fish and fish products Electric motors, generators and transformers Optical instruments and photographic equipment
DE Electricity distribution and control apparatus Machine-tools Motor vehicles	EE Sawmilling and planing of wood Processing and preserving of fish and fish products Veneer sheets and boards	ES Ceramic tiles and flags Cutting, shaping and finishing of stone Cement, lime and plaster
FR Steam generators, except central heating hot water boilers Industrial process control equipment Soaps, detergents, cleaning products and toiletries	IT Tanning and dressing of leather Footwear Ceramic tiles and flags	CY Cement, lime and plaster Builders' carpentry and joinery Jewellery and related articles
LV Sawmilling and planing of wood Veneer sheets and boards Processing and preserving of fish and fish products	LT Knitted and crocheted articles Processing and preserving of fish and fish products Sawmilling and planing of wood	LU Other textiles Basic iron and steel and of ferro-alloys (ECSC) Rubber products
HU Lighting equipment and electric lamps TV and radio receivers, sound or video recording Vegetable and animal oils and fats	MT Games and toys Electronic valves and tubes and other electronic components Building and repairing of ships and boats	NL Building and repairing of ships and boats Vegetable and animal oils and fats Prepared animal feeds
AT Sports goods Sawmilling and planing of wood Basic iron and steel and of ferro-alloys (ECSC)	PL Veneer sheets and boards Processing and preserving of fruit and vegetables Building and repairing of ships and boats	PT Footwear Knitted and crocheted fabrics Other products of wood; cork, straw and plaiting materials
SI Made-up textile articles Domestic appliances n.e.c. Tanning and dressing of leather	SK Other first processing of iron and steel non-ECSC ferro-alloys Man-made fibres Railway, tramway locomotives, rolling stock	FI TV and radio transmitters and telephone apparatus Pulp, paper and paperboard Sawmilling and planing of wood
SE Pulp, paper and paperboard Sawmilling and planing of wood Tubes	UK Processing of nuclear fuel Aircraft and spacecraft Miscellaneous manufacturing n.e.c.	

(1) Three most specialised manufacturing activities per country; based on NACE Groups and their specialisation ratios in terms of value added at factor cost; only NACE Groups with a share > 0.5% of national manufacturing are included; table based on available NACE for each country; Greece and Ireland, not available.
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms).

Figure 6

Breakdown of value added in the non-financial services sector, EU, 2001 (EUR billion)



(1) 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms).

The EU-25 generated EUR 2 430 billion of value added in the non-financial services sector in 2001; some 95.4 % of this total was accounted for by the EU-15. Within the services sector (see Figure 6) the five largest non-financial services' divisions contributed 74.1 % to total non-financial services' value added in the 10 new Member States in 2001, compared with 67.9 % in the EU-15. This result was in contrast to that of the mining and manufacturing sector where there was more diversification in the 10 new Member States. The biggest difference was the comparatively high contribution of the wholesale trade sector to the non-financial services' total value added within the 10 new Member States and the relatively low contribution of other business activities within the economies of the 10 new Member States.

Within the EU-25 the largest services sectors (at the NACE division level) in 2001 were other business activities, wholesale trade, and retail trade (see Table 3). These activities often appeared among the three largest services sectors when looking at the largest sectors in each country. Indeed, this was the case in all but three of the EU-15 Member States for which data are available (5). The exceptions were Denmark and Sweden, where real estate activities generated more value added than the retail trade sector and Luxembourg, where post and telecommunications generated more value added than the retail trade sector. This same sector (post and telecommunications) also played a relatively important role in the generation of value added in the non-financial services sector of 5 of the 10 new Member States. It was the largest non-financial services sector in Hungary in 2001, the second largest services sector in Latvia and Slovakia, and the third largest in the Czech Republic and Lithuania. The other main divergence in the

Table 3

Three largest non-financial services sectors, 2001 (1)

	Largest	Second largest	Third largest
EU-25 (2)	Other business activities	Wholesale trade	Retail trade
BE	Other business activities	Wholesale trade	Retail trade
CZ	Wholesale trade	Other business activities	Post and telecommunications
DK	Wholesale trade	Other business activities	Real estate activities
DE (3)	Other business activities	Wholesale trade	Retail trade
EE (4)	Wholesale trade	Auxiliary transport activities	Retail trade
EL	:	:	:
ES	Wholesale trade	Other business activities	Retail trade
FR	Other business activities	Retail trade	Wholesale trade
IE (5)	Other business activities	Retail trade	Wholesale trade
IT	Other business activities	Wholesale trade	Retail trade
CY (6)	Hotels and restaurants	Wholesale trade	Retail trade
LV	Wholesale trade	Post and telecommunications	Retail trade
LT	Wholesale trade	Land transport	Post and telecommunications
LU	Other business activities	Wholesale trade	Post and telecommunications
HU	Post and telecommunications	Wholesale trade	Land transport
MT (2) (7)	Hotels and restaurants	Wholesale trade	Air transport
NL (8)	Other business activities	Wholesale trade	Retail trade
AT	Wholesale trade	Other business activities	Retail trade
PL (9)	Wholesale trade	Other business activities	Land transport
PT	Wholesale trade	Retail trade	Other business activities
SI (10)	Wholesale trade	Other business activities	Retail trade
SK (4)	Wholesale trade	Post and telecommunications	Other business activities
FI	Wholesale trade	Other business activities	Retail trade
SE	Other business activities	Wholesale trade	Real estate activities
UK	Other business activities	Wholesale trade	Retail trade

(1) Based on value added for NACE Divisions within Sections G, H, I and K. (2) NACE Division 73, not available.

(3) 2000. (4) NACE Divisions 61 and 62, not available. (5) NACE Divisions 61, 62 and 63, not available.

(6) NACE Divisions 70, 71, 72, 73 and 74, not available. (7) NACE Division 71, 2000.

(8) NACE Division 73, 2000. (9) NACE Divisions 61, 62, 63 and 64, not available.

(10) NACE Divisions 60 and 61, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms).

ranking of services sectors among the new Member States was the elevated position of the hotels and restaurants sector in the two Mediterranean islands of Cyprus and Malta.

Indeed, the hotels and restaurants sector was the largest contributor to non-financial services' value added in 2001 in both of these countries.

(5) Greece, not available.

Specialisation ratios can also be produced for the services sector, looking at the proportion of non-financial services' value added accounted for by a particular activity within each country and comparing this to the same ratio for the whole of the EU-25 in 2001. The most specialised activities (at the NACE group level) in the majority of countries were within the distributive trades sector, spread across the activities of motor trades, wholesale trade, and retail trade. However, the data presented in Table 4 confirm the importance of the hotels and restaurants sector in Cyprus and Malta (as well as in Spain and Austria). The highest degree of specialisation in the services sector in Hungary was recorded for the telecommunications sector, which registered the third highest specialisation ratio in Slovakia.

Table 4
Relative specialisation in the non-financial services sector, 2001 (1)

BE Wholesale of machinery, equipment and supplies Labour recruitment and provision of personnel Wholesale of household goods	CZ Other wholesale Retail sale of automotive fuel Wholesale of non-agricultural intermediate products	DK Wholesale of machinery, equipment and supplies Wholesale of agricultural raw materials, live animals Real estate activities
EE Supporting and auxiliary transport activities; travel agencies Retail sale of automotive fuel Wholesale of non-agricultural intermediate products	ES Retail sale of food, beverages, tobacco in specialized stores Hotels; camping sites, other short-stay accommodation Restaurants; bars; canteens and catering	FR Labour recruitment and provision of personnel Retail sale of pharmaceuticals, cosmetics & toiletries Wholesale of agricultural raw materials, live animals
IE Wholesale of food, beverages and tobacco Computer and related activities Hotels; camping sites, other short-stay accommodation	IT Wholesale on a fee or contract basis Maintenance and repair of motor vehicles Industrial cleaning	CY (2) Hotels; camping sites, other short-stay accommodation Restaurants; bars; canteens and catering Air transport
LV Wholesale of non-agricultural intermediate products Retail sale of automotive fuel Retail sale not in stores	LT Retail sale of automotive fuel Transport via railways Sale of motor vehicle parts and accessories	LU Air transport Inland water transport Transport via railways
HU Other wholesale Telecommunications Retail sale of automotive fuel	MT Air transport Hotels; camping sites, other short-stay accommodation Supporting and auxiliary transport activities; travel agencies	NL Inland water transport Wholesale of agricultural raw materials, live animals Wholesale of machinery, equipment and supplies
AT Hotels; camping sites, other short-stay accommodation Wholesale of agricultural raw materials, live animals Wholesale of machinery, equipment and supplies	PL Other wholesale Retail sale of automotive fuel Wholesale of food, beverages and tobacco	PT Air transport Wholesale of household goods Wholesale of food, beverages and tobacco
SI Wholesale on a fee or contract basis Other wholesale Retail sale of automotive fuel	SK Wholesale on a fee or contract basis Other wholesale Telecommunications	FI Wholesale of machinery, equipment and supplies Other land transport Air transport
SE Real estate activities Retail sale of automotive fuel Computer and related activities	UK Miscellaneous business activities n.e.c. Air transport Labour recruitment and provision of personnel	

(1) Three most specialised non-financial services sectors per country; based on specialisation ratios in terms of value added at factor cost; only NACE with a share >0.5% of national non-financial services (NACE Sections G, H, I and K) are included; NACE Groups 60.3, 61.1, 74.2, 74.3 and 74.6 and NACE Division 73, not available; NACE 55.1 and 55.2 and NACE 55.3 to 55.5 are aggregated; no breakdown available for NACE Divisions 62, 63, 70, 71 and 72; table based on available NACE for each country; Germany and Greece, not available.

(2) Excluding NACE Section K.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms).

Table 5

Breakdown of activity by enterprise size-class, EU-25, 2001 (% share of value added and employment in each NACE Section) (1)

NACE label (NACE Section)	Value added				Employment			
	Micro (1 to 9 persons employed)	Small (10-49 persons employed)	Medium (50-249 persons employed)	Large (250 or more persons employed)	Micro (1 to 9 persons employed)	Small (10-49 persons employed)	Medium (50-249 persons employed)	Large (250 or more persons employed)
Mining and quarrying (C)	11.3	8.7	17.5	62.5	4.6	13.7	13.2	68.5
Manufacturing (D)	7.3	15.8	22.0	54.9	9.6	20.6	25.2	44.5
Electricity, gas and water supply (E)	5.3	4.1	11.5	79.1	1.9	5.0	13.6	79.5
Construction (F)	31.5	32.2	17.8	18.5	30.4	36.0	18.3	15.3
Distributive trades (G)	26.8	24.4	17.9	30.8	39.6	21.2	12.4	26.8
Hotels & restaurants (H)	38.4	24.3	12.7	24.6	45.7	24.4	10.2	19.7
Transport, storage & communication (I)	11.1	11.9	10.6	66.4	17.0	14.4	11.7	56.9
Real estate, renting & business activities (K)	32.9	19.9	18.7	28.5	31.9	18.0	16.7	33.4

(1) Data are provided for the non-financial business economy (NACE Sections C to I and K); NACE Sections C to F, employment data relates to the number of employees instead of the number of persons employed.

Source: Eurostat, Structural Business Statistics (theme4/sbs/sizclass).

ECONOMIC STRUCTURE OF THE EU-25'S BUSINESS ECONOMY BREAKDOWN BY SIZE CLASS

There is, a priori, no optimum structure for the size of an enterprise. During the mid-1900s most economists agreed that economic modernisation was linked to increasing economies of scale. However, the subsequent rapid growth of the services sector, often on the back of an enterprise structure that was dominated by small and medium-sized enterprises (SMEs), led to a revision of these theories. The link between scale economies and increased productivity and competitiveness was further questioned when a large number of industrial conglomerates re-focused on their core activities during the 1980s and 1990s, while at the same time the complexity of production structures evolved, as industrial subcontracting and outsourcing emerged as new economic models alongside 'Just-in-Time' (JIT) production methods. However, it is clear that in some activities, particularly those characterised by network provision (for example, electricity supply or transport and communications), a minimum efficient scale of production exists.

Table 5 provides information on the breakdown of value added and employment according to enterprise size-class. While the vast majority of enterprises in the EU-25 are small (with less than 50 persons employed), they do not account for the majority of value added or employment. In 2001, large enterprises (with 250 or more persons employed) generated a majority of the value added in the mining and quarrying, manufacturing, electricity, gas and water supply, and transport, storage and communications sectors, their share of total value added rising as high as 79.1 % for electricity, gas and water supply. Large enterprises usually accounted for a lower proportion of total employment and as such it is possible to say that they were generally more productive than smaller enterprises. However, this relationship was not valid in three of the NACE sections for which data are available in Table 5: mining and quarrying, electricity, gas and water supply, and real estate, renting and business activities.

A more detailed breakdown of value added is presented in Table 6, with data provided at the level of NACE divisions. On average, large enterprises generated 43.3 % of the total value added generated in 2001 in the EU-25 within the non-financial business economy. This was considerably above the proportion of value added that was associated with each of the three other size-classes, which were all situated within the narrow range of 18 to 20 % of total value added.

Table 6

Breakdown of value added by enterprise size-class, EU-25, 2001 (% share of value added in each NACE Division) (1)

NACE label (NACE Division)	Micro (1 to 9 persons employed)	Small (10-49 persons employed)	Medium (50-249 persons employed)	Large (250 or more persons employed)
NON-FINANCIAL BUSINESS ECONOMY (Sections C to I and K)	19.5	19.0	18.2	43.3
Mining of coal and lignite; extraction of peat (10)	1.4	1.7	4.8	92.1
Extraction of crude petroleum and natural gas (11)	13.7	3.2	17.9	65.2
Mining of metal ores (13)	0.2	0.6	6.5	92.6
Other mining and quarrying (14)	11.8	36.0	27.6	24.6
Manufacture of food products and beverages (15)	8.7	15.1	23.0	53.1
Manufacture of tobacco products (16)	0.2	11.5	5.8	82.6
Manufacture of textiles (17)	9.8	23.8	35.4	31.0
Manufacture of wearing apparel; dressing; dyeing of fur (18)	17.4	28.4	27.3	26.9
Tanning, dressing of leather; manufacture of luggage (19)	17.5	30.3	28.6	23.6
Wood and products of wood and cork, except furniture (20)	22.1	31.3	25.3	21.2
Pulp, paper and paper products (21)	2.5	9.5	24.3	63.7
Publishing, printing, reproduction of recorded media (22)	13.9	22.7	23.7	39.7
Coke, refined petroleum products and nuclear fuel (23)	0.5	3.0	3.9	92.6
Chemicals and chemical products (24)	1.4	5.6	16.7	76.3
Rubber and plastic products (25)	5.1	18.4	32.5	44.0
Other non-metallic mineral products (26)	7.1	18.1	26.4	48.3
Basic metals (27)	1.6	7.5	19.7	71.2
Fabricated metal products, except machinery and equipment (28)	14.1	34.3	29.0	22.6
Machinery and equipment n.e.c. (29)	6.2	17.1	27.4	49.3
Office machinery and computers (30)	5.1	7.0	12.1	75.9
Electrical machinery and apparatus n.e.c. (31)	4.4	11.8	19.7	64.1
Radio, television and communication equipment and apparatus (32)	3.6	7.0	12.1	77.2
Medical, precision and optical instruments, watches and clocks (33)	10.7	18.1	24.1	47.1
Motor vehicles, trailers and semi-trailers (34)	0.8	3.1	8.1	88.0
Other transport equipment (35)	2.7	5.3	10.6	81.4
Furniture; manufacturing n.e.c. (36)	17.9	25.8	28.2	28.2
Recycling (37)	21.5	41.1	25.9	11.5
Electricity, gas, steam and hot water supply (40)	5.2	3.4	10.6	80.8
Collection, purification and distribution of water (41)	6.4	9.4	18.6	65.5
Construction (45)	31.5	32.2	17.8	18.5
Sale, maintenance and repair of motor vehicles (50)	27.6	27.9	20.6	23.9
Wholesale trade and commission trade (51)	24.0	29.2	22.1	24.7
Retail trade (52)	30.1	17.3	11.7	41.0
Hotels and restaurants (55)	38.4	24.3	12.7	24.6
Land transport (60)	22.5	21.2	14.3	42.0
Air transport (62)	1.7	2.9	10.6	84.8
Supporting and auxiliary transport activities; travel agencies (63)	12.4	18.7	18.7	50.2
Post and telecommunications (64)	1.7	1.3	2.0	95.0
Real estate activities (70)	53.3	18.1	16.9	11.6
Renting of machinery and equipment (71)	27.9	22.2	24.8	25.1
Computer and related activities (72)	20.7	17.8	20.2	41.3
Research and development (73)	8.0	9.2	27.9	54.9
Other business activities (74)	30.1	21.0	18.0	31.0

(1) Data are provided for the non-financial business economy (NACE Sections C to I and K); NACE Divisions 12 and 61, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/sizclass).

OUTPUT AND PRICE TRENDS

To study the evolution of the industrial economy over time, the short-term statistics (STS) database can be used to obtain annual indices for industrial production, output prices and turnover. These two concepts are linked to the production of branches and not to the production of sectors.

EU-25 industrial output (NACE Sections C to E) rose by 0.6 % between 2002 and 2003 (based on annual averages for both of these years), having recorded a contraction of 0.6 % in 2002 and a modest increase of 0.2 % in 2001 (see Figure 7). These figures could be contrasted with those for the period 1995 to 2000, when in four of the six years considered industrial output rose by upwards of 3 %, the highest growth rate being reported in 2000 when EU-25 industrial production grew by 4.8 %.

Industrial output in the 10 new Member States generally rose at a faster pace in recent years compared with the EU-15 Member States. Taking the five-year period from 1998 to 2003, industrial output rose, on average, by at least 3.9 % in Ireland, Estonia, Lithuania, Poland and Finland. There followed a group of three countries where industrial output rose on average by between 2.0 and 3.0 % over the same period: Latvia, Luxembourg and Slovenia. The United Kingdom was the only Member State to report declining industrial output during the period 1998 to 2003 ⁽⁶⁾.

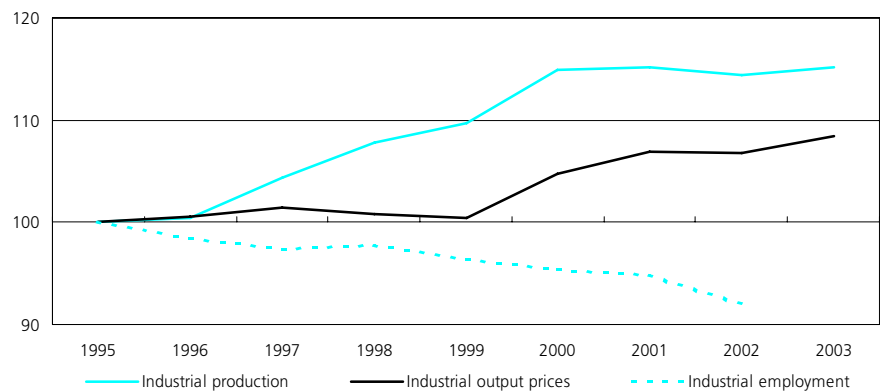
⁽⁶⁾ The Czech Republic, Greece, Cyprus, Hungary, Malta, Austria and Slovakia, not available.

The evolution of EU-25 production across different manufacturing subsections showed wide variations (see Table 7). The fastest expanding sectors (with annual average growth of between 3.3 to 4.2 % during the period 1995 to 2003) included chemicals, chemical products and man-made fibres, electrical and optical equipment, and transport equipment. There was also fairly high growth (2.2 %) recorded in the rubber and plastic products sector. Moderate growth (of between 1.0 and 1.5 %) per annum was recorded for pulp, paper and paper products, publishing and printing, food products, beverages and tobacco, basic metals and fabricated metal products, wood and wood products, as well as machinery and equipment. At the other end of the range, textiles and textile products, and leather and leather products both reported annual average declines of close to 4 % during the period 1995 to 2003. The coke, refined petroleum products and nuclear fuels sector was the only other manufacturing NACE subsection to report that output fell.

Industrial output prices rose overall by 8.4 % between 1995 and 2003 within the EU-25. Having fallen by 0.1 % for both the EU-25 and the EU-15 in 2002, industrial output prices rose by 1.6 % in the EU-25 and by 1.5 % in the EU-15 in 2003. Between 2002 and 2003 prices fell in Lithuania (0.7 %) and the Czech Republic (0.3 %), while they increased by 4.0 % or more in Slovakia, Sweden, Hungary, the Netherlands and Luxembourg.

Manufacturing (NACE Section D) prices rose at an almost identical pace to industrial prices (8.2 %) during the period 1995 to 2003; this was equivalent to a 1.0 % increase per annum over the period considered. Over the same period the mining and quarrying sector (NACE Section C), and the electricity, gas and water supply sector (NACE Section E) had much higher price increases (22.0 % and 18.2 % respectively in the EU-25). The price of oil played an important role in determining prices in both of these sectors.

Figure 7
Evolution of main indicators for total industry (NACE Sections C to E), EU-25 (1995=100)



Source: Eurostat, European Business Trends.

Table 7
Development of industrial production, EU-25, growth rates (%)

NACE label (NACE code)	1995	1996	1997	1998	1999	2000	2001	2002	2003
TOTAL INDUSTRY (C-E)	3.2	0.5	3.9	3.3	1.7	4.8	0.2	-0.6	0.6
Mining and quarrying (C)	2.3	1.6	-2.2	-0.9	1.3	-2.8	-4.1	1.0	-3.1
Manufacturing (D)	3.2	0.1	4.5	3.6	1.6	5.2	0.2	-0.9	0.6
Food products; beverages and tobacco (DA)	1.5	1.5	3.1	0.9	1.3	0.9	1.1	1.9	0.8
Textiles and textile products (DB)	-1.9	-4.4	0.6	-2.3	-7.0	-1.4	-3.6	-7.5	-4.6
Leather and leather products (DC)	1.0	-3.4	1.1	-5.4	-3.9	-3.3	-4.0	-7.8	-8.7
Wood and wood products (DD)	-0.9	-3.4	4.4	3.3	2.6	5.4	-3.0	0.6	0.8
Pulp, paper and paper products; publishing and printing (DE)	-1.4	-0.7	4.2	3.5	3.2	2.4	-1.2	0.2	0.4
Coke, refined petroleum products and nuclear fuel (DF)	1.7	-0.2	-2.1	1.9	-5.6	2.4	-0.2	-2.5	2.1
Chemicals, chemical products and man-made fibres (DG)	3.6	2.7	6.4	3.2	4.6	5.2	2.8	4.8	2.1
Rubber and plastic products (DH)	3.0	-0.9	5.8	4.5	2.5	4.8	-0.7	0.1	1.7
Other non-metallic mineral products (DI)	2.0	-2.7	2.9	2.3	2.3	3.8	-0.9	-1.9	1.3
Basic metals and fabricated metal products (DJ)	5.1	-1.3	4.7	3.1	-0.7	5.8	0.1	-1.2	-0.1
Machinery and equipment n.e.c. (DK)	7.7	0.3	2.9	2.7	-2.5	5.7	1.6	-1.3	-1.1
Electrical and optical equipment (DL)	5.5	1.5	5.6	6.4	5.9	14.2	-1.4	-5.3	0.7
Transport equipment (DM)	3.1	2.4	8.0	9.0	3.9	5.7	1.9	-0.3	3.2
Manufacturing n.e.c. (DN)	-0.2	-0.9	1.9	5.1	2.7	2.9	0.1	-4.2	-2.1
Electricity, gas and water supply (E)	3.4	3.3	0.6	2.5	2.1	3.3	2.4	0.4	3.2

Source: Eurostat, European Business Trends.

Table 8
Development of domestic output prices, EU-25, growth rates (%)

NACE label (NACE code)	1995	1996	1997	1998	1999	2000	2001	2002	2003
TOTAL INDUSTRY (C-E)	4.3	0.5	0.9	-0.6	-0.4	4.3	2.0	-0.1	1.6
Mining and quarrying (C)	:	-2.1	4.1	0.2	0.2	8.8	5.5	1.1	2.7
Manufacturing (D)	4.8	1.1	0.6	-0.7	0.1	4.5	1.1	0.2	1.1
Food products; beverages and tobacco (DA)	:	2.3	1.4	-0.2	-0.7	1.7	4.0	1.1	1.6
Textiles and textile products (DB)	4.1	1.0	0.8	0.9	-0.1	1.2	1.5	0.4	0.5
Leather and leather products (DC)	4.7	2.0	1.5	1.3	0.3	2.0	4.4	2.2	0.7
Wood and wood products (DD)	5.0	-1.0	1.3	0.7	-0.6	0.9	0.9	-0.1	0.7
Pulp, paper and paper products; publishing and printing (DE)	:	-0.8	-1.1	0.9	-0.3	4.9	1.9	0.0	0.2
Coke, refined petroleum products and nuclear fuel (DF)	3.6	7.7	2.4	-10.4	10.9	36.0	-5.0	-2.2	3.5
Chemicals, chemical products and man-made fibres (DG)	7.4	-1.3	0.9	-1.7	-0.7	6.4	1.5	-0.7	1.9
Rubber and plastic products (DH)	6.7	0.0	-0.5	-0.7	-0.9	2.2	1.1	0.0	0.4
Other non-metallic mineral products (DI)	2.7	1.0	1.0	1.1	1.3	1.9	2.5	1.7	0.7
Basic metals and fabricated metal products (DJ)	:	-0.9	0.5	0.7	-2.2	4.3	0.4	-0.1	1.7
Machinery and equipment n.e.c. (DK)	3.3	2.7	1.5	1.1	0.8	1.0	1.5	1.3	0.9
Electrical and optical equipment (DL)	:	-0.9	-1.6	-2.3	-1.9	-0.8	-1.6	-1.4	-1.7
Transport equipment (DM)	:	1.9	0.2	0.9	0.6	0.3	0.6	1.2	0.8
Manufacturing n.e.c. (DN)	:	3.0	1.0	1.1	1.0	1.3	1.6	1.7	1.7
Electricity, gas and water supply (E)	:	-0.3	1.9	-2.1	-3.4	6.6	7.9	-0.3	7.4

Source: Eurostat, European Business Trends.

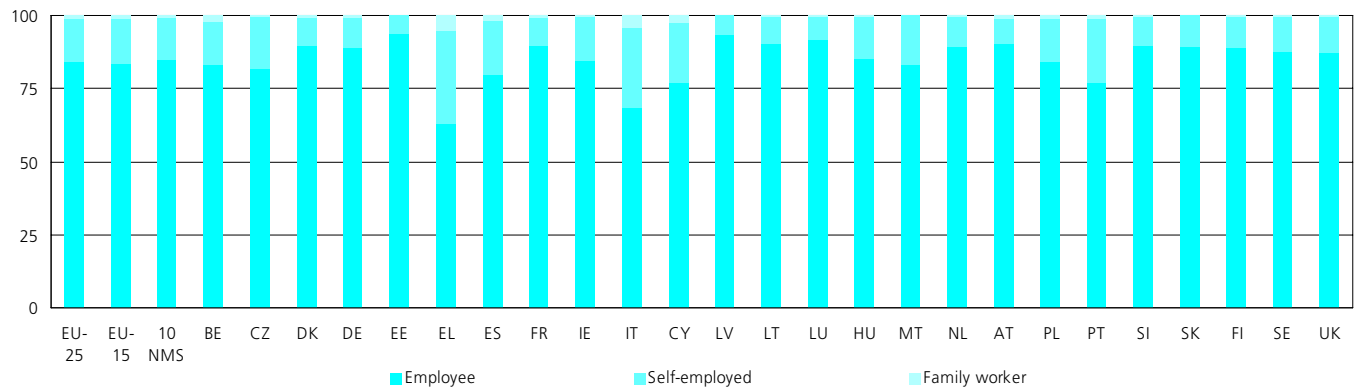
With the exception of the coke, refined petroleum products and nuclear fuels sector (NACE Subsection DF), where price increases averaged 4.6 % per annum between 1995 and 2003 in the EU-25, none of the manufacturing subsections reported that output prices rose by more than 2 % per annum. Electrical and optical equipment was the only sector to report that output prices for the EU-25 fell, down by more than 11 % between 1995 and 2003 (see Table 8).

Lengthy time-series for annualised short-term statistics only exist for a limited number of service sectors, mainly within the area of distributive trades. These show that turnover in the EU-25 rose, on average, by 2.9 % per annum in the wholesale trade sector and by 3.4 % per annum in the hotels and restaurants sector between 1995 and 2002. Note that these growth rates are not deflated and hence include price changes. The index of the volume of sales (deflated turnover) in the retail trade

sector (excluding repair of household goods) rose, on average, by 1.9 % per annum between 1995 and 2003.

Figure 8

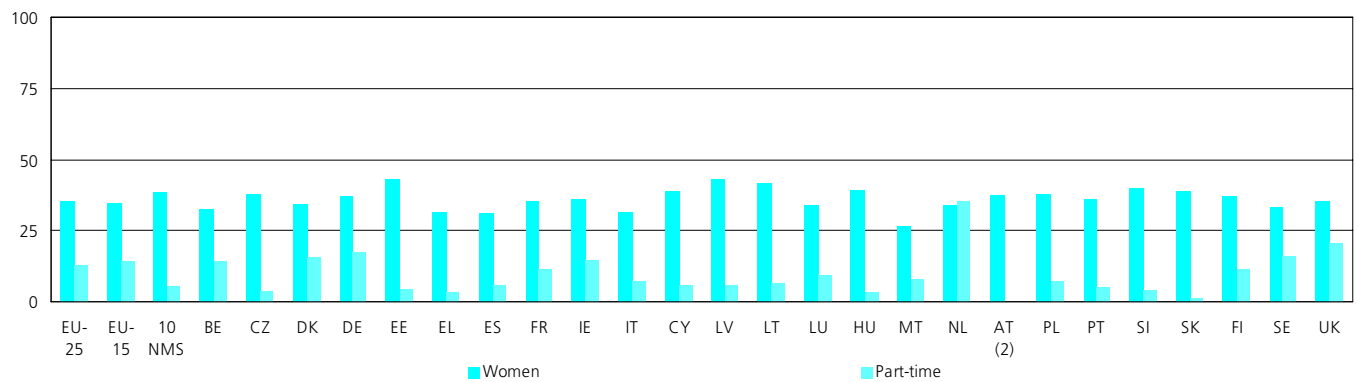
Labour force characteristics in the business economy (NACE Sections C to K) by employment status, 2002 (share of persons aged 15 or more) (%) (1)



(1) Non-response, not considered; 10 NMS, average for the ten new Member States.
Source: Eurostat, Labour Force Survey.

Figure 9

Labour force characteristics in the business economy (NACE Sections C to K), 2002 (% share of those employed aged 15 or more) (1)



(1) Non-response, not considered; 10 NMS, average for the ten new Member States.
(2) Part-time employment, not available.
Source: Eurostat, Labour Force Survey.

EMPLOYMENT TRENDS AND CHARACTERISTICS

According to the Labour Force Survey, in 2002 there were 192 million persons that made up the EU-25 workforce. The contribution of the 10 new Member States to this total was 15.1 %. Note that these figures cover the whole economy (NACE Sections A to Q). Restricting the analysis to the business economy activities (NACE Sections C to K), the EU-25 workforce was composed of 125 million persons. Of these, some 83.9 % were paid employees, 14.7 % were self-employed and the remaining 1.4 % were family workers (see Figure 8).

The main difference in the composition of the EU-15 and the 10 new Member States' workforces in terms of employment characteristics was the apparently low proportion (0.8 %) of family workers in the business economy workforce (NACE Sections C to K) of the 10 new Member States. However, closer inspection of the data reveals that the share of family workers in the 10 new Member States was not atypical. Rather, the difference was due to the relatively high proportion of family workers in the four southern EU-15 Member States of Greece, Spain, Italy and Portugal (where family workers accounted, on average, for 3.3 % of the total workforce). If these four countries are removed from the EU-15 aggregate, then the proportion of family workers in the total workforce of the 10 new Member States was identical to the other EU-15 Member States (0.8 %).

A breakdown by gender reveals that there were 81.1 million men and 43.9 million women working in the EU-25's business economy in 2002. As such, women accounted for 35.1 % of the business economy workforce, compared with 43.4 % within the whole economy (NACE Sections A to Q). This could be explained by a higher proportion of women working in areas such as education, health and social work, community and personal services. The 10 new Member States generally reported that women made up a higher proportion of the business economy workforce than in the EU-15 Member States, some 38.5 % compared with 35.1 % (see Figure 9). The Baltic States were the only Member States where the proportion of women in the business economy workforce rose to above 40 %. Malta was the only country where the proportion of women fell below 30 %, although Greece, Spain and Italy all registered shares that were between 30 and 32 %.

There were relatively large differences between the EU-15 and the 10 new Member States as regards the propensity to employ on a part-time basis (see again Figure 9). Some 14.3 % of the business economy workforce in the EU-15 had a part-time work contract in 2002, compared with just 5.3 % of the workforce in the 10 new Member States. All 10 of the new Member States had a part-time employment rate that was below 10 %, as did Greece, Spain, Italy, Luxembourg and Portugal. At the other end of the range, the Netherlands stood out as having by far the highest proportion of persons with a part-time work contract (35.1 %), followed by the United Kingdom (20.7 %).

According to structural business statistics (SBS), there were 113 million persons ⁽⁷⁾ working in the EU-25's non-financial business economy in 2001 (as covered by NACE Sections C to I and K). Of these, some 32.1 % were working in the industrial sector (NACE Sections C to E), while 10.5 % were working in the construction sector (NACE Section F) and the remaining 57.3 % in the non-financial services sector (NACE Sections G to I and K) - see Table 9. The 10 new Member States had a higher share of total EU-25 employment within the industrial sector (18.1 %) as compared with the construction (12.7 %) or non-financial services sectors (11.9 %).

This pattern of relatively high proportions of the total number of persons employed within industrial activities was repeated in 9 of the 10 new Member States. Indeed, Cyprus was the only one of the new Member States to report a higher proportion of EU-25 persons employed in the non-financial services sector. Within the EU-15 Member States it was common to find a higher proportion of the EU-25 workforce within the non-financial services sector; this was particularly the case in the Benelux countries, Denmark, France, Austria and the United Kingdom. Spain and Portugal reported a relatively high proportion of the EU-25 workforce within the construction sector, while Germany accounted for 21.8 % of the industrial workforce compared with 15.7 % of the non-financial services workforce.

⁽⁷⁾ Slovenia, number of employees; Cyprus, excluding NACE Section K; Malta, excluding NACE Section E.

Table 9
Number of persons employed in the non-financial business economy, 2001 (1)

NACE label (NACE Section)	10																
	EU-25	EU-15	NMS	BE	CZ	DK	DE (2)	EE	EL (3)	ES	FR	IE (4)	IT	CY (5)			
Non-financial business economy (C to I and K)																	
Number of persons employed (thousands)	112 955	97 175	15 780	2 485	3 535	1 714	20 089	356	349	11 462	14 027	887	14 022	176			
Share of EU-25 (%)	100.0	86.0	14.0	2.2	3.1	1.5	17.8	0.3	:	10.1	12.4	:	12.4	0.2			
Mining and quarrying; manufacturing; electricity, gas and water supply (C to E)																	
Number of persons employed (thousands)	36 294	29 736	6 559	709	1 518	498	7 917	140	257	2 762	4 312	271	5 003	39			
Share of EU-25 (%)	100.0	81.9	18.1	2.0	4.2	1.4	21.8	0.4	0.7	7.6	11.9	0.7	13.8	0.1			
Construction (F)																	
Number of persons employed (thousands)	11 900	10 385	1 515	278	376	184	1 988	31	92	1 953	1 458	:	1 529	27			
Share of EU-25 (%)	100.0	87.3	12.7	2.3	3.2	1.5	16.7	0.3	0.8	16.4	12.3	:	12.8	0.2			
Non-financial services (G to I and K)																	
Number of persons employed (thousands)	64 761	57 054	7 707	1 499	1 640	1 027	10 184	186	:	6 747	8 257	582	7 490	110			
Share of EU-25 (%)	100.0	88.1	11.9	2.3	2.5	1.6	15.7	0.3	:	10.4	12.7	0.9	11.6	0.2			
	LV	LT	LU	HU	MT	NL	AT	PL	PT	SI (6)	SK	FI	SE	UK			
Non-financial business economy (C to I and K)																	
Number of persons employed (thousands)	496	699	179	1 665	108	5 027	2 215	7 254	2 813	549	942	1 216	2 617	18 145			
Share of EU-25 (%)	0.4	0.6	0.2	1.5	0.1	4.4	2.0	6.4	2.5	0.5	0.8	1.1	2.3	16.1			
Mining and quarrying; manufacturing; electricity, gas and water supply (C to E)																	
Number of persons employed (thousands)	174	281	36	828	32	972	668	2 811	952	255	480	457	831	4 092			
Share of EU-25 (%)	0.5	0.8	0.1	2.3	0.1	2.7	1.8	7.7	2.6	0.7	1.3	1.3	2.3	11.3			
Construction (F)																	
Number of persons employed (thousands)	43	69	27	117	8	496	235	709	382	62	74	126	237	1 367			
Share of EU-25 (%)	0.4	0.6	0.2	1.0	0.1	4.2	2.0	6.0	3.2	0.5	0.6	1.1	2.0	11.5			
Non-financial services (G to I and K)																	
Number of persons employed (thousands)	280	350	116	719	68	3 559	1 312	3 735	1 479	232	387	633	1 549	12 687			
Share of EU-25 (%)	0.4	0.5	0.2	1.1	0.1	5.5	2.0	5.8	2.3	0.4	0.6	1.0	2.4	19.6			

(1) 10 NMS, ten new Member States.

(2) NACE Section G, 2000.

(3) Excluding NACE Sections G to I and K.

(4) NACE Section F, not available.

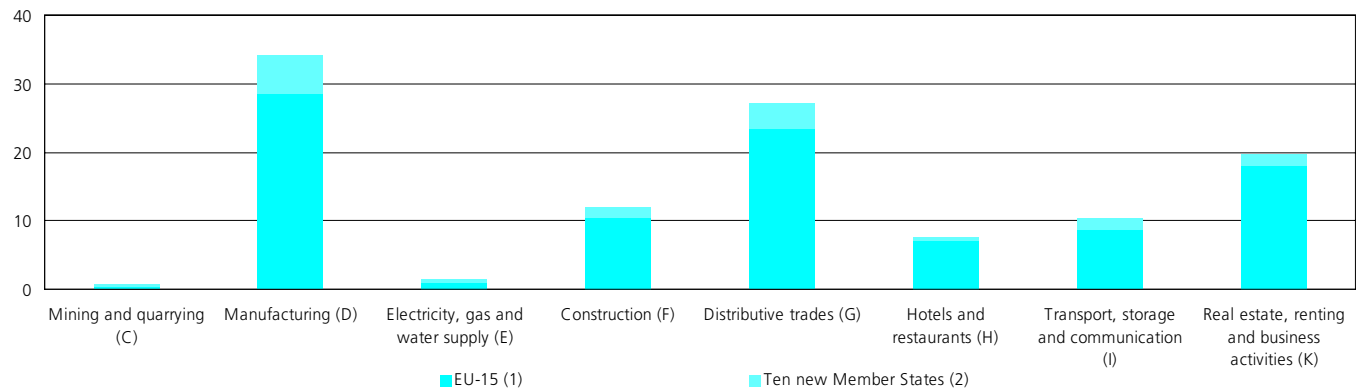
(5) NACE Section K, not available.

(6) Number of employees.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms).

Figure 10

Breakdown of the number of persons employed in the non-financial business economy, 2001 (millions)



(1) Excluding Greece, NACE Sections G to I and K.
 (2) Excluding Cyprus, NACE Section K; SI, number of employees.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms).

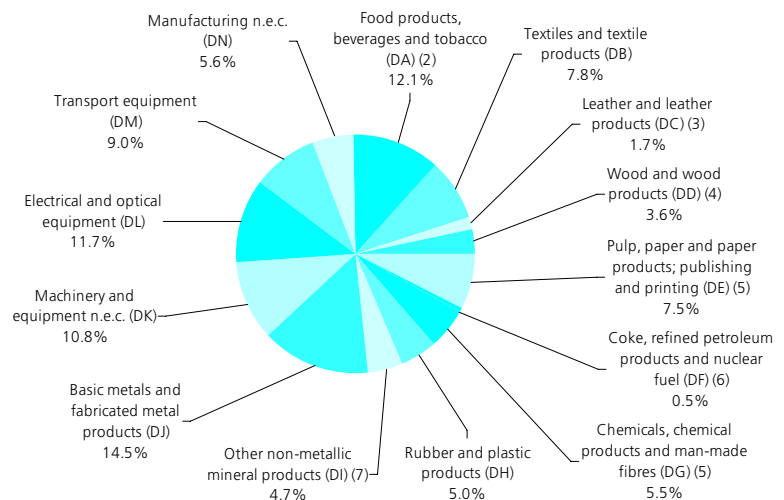
Figure 10 shows in more detail the breakdown of employment between the EU-15 and the 10 new Member States. The two NACE sections where the 10 new Member States had by far their highest share of total EU-25 employment were the activities of mining and quarrying (NACE Section C) and electricity, gas and water supply (NACE Section E). In these two sectors, the 10 new Member States accounted for 46.6 % and 32.2 % respectively of EU-25 employment in 2001, with the next highest proportion recorded in the manufacturing sector (NACE Section D), where the 10 new Member States occupied 16.9 % of the EU-25 workforce. Two services sectors stood out at the lower end of the ranking; they were real estate, renting and business activities (NACE Section K) and hotels and restaurants (NACE Section H), where the 10 new Member States occupied less than 1 in 10 of the EU-25's workforce (8.7% and 7.6 % respectively).

A breakdown of EU-25 employment in the manufacturing sector by NACE subsection is provided in Figure 11. This shows (as with the analysis of value added) that the largest manufacturing sector in the EU-25 in 2001 was the activity of basic metals and fabricated metal products (NACE Subsection DJ), which employed around 4.8 million persons, or 14.5 % of the non-financial business economy. The second and third largest activities in the EU-25's manufacturing sector, as measured by the number of persons employed, were also identical to the ranking by value added, namely, food products, beverages and tobacco (NACE Subsection DA) and electrical and optical equipment (NACE Subsection DL).

The main differences were recorded in the chemicals, chemical products and man-made fibres sector (NACE Subsection DG) which was the sixth largest in terms of value added (with a

Figure 11

Breakdown of the number of persons employed in the manufacturing sector, EU-25, 2001 (1)



(1) All NACE Subsections for Slovenia, number of employees.
 (2) Excluding Poland; Slovakia, 2000.
 (3) Excluding Estonia and Slovenia; Lithuania and Hungary, 1999; Latvia, number of employees.
 (4) Malta, 2000.
 (5) Excluding Poland.
 (6) Excluding Estonia, Lithuania, Malta, Poland, Slovenia and Slovakia; Hungary, 1999; Latvia, number of employees.
 (7) Poland, number of employees.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms).

10.6 % share of the manufacturing total), but the ninth largest in terms of employment (5.5 %). This resulted in the chemicals, chemical products and man-made fibres sector recording by far the highest apparent labour productivity in the EU-25's manufacturing sector, almost EUR 89 000 per person employed. On the other hand, the textiles and textile products sector (NACE Subsection DB) occupied 7.8 % of those employed in manufacturing, while generating 4.1 % of manufacturing value added. As such, each person employed generated an average of EUR 24 100, less than 3.5 times the level in the

chemicals sector. It should be noted that employment data in SBS are a simple head count and that there may be large differences in the number of part-time employees between different sectors. As such, employment can be overestimated in sectors that display a high propensity to employ on a part-time basis, as employment levels in these sectors would be considerably lower if expressed as full-time equivalents.

EXTERNAL TRADE

The enlargement of the EU to 25 Member States resulted in approximately 75 million potential new customers within the single market, with the total number of customers rising to approximately 455 million with the accession of the new Member States. External trade statistics are based on products, as defined by the CPA (Classification of Products by Activity).

EU-25 exports of goods with non-Community countries (often called extra-EU trade, in other words, all trade with countries outside of the 25 Member States) totalled EUR 903 billion in 2002, which could be compared to EUR 942 billion of imports (see Table 10). It should be noted that, for many goods, the amount of trade that takes place within the EU is considerably higher than the flows that leave to or arrive from non-Community countries (for example, perishable goods, or goods with a low price/weight ratio). Furthermore, the data presented refer to the aggregate of all traded goods, (generally within CPA Sections A to E); as such, the data do not include trade in services, which have become an increasingly important part of the current account in most countries. The EU-25 ran a trade deficit of almost EUR 39 billion with non-Community countries in 2002, as exports covered imports by 95.9 %. The trade deficit in goods of the new Member States alone (with non-Community countries) was EUR -29 billion in 2002.

Some 80.7 % of the EUR 161 billion of exports made by the 10 new Member States in 2002 were destined for one of the other 25 Member States, while 68.9 % of the EUR 195 billion of the imports made by the new Member States originated from one of the other 25 EU countries. The growing importance of external trade between the new Member States and the EU-15 Member States means that, in particular, enterprises from the 10 new Member States are increasingly affected by economic developments within the EU-15, and vice versa, as the two economies become increasingly entwined.

Germany had the largest share of trade by EU Member States in 2002, accounting for 23.5 % of the goods that were exported (intra- and extra-EU trade combined). France, the United Kingdom, Italy, the Netherlands and Belgium all reported shares of between 13 and 8 %, while no other country had a share of more than 5 % of exports. Germany also reported the highest share of imports of goods (again from intra- and extra-EU partners), some 19.3 % of the total; the United Kingdom (13.6 %) and France (12.9 %) followed.

Table 10

External trade flows of all goods (CPA Sections A to E), 2002 (EUR million)

	Exports	Share in EU total (%)	Imports	Share in EU total (%)	Trade balance	Cover ratio (%)
EU-25 (1)	903 314	~	942 138	~	-38 824	95.9
BE	228 609	8.3	210 321	7.8	18 287	108.7
CZ	40 682	1.5	43 005	1.6	-2 323	94.6
DK	60 802	2.2	53 215	2.0	7 587	114.3
DE	651 259	23.5	518 488	19.3	132 771	125.6
EE	3 638	0.1	5 079	0.2	-1 441	71.6
EL	10 946	0.4	33 065	1.2	-22 118	33.1
ES	132 918	4.8	174 603	6.5	-41 685	76.1
FR	350 803	12.7	348 205	12.9	2 598	100.7
IE	93 337	3.4	55 429	2.1	37 909	168.4
IT	269 064	9.7	261 226	9.7	7 838	103.0
CY	449	0.0	3 903	0.1	-3 454	11.5
LV	2 417	0.1	4 279	0.2	-1 862	56.5
LT	5 537	0.2	7 958	0.3	-2 422	69.6
LU	10 814	0.4	13 907	0.5	-3 093	77.8
HU	36 503	1.3	39 927	1.5	-3 424	91.4
MT	2 144	0.1	2 799	0.1	-654	76.6
NL	258 099	9.3	231 879	8.6	26 220	111.3
AT	83 199	3.0	82 804	3.1	395	100.5
PL	43 499	1.6	58 480	2.2	-14 981	74.4
PT	28 098	1.0	42 414	1.6	-14 316	66.2
SI	10 962	0.4	11 574	0.4	-612	94.7
SK	15 234	0.6	17 517	0.7	-2 283	87.0
FI	47 742	1.7	36 187	1.3	11 556	131.9
SE	86 090	3.1	70 731	2.6	15 358	121.7
UK	296 315	10.7	366 240	13.6	-69 925	80.9

(1) Trade with non-Community countries only.
Source: Eurostat, Comext.

Among the new Member States the highest share of EU-25 trade was accounted for by Poland, which registered a 1.6 % share of all exports by EU Member States and a 2.2 % share of all imports. The only other new Member States that recorded more than 1 % of total EU exports or imports were the Czech Republic and Hungary. Every one of the 10 new Member States registered a trade deficit in goods in 2002, with only the Czech Republic, Hungary and Slovenia recording cover ratios (the ratio of exports to imports) above 90 %.

Table 11 presents information that relates uniquely to manufactured products (as covered by CPA Section D). The information presented concerns data for external trade flows with non-Community countries only. It shows that the largest sectors of the EU-25 economy as measured by value added (classified by NACE) were not always those for which the equivalent product groups (according to the CPA) had the largest trade flows. For example, the shares of food products, beverages and tobacco, and basic metals and fabricated metal products in EU-25 exports and imports of manufactured goods were considerably lower than the corresponding shares of the equivalent activities in manufacturing value added. On the other hand, there was a relatively high degree of importance for exports and imports of chemicals, and electrical and optical equipment when compared with the size of their equivalent activities in terms of value added.

A comparison of the breakdown of total manufactured imports and exports (CPA Section D) between the EU-25 and the new Member States shows that there was a higher propensity for the new Member States to export food products, beverages and tobacco, rubber and plastic products, other non-metallic mineral products, and basic metals and fabricated metal products. The EU-15 Member States were relatively specialised (in comparison with the new Member States) in exporting chemicals, chemical products and man-made fibres, machinery and equipment, and transport equipment.

In terms of imports, the new Member States imported a much higher share of electrical and optical equipment, while the EU-15 Member States imported relatively more textiles and textile products, transport equipment, and manufacturing goods not elsewhere classified (a division that includes jewellery, musical instruments, games and toys and sports goods).

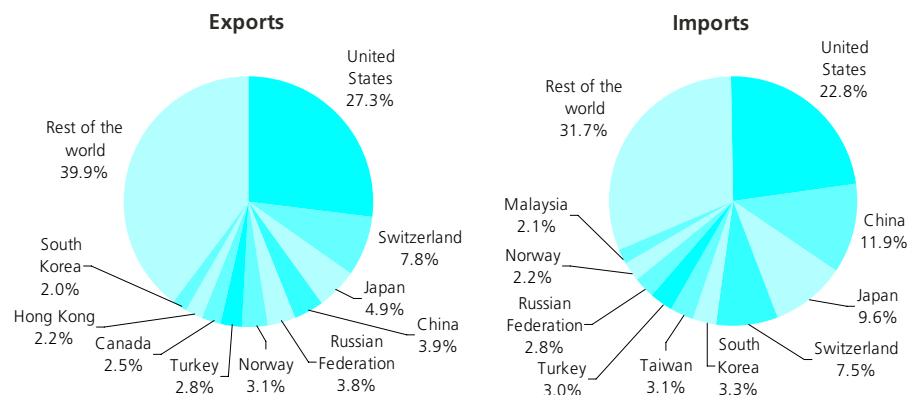
Figure 12 provides information concerning the most important destinations and origin of EU-25 exports and imports of manufactured goods (CPA Section D) in 2002. These figures cover extra-EU trade with non-Community countries and do not take account of trade flows between the Member States. EU-25 exports were somewhat more diversified as the top five export partners represented 47.6 % of total exports, compared with 55.1 % for imports.

Table 11
EU-25 external trade flows with non-Community countries
(% share of all manufactured products)

CPA label (CPA Subsection)	EU-25		Ten new Member States	
	Exports	Imports	Exports	Imports
Food products, beverages and tobacco (DA)	5.7	5.3	9.7	4.9
Textiles and textile products (DB)	4.3	9.0	4.4	6.7
Leather and leather products (DC)	1.5	2.4	1.1	2.0
Wood and wood products (DD)	0.9	1.2	2.6	1.0
Pulp, paper and paper products; publishing and printing (DE)	2.7	1.9	4.3	1.4
Coke, refined petroleum products and nuclear fuel (DF)	2.1	3.0	1.4	3.7
Chemicals, chemical products and man-made fibres (DG)	16.3	11.3	11.0	10.0
Rubber and plastic products (DH)	2.3	2.2	4.4	2.6
Other non-metallic mineral products (DI)	1.9	1.0	4.3	1.1
Basic metals and fabricated metal products (DJ)	6.6	8.4	10.1	7.7
Machinery and equipment n.e.c. (DK)	14.9	7.8	9.5	7.5
Electrical and optical equipment (DL)	18.6	28.4	18.8	39.8
Transport equipment (DM)	18.8	13.6	14.2	9.3
Other manufactured goods n.e.c. (DN)	3.5	4.6	4.4	2.2

Source: Eurostat, Comext.

Figure 12
Destination and origin of EU-25 manufactured (CPA Section D) exports and imports, 2002



Source: Eurostat, Comext.

The United States stood out as being by far the most important trading partner of the EU-25 for manufactured goods (CPA Section D). The United States was the destination for over a quarter (27.3 %) of the EU-25's exports of manufactured goods in 2002 and was the origin of 22.8 % of the EU-25's imports. The EU-25 ran a trade surplus for manufactured goods of EUR 61.3 billion with the United States in 2002, which was more than five times the size of the next most important surpluses that were recorded with the United Arab Emirates, the Russian Federation, Australia, Saudi Arabia, Mexico, Norway, Switzerland and Hong Kong.

China was the second most important origin of imports of manufactured goods into the EU-25, with an 11.9 % share of total manufactured imports. This figure was 8 percentage points higher than China's share of EU-25 manufactured exports (3.9 %), evidence of a large trade surplus for China with the EU-25 in terms of manufactured goods (EUR 54.3 billion). Japan reported a similar pattern, accounting for 9.6 % of the EU-25's imports, compared with 4.9 % of the EU-25's exports and hence recorded a trade surplus with the EU-25 of EUR 29.7 billion. The EU-25 also ran trade deficits (for manufactured goods) of at least EUR 5 billion in 2002 with Taiwan, Malaysia, Korea (Republic of), the Philippines, Indonesia and Thailand.

BUSINESS DEMOGRAPHY

Data are available for a limited number of Member States for enterprise demography indicators (covering the birth, death and survival of enterprises). This limited data set currently reports data for 10 of the EU-15 Member States and Norway, although it has recently been expanded to include several of the new Member States (this information will become available shortly).

Business demography is of interest to policy makers as it provides measures that can be used to study entrepreneurship. Most commentators believe that new enterprises stimulate economic growth by creating jobs and making economies more dynamic. Many new enterprises are created to fill market niches. These can take the form of product markets, or alternatively, geographical markets.

For this data set the business economy is defined as NACE Sections C to K (excluding NACE Class 74.15). The birth rate in the EU ⁽⁸⁾ was 8.4 % in 1999, rising to 8.5 % in 2000, before declining to 8.3 % in 2001. This figure is derived as the ratio of the number of enterprise births to the total number of active enterprises in each reference period. There are some quite large discrepancies between countries, as birth rates in 2001 ranged between 6.6 % in Sweden and 12.2 % in Luxembourg (see Table 12).

Given that the stock of active enterprises does not vary greatly over time, it is not surprising to find that death rates are also roughly the same magnitude as birth rates. Hence, the number of enterprises that went out of business in the EU was similar in magnitude to the number of enterprises that were created. In 1998, some 7.2 % of enterprises in the EU's business economy died, a figure that fell to 7.0 % in 1999, before climbing once more to 7.3 % in 2000. There were again quite large differences between countries, as Sweden recorded the lowest death rates (5.5 % of enterprises died in that country in 2000), while the highest rates were registered in the United Kingdom, where 10.6 % of the total number of enterprises died in 2000 (see Table 13).

⁽⁸⁾ For the whole of this section on business demography, the EU data refer to an average for Denmark, Spain, Italy, Luxembourg, the Netherlands, Finland and Sweden.

Table 12
Birth rates within the business economy (NACE Sections C to K) (enterprise births as a proportion of the total number of enterprises, %) (1)

	1998	1999	2000	2001
EU (2)	:	8.4	8.5	8.3
BE	:	:	7.0	:
DK	10.1	10.9	10.0	9.3
ES	9.7	9.6	9.7	9.1
IT	11.4	7.6	7.8	7.7
LU	13.2	13.4	12.4	12.2
NL	:	9.6	9.4	9.6
PT (3)	9.5	8.0	7.6	7.5
FI	8.5	7.6	7.3	7.2
SE	:	6.3	7.0	6.6
UK	9.1	9.6	8.9	:
NO	12.3	11.4	10.3	10.1

(1) Excluding NACE Class 74.15.

(2) Average for Denmark, Spain, Italy, Luxembourg, the Netherlands, Finland and Sweden only.

(3) Break in series, 2001, from when the data exclude sole proprietors.

Source: Eurostat, Structural Business Statistics (theme4/sbs/bus_demo).

Table 13
Death rates within the business economy (NACE Sections C to K) (enterprise deaths as a proportion of the total number of enterprises, %) (1)

	1997	1998	1999	2000
EU (2)	:	7.2	7.0	7.3
BE	:	6.7	8.7	:
DK	8.1	8.3	8.1	9.7
ES	7.7	8.0	6.9	7.2
IT	9.3	6.5	7.1	7.0
LU	8.7	9.0	9.4	9.2
NL	:	7.7	8.1	10.2
PT	7.0	6.5	6.3	:
FI	6.7	8.0	6.8	7.3
SE	7.1	5.9	5.1	5.5
UK	9.7	10.5	10.4	10.6
NO	:	:	7.6	8.3

(1) Excluding NACE Class 74.15.

(2) Average for Denmark, Spain, Italy, Luxembourg, the Netherlands, Finland and Sweden only.

Source: Eurostat, Structural Business Statistics (theme4/sbs/bus_demo).

Table 14
Survival rates within the business economy (NACE Sections C to K) (enterprises surviving as a proportion of the total number of enterprise births, %) (1)

	Enterprises born in 1998 that survived to:			Enterprises born in 1999 that survived to:	
	1999	2000	2001	2000	2001
EU (2)	:	:	:	85.2	73.6
BE	:	:	:	:	:
DK	80.6	63.8	53.5	79.7	61.9
ES	82.8	69.3	61.6	80.6	70.1
IT	83.3	71.3	62.3	88.4	76.6
LU	89.4	77.2	66.2	89.3	77.2
NL	:	:	:	84.6	71.0
PT	94.1	71.6	:	95.9	:
FI	83.0	68.4	59.2	84.2	70.6
SE	:	:	:	98.7	89.3
UK	91.8	77.8	:	93.4	:
NO	85.1	74.8	66.9	82.6	70.2

(1) Excluding NACE Class 74.15.

(2) Average for Denmark, Spain, Italy, Luxembourg, the Netherlands, Finland and Sweden only.

Source: Eurostat, Structural Business Statistics (theme4/sbs/bus_demo).

The business demography data set also allows a cohort of enterprises to be tracked over time, plotting the survival rates of a particular subset of enterprises. Table 14 shows the survival rates within the business economy of enterprises born in either 1998 or 1999. These rates are given as a proportion of the initial number of enterprise births in each of the years. As such, from the cohort of enterprises that were born in 1999 in the EU, some 85.2 % survived to the

following year and by 2001 there 73.6 % of those initially born in 1999 were still surviving. For the cohort of enterprises that were born in 1998, only slightly more than half had survived to 2001 in Denmark (53.5 %), while the ratio was somewhat higher in Finland (59.2 %) Spain (61.6 %) and Italy (62.3 %), with the highest survival rates being registered in Luxembourg (66.2 %).

INFORMATION SOCIETY AND INTANGIBLES

The final section looks at the development of the knowledge-based society. Vocational training, research, innovation and the use of modern technologies are some of the ways that efficiency gains can be made in a modern economy, thus improving competitiveness. These topics have been addressed by the European Commission under various initiatives that are directed at moving the EU towards the Lisbon goal of becoming 'the most competitive and dynamic knowledge-based economy in the world' by 2010.

ICT AND E-COMMERCE USAGE AMONG ENTERPRISES

There was rapid change in the business economy during the 1990s, as telecommunications liberalisation, coupled with the growth of the Internet, led to the birth of the information society. While the buoyant growth of the ICT sector was halted abruptly in 2001, partnerships between enterprises, suppliers and consumers have continued to develop and e-business continues to provide opportunities for enterprises to access new markets.

The eEurope 2005 action plan was launched at the Seville European Council in June 2002. Its aim was to develop modern public services and 'a dynamic environment for e-business through the widespread availability of broadband access at competitive prices with a secure information infrastructure across the EU'.

The ICT usage and e-commerce survey of enterprises ⁽⁹⁾ shows that 95 % of enterprises in the EU-15 used a computer at the start of 2002, while four out of five (81 %) of these used the Internet as a working tool during 2001.

The most popular online application used by enterprises was e-banking (68 % of all enterprises using the Internet), while enterprises that had a web presence at the start of 2002 favoured using the Internet as a marketing tool (80 %) ⁽¹⁰⁾. The supply of and the demand for web-based services generally increased with the average size of an enterprise (see Table 15).

⁽¹⁰⁾ Note that this means the enterprise used the Internet to provide information concerning the goods or services they offered, while there was no direct attempt to make sales over the Internet.

⁽⁹⁾ The Community survey on ICT usage in enterprises was conducted in 2002. The target population for this survey was enterprises with 10 or more persons employed within the following activities: NACE Sections D and G, Groups 55.1 and 55.2, Section I, Division 67 and Section K. EU averages cover all EU-15 Member States except Belgium, France and the United Kingdom. Any additional divergences from the standard activity, size coverage or variable definitions for any of the individual Member States that are used to compile EU averages are also present in the EU averages. The results presented exclude NACE Division 67 for Denmark, Germany, Ireland and Italy, while they include NACE Divisions 65 and 66 and Groups 55.3 to 55.5 for the Netherlands. Size class data for the Netherlands are based on the distinction between medium-sized enterprises and large enterprises being made at 200 persons employed (and not the standard threshold of 250 persons that is used in the other Member States).

Table 15
Proportion of enterprises using ICT (%)

	EU (1)	BE	DK	DE	EL	ES	FR	IE	IT	LU	NL	AT	PT	FI	SE	UK
Proportion of enterprises using computers at the start of 2002																
All sizes	95	:	98	95	88	95	:	95	95	97	94	93	84	99	99	89
SME	94	:	98	94	88	95	:	95	95	97	94	93	84	99	99	88
Large	100	:	100	100	99	100	:	98	100	97	97	100	99	100	100	100
Proportion of PC-equipped enterprises that used the Internet during 2001																
All sizes	81	:	95	84	64	83	:	83	74	79	85	85	69	96	95	54
SME	81	:	95	83	64	82	:	82	74	78	85	84	68	96	95	53
Large	98	:	100	98	96	98	:	96	95	96	95	100	98	100	100	86
Enterprises using the Internet during 2001: proportion using the following Internet services																
For market monitoring (2)	46	:	44	41	77	54	:	40	38	55	63	66	43	61	53	:
To receive digital products	35	:	45	42	15	21	:	30	33	62	27	26	18	60	65	:
To obtain after-sales services	:	:	:	50	15	23	:	22	15	31	30	16	14	36	70	:
For banking and financial services (2)	68	:	72	65	60	78	:	69	52	54	78	68	71	85	75	:
Enterprises using the Internet during 2001: proportion with a web-site or homepage																
	67	:	80	78	52	46	:	64	62	65	68	75	55	72	84	100
Enterprises with a web-site or homepage in 2001: proportion offering the following Internet services																
Market products	80	:	96	82	97	54	:	90	88	69	88	88	58	86	97	:
Facilitate access to product catalogues & price lists (2)	45	:	39	40	43	60	:	45	43	51	40	47	58	42	43	:
Deliver digital products (3)	9	:	11	11	7	6	:	12	5	20	20	7	5	11	4	:
Provide after-sales support	26	:	27	45	11	18	:	18	7	23	30	12	16	31	35	:
Provide mobile Internet services	4	:	2	6	6	2	:	7	3	5	:	4	2	5	5	:

(1) Excluding Belgium, France and the United Kingdom.

(2) Sweden, wording of these services was different in the survey questionnaire.

(3) Denmark, wording of these services was different in the survey questionnaire.

Source: Eurostat e-commerce survey, 2002.

Table 16

Enterprise use of e-commerce

	EU (1)	BE	DK (2)	DE	EL (3)	ES	FR	IE	IT	LU	NL (4)	AT	PT (5)	FI	SE	UK
Enterprises having used the Internet during 2001: proportion that purchased products via the Internet in 2001																
All sizes	29	:	49	45	17	8	:	46	10	29	37	37	24	54	62	47
SME	29	:	48	45	16	8	:	45	10	29	37	36	24	53	62	47
Large	40	:	80	41	27	15	:	62	15	23	54	56	30	70	83	45
Enterprises having used the Internet during 2001: proportion that received orders via the Internet in 2001																
All sizes	14	:	25	19	14	3	:	26	5	15	40	25	11	17	14	19
SME	14	:	25	19	14	3	:	26	5	15	40	25	10	17	14	19
Large	20	:	36	18	17	7	:	33	7	13	47	29	27	27	27	22

(1) Excluding Belgium, France and the United Kingdom.

(2) Limited to purchases from web-sites; limited to own web-site for receiving orders.

(3) Only covers enterprises that made at least 1% of purchases via the Internet or generated at least 1% of turnover via the Internet.

(4) Includes transactions by all types of electronic networks.

(5) For orders received, only covers enterprises that generated at least 1% of turnover via the Internet; estimates.

Source: Eurostat e-commerce survey, 2002.

Three out of every 10 (29 %) enterprises using the Internet in the EU-15 made use of e-commerce in 2001 to purchase at least some of the products they needed for their activity (see Table 16). Enterprises within the services sector (particularly those within the business services sector) generally reported a higher recourse to Internet purchasing than enterprises within the manufacturing sector.

Data that relate to e-sales refer to both business-to-business (B2B) and business-to-consumer (B2C) markets. The survey shows that EU-15 enterprises were generally less active in the domain of e-selling as compared with e-purchasing, as just 14 % of the enterprises in the EU-15 that used the Internet during 2001 declared having received orders for their products or services via the Internet. A somewhat higher proportion of large enterprises recorded using e-sales (20 %), although this share was half the proportion of large enterprises that made some form of e-purchase (40 %).

INNOVATION

Innovation activity is thought to be one of the main driving forces that increases knowledge and the use of technology within an economy. Innovation changes the pace of economic growth by opening up potentially new markets, be they for goods, services or industrial processes. Innovations may result in cost advantages for the enterprises that introduce them. Alternatively, when introducing products that are new to the market, it is likely that enterprises with innovation activity will, at least for a limited period of time, benefit from a monopolistic position. In both cases the enterprise that innovates benefits in relation to its competitors.

One important aspect of the innovation process is that it spreads information and knowledge. Often the costs of making this knowledge available to many users are considerably lower than the costs incurred by the enterprise introducing the innovation. As a result, many governments put in place policies that protect intellectual property rights, for example patents, copyrights and trademarks (see the following section for more information on patents). Without these forms of protection, some enterprises would likely cease to carry out their innovation activities for fear that they would never re-coup their costs, in terms of time and expenditure. This is particularly true when innovations are related to basic research where the potential use of an innovation is unclear (for example, a scientific discovery that could be used in a number of different fields). However, it is in these very areas that the public benefits of innovation can potentially be at their greatest (for example, medical discoveries). As such, many governments provide public funding for basic research activities.

Every four years a major innovation survey is conducted across Europe, called the Community innovation survey. The last time this took place was in 2000 and aggregated results of this exercise are available for 13 of the EU-15 Member States ⁽¹¹⁾. Results from the third Community innovation survey (CIS3) show that there were 233 200 enterprises with 10 or more employees within the business economy ⁽¹²⁾ that had some form of innovation activity during the period 1998–2000, some 43 % of the all enterprises. It is possible to provide a breakdown of this figure according to different types of innovator. This shows that enterprises were most likely to be both product and process innovators (23 % of all enterprises), while 10 % were product only innovators and 7 % were process only innovators. The survey also distinguished enterprises with only on-going and/or abandoned innovation activity; these accounted for 3 % of all enterprises (see Table 17).

⁽¹¹⁾ Data for Ireland and Luxembourg were not taken into account when creating EU aggregates. Hence, all EU data in this section refers to a sum or an average for the 13 remaining EU-15 Member States.

⁽¹²⁾ For the purpose of this section on innovation the business economy is defined as NACE Sections C to E (industry) and NACE Division 51, Sections I and J, Divisions 72 and 73 and Groups 74.2 and 74.3 (services).

Table 17

Typology of innovators in the EU's business economy, 1998-2000 (1)

	Total number of enterprises (thousands)	Proportion of total number of enterprises (%)	Proportion of total number of industrial enterprises (%)	Proportion of total number of enterprises in the services sector (%)
Total	546.8	100	100	100
Enterprises with innovation activity	233.2	43	45	39
Successful innovators	212.3	41	42	34
Product only innovators	58.3	10	10	12
Process only innovators	39.2	7	9	5
Product and process innovators	114.7	23	23	17
Enterprises with only on-going and/or abandoned innovations	31.7	3	5	6
Enterprises without innovation activity	313.6	56	55	61

(1) Excluding Ireland and Luxembourg; business economy defined as NACE Sections C to E (industry) and NACE Division 51, Sections I and J, Divisions 72 and 73 and Groups 74.2 and 74.3 (services).

Source: Eurostat, Third Community Innovation Survey (theme9/innovat/inn_cis3).

A higher proportion of enterprises in the EU-15's industrial sector (45 %) engaged in innovation activities during the period 1998–2000, compared with those in the services sector (39 %). The difference was most noticeable among large enterprises, where 78 % of all enterprises in the industrial sector had some form of innovation activity, while the corresponding figure for services was 63 %. While the economic sector appears to explain some of the differences in the propensity to innovate, the average size of an enterprise also appeared to be an important factor. An increasing proportion of enterprises reported innovation activity as the average size of the enterprise grew in both the industrial and the services sector (see Table 18).

In order to measure the relative performance of enterprises with innovation activity, it is perhaps more revealing to look at the proportion of turnover or employment that is accounted for by enterprises with innovation activity. Enterprises with innovation activity in the EU-15⁽¹³⁾ accounted for 44 % of the total population of enterprises between 1998 and 2000; however, in contrast, their share of total employment and turnover reached 72 % and 75 % in 2000. The CIS3 survey provides one way of studying innovation output over time, by measuring the turnover growth of enterprises. This measure reveals that turnover grew on average by 9 % per annum during the period 1998–2000 among enterprises with innovation activity, compared with average annual growth of 3 % among enterprises without innovation activity. This pattern was reproduced in both the industrial and services sectors.

⁽¹³⁾ All data in this paragraph also excludes the United Kingdom (in other words EU-15 excluding Ireland, Luxembourg and the United Kingdom).

Table 18

Proportion of enterprises with innovation activity in the EU, 1998-2000 (1)

	Industry	Services
All sizes	45	39
Small	39	35
Medium-sized	61	51
Large	78	63

(1) Excluding Ireland and Luxembourg; industry defined as NACE Sections C to E; services defined as NACE Division 51, Sections I and J, Divisions 72 and 73 and Groups 74.2 and 74.3.

Source: Eurostat, Third Community Innovation Survey (theme9/innovat/inn_cis3).

RESEARCH AND DEVELOPMENT

The Barcelona Council set the ambitious target of raising R & D expenditure within the EU to 3 % of GDP by 2010. The European Commission has initiated a number of policies to promote R & D expenditure, including cooperation with the European Investment Bank (EIB). This has resulted in an increase in the means with which the EIB can support research and innovation. The Commission is also working on extending the block exemption of State aid for R & D to SMEs, which should make access to finance for R & D more simple and efficient.

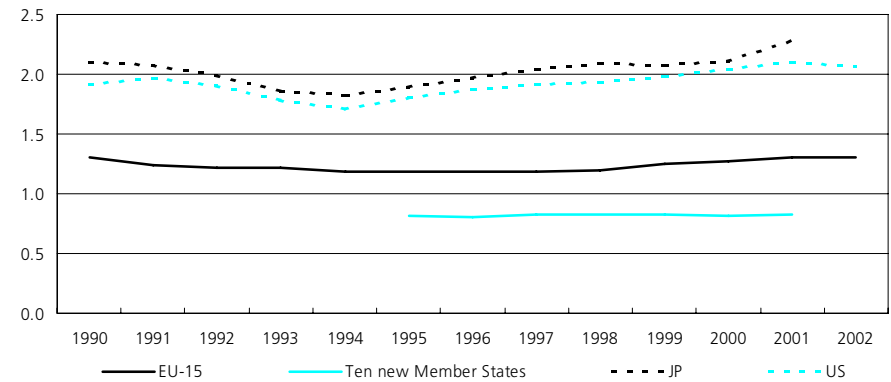
In 2002, R & D expenditure in the EU-15, relative to GDP, was 1.99 %; this was the same ratio that had been recorded in 1990. Within the EU-25, the ratio was slightly lower at 1.93 % in 2001. At the time of writing (spring 2004), there were only two Member States that had attained the Barcelona objectives, namely, Sweden (where R & D accounted for a 4.27 % share of GDP in 2001) and Finland (3.49 % in 2002). The next best-placed country to reach the 3 % threshold was Germany (2.51 % in 2002). Among the new Member States there were just two countries where the share of R & D expenditure rose above 1 % of GDP; they were Slovenia (1.57 % in 2001) and the Czech Republic (1.30 %). At the bottom end of the range, Greece, Spain and Portugal reported that their R & D expenditure accounted for less than 1 % of GDP, while among the 10 new Member States, Latvia and Cyprus recorded rates below 0.5 %⁽¹⁴⁾.

⁽¹⁴⁾ Malta, not available.

In absolute terms, the EU-15 reported that EUR 119 billion of R & D expenditure was made in the business enterprise sector (which is defined by the OECD as including all firms, organisations and institutions whose primary activity is the market production of goods or services (other than higher education) for sale to the general public at an economically significant price, and private non-profit institutes serving them) in 2002, compared with EUR 105 billion in Japan in 2001 and EUR 225 billion in the US in 2002. Practically the whole of the R & D investment gap (relative to GDP) between the EU-15 and the two other members of the Triad could be attributed to the relative under-performance of the business enterprise (or private) sector (see Figure 13). Indeed, a comparison of the levels of expenditure that are recorded in the governmental and the higher educational sectors shows that EU-15 expenditure in these sectors was almost identical to the levels recorded in Japan or the US (see Table 19).

Tracing the development of business enterprise R & D expenditure (again as a proportion of GDP) over time shows that this ratio rose in the EU-15 from 1.19 % to 1.30 % between 1995 and 2001. Within the 10 new Member States there was almost no change in the relative importance of R & D expenditure made by the business enterprise sector, which accounted for 0.82 % of GDP in 1995 and 0.83 % in 2001. On the other hand, expenditure by the business enterprise sector rose from 1.89 % of GDP in Japan in 1995 to 2.28 % by 2001, while there was also growth in the US (1.80 % in 1995 to 2.06 % by 2002).

Figure 13
Business enterprise research and development expenditure (% of GDP) (1)



(1) Estimates.
Source: Eurostat, Research and Development expenditure and personnel (theme9/rd_ex_p/rd_nat/nat_exp and theme9/rd_ccc/r_d/).

As such, it is perhaps not surprising to find that one of the main conclusions that came out of the Barcelona summit was that the Heads of State or Government asked for increased involvement from the private sector towards R & D funding. The gap in business enterprise sector funding may result from a lack of R & D investment by SMEs within Europe. Indeed, very large EU-15 enterprises performed comparably to the R & D expenditure performance of large enterprises from the US or Japan. Large enterprises in the EU-15 accounted for a growing share of R & D expenditure among the top 300 international enterprises in terms of R & D investment. It is important to note, however, that an increasingly important share of R & D expenditure that was made by large European enterprises was made outside of the EU-15 (for example, in Asia or in the US).

Table 19
Research and development expenditure in the EU, 2002 (EUR million) (1)

	EU-15	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV
Total R&D expenditure	182 387	5 515	744	4 265	51 539	37	:	6 227	33 414	1 339	:	25	38
Of which:													
Business enterprise sector	119 000	4 062	381	2 934	36 350	9	:	3 261	20 779	917	6 870	4	11
Government sector	23 949	331	331	503	6 923	22	:	989	5 664	128	2 657	16	16
Higher education sector	38 197	1 059	4	796	8 266	1	:	1 925	6 506	294	:	0	:
Private non-profit sector	1 240	62	5	32	:	1	:	52	465	:	:	1	:
	LT	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK
Total R&D expenditure	73	:	405	:	8 090	4 217	1 197	1 038	297	143	4 873	10 459	30 501
Of which:													
Business enterprise sector	:	:	153	:	4 712	:	390	330	159	78	3 447	8 118	19 683
Government sector	:	33	201	:	1 194	:	759	216	119	61	521	297	3 683
Higher education sector	:	2	:	:	2 184	:	20	381	1	1	905	2 033	6 724
Private non-profit sector	:	:	1	:	44	:	5	112	0	0	:	10	412

(1) Estimates; Belgium, Denmark, Germany, Spain, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Sweden, 2001; the Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Poland, Slovenia and Slovakia, 2000.
Source: Eurostat, Research and Development expenditure and personnel (theme9/rd_ex_p/rd_nat/nat_exp and rd_ccc/r_d/gerdfund).

PATENTS

The previous sections on innovation and R & D have dealt with the measurement of two phenomenon that are often cited as being highly important within the context of the knowledge-based economy. A related issue is the protection of any innovations and research discoveries that are made.

Intellectual property rights are a key element in the transformation of knowledge into economic value and as such are an important dimension of European research policy. The protection of intellectual property rights has become an increasingly strategic issue for enterprises, universities and public research organisations that invest in research and innovation. Property rights provide an incentive for invention and the subsequent market development of new ideas.

A patent is a legal entitlement of property that grants the owner the exclusive rights to exploit an innovation commercially. This right usually refers to a specific geographical area and is granted for a limited period of time. In return for this exclusive right, its technical details are published hence, allowing the knowledge associated with the innovation to circulate freely even if the idea itself cannot be commercially developed.

In 2001, the EU-25 applied for 61 458 patents to the European Patent Office (EPO) - see Table 20. There were a significant number of patent applications made to the EPO in the same year from Japan (22 226) and the US (47 202). Patent applications at the EPO from Japan and the United States were particularly high within the field of high-technology applications, which accounted for more than 20 % of total patent applications from these two countries, whereas the corresponding proportion in the EU-25 was just over 10 %.

When expressed as a ratio per million inhabitants, Japan recorded the highest relative number of patent applications to the EPO (174.7), followed by the United States (169.8) and the EU-25 (161.1). Note that the number of patent applications is likely to be higher within the national territory than abroad and hence, the figures for both Japan and the United States are relatively high considering they relate to applications for patents within Europe.

As with the indicators presented for innovation and research, there were wide disparities between the levels of patent applications among the Member States. Germany had the highest number of patent applications in 2001 (25 489 or 41.9 % of the EU-15 total). However, in relative terms the highest ratios for patent applications per million inhabitants were reported in Finland and Sweden (the two countries that also recorded the highest R & D expenditure). Sweden (366.6), Finland (337.8) and Germany (309.9) were the only three Member States to make more than 300 patent applications to the EPO per million inhabitants in 2001.

Among the 10 new Member States the highest absolute number of patent applications made at the EPO was recorded by Hungary (190), followed by the Czech Republic (110). However, in relative terms the highest number of applications per million inhabitants was registered in Slovenia (40.7), followed by Hungary (19.0).

Table 20
Patent applications to the European Patent Office

	1995	1996	1997	1998	1999	2000	2001
Total number of patent applications (units)							
EU-25	34 487	36 465	43 230	49 084	53 301	60 328	61 458
EU-15	34 205	36 180	42 894	48 671	52 896	59 754	60 890
10 NMS (1)	282	284	337	414	405	574	568
JP	11 084	12 641	14 342	15 500	16 649	20 250	22 226
US	25 246	28 130	31 225	35 035	38 552	45 778	47 202
Patent applications per million inhabitants (units)							
EU-25	77.2	81.4	96.3	109.2	118.3	133.6	135.7
EU-15	92.1	97.1	114.8	130.0	141.0	158.7	161.1
10 NMS (1)	3.7	3.8	4.5	5.5	5.4	7.7	7.6
JP	88.3	100.7	115.1	122.9	131.7	159.5	174.7
US	96.5	106.5	117.2	130.2	141.9	166.2	169.8
High-technology patent applications (units)							
EU-25	3 902	4 385	5 695	7 321	8 759	11 126	12 017
EU-15	3 880	4 367	5 674	7 281	8 718	11 048	11 928
10 NMS (1)	23	18	21	39	42	78	89
JP	2 464	2 787	3 361	3 678	4 096	5 085	5 707
US	5 275	6 252	7 329	8 623	10 118	14 140	15 839

(1) 10 NMS: ten new Member States.

Source: Eurostat, European patenting systems (theme9/patents/pat_eu/pat_nat/nat_tot and nat_ht).

Table 21

Main indicators for training, 1999 (% of all enterprises)

	EU-15	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV
Proportion of enterprises providing training	62	70	69	96	75	63	18	36	76	79	24	:	53
Continuing vocational training	54	48	61	88	67	47	9	28	71	56	23	:	26
Other forms of training	53	67	59	87	72	57	15	27	41	75	22	:	50
Proportion of enterprises providing training (breakdown by enterprise size-class)													
Small	56	66	62	95	71	58	11	31	70	75	20	:	49
Medium-sized	81	93	84	98	87	85	43	58	93	98	48	:	70
Large	96	100	96	100	98	96	78	86	98	100	81	:	91
	LT	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK
Proportion of enterprises providing training	43	71	37	:	88	72	39	22	48	:	82	91	87
Continuing vocational training	21	50	24	:	82	71	26	11	33	:	75	83	76
Other forms of training	39	65	30	:	70	27	36	20	46	:	72	78	83
Proportion of enterprises providing training (breakdown by enterprise size-class)													
Small	37	67	32	:	85	68	36	17	35	:	78	88	85
Medium-sized	60	83	51	:	96	91	52	46	72	:	97	99	91
Large	80	99	79	:	98	96	63	78	96	:	99	99	98

Source: Eurostat, Continuing Vocational Training (theme3/training/cvts/cvts2/tentn/tent03n and tents/tent03s).

TRAINING

As well as raising competitiveness, the Lisbon European Council also called for sustained economic growth with more and better jobs and greater social cohesion. To ensure their contribution to the Lisbon strategy, the ministers for education adopted, in 2001, a report on the future objectives of education and training systems within the EU. They agreed on three major goals to be achieved by 2010:

- to improve the quality and effectiveness of EU education and training systems;
- to ensure that these systems were accessible to all;
- to open up education and training to the wider world.

It was also agreed that the policies needed in each country would vary according to the circumstances encountered and as such would be developed according to national contexts and traditions, being driven forward through cooperation and shared experiences.

The European Commission adopted on 11 November 2003 a communication ⁽¹⁵⁾ that presented an interim evaluation of the implementation of the *Education and training 2010* programme. The communication stated that, 'if the Union as a whole is currently underperforming in the knowledge-driven economy in relation to some of its main competitors, this is due partly to an overall level of investment which is comparatively too low in human resources'.

The last reference year for the Continuing vocational training survey (CVTS) is 1999. This survey concerned enterprises with 10 or more employees. Table 21 presents some of the main results, namely, that training seemed to be more common in the northern Member States and that it was also more customary in large enterprises (as compared with SMEs).

⁽¹⁵⁾ *Education and training 2010 - The success of the Lisbon strategy hinges on urgent reforms*, COM(2003) 685 final.

On average, 65 % of all enterprises in the EU-15 provided some form of training to their employees in 1999. This ranged from highs of more than 90 % of all enterprises in Denmark and Sweden, to less than one quarter of all enterprises in Greece, Italy and Portugal.

While just over half (56 %) of the small enterprises (10–49 employees) in the EU-15 provided some form of training in 1999 to their employees, this proportion rose as high as 96 % among large enterprises (with 250 or more employees). This pattern of an increasing propensity to provide training, as the average size of an enterprise grew, was reproduced in every country for which data are available.

Statistical annex

There follows a short set of tables giving some general information which may be of use in interpreting the data that follows in the remaining chapters. This data is generally of a macro-economic nature and may prove relevant for a number of chapters.

Table 22
Exchange rates, annual average rates (1 ECU/EUR=... national currency) (1)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
BEF/LUF	40.4713	39.6565	38.5519	39.2986	40.5332	40.6207	40.3399	40.3399	40.3399	-	-
CZK	34.1690	34.1509	34.6960	34.4572	35.9304	36.3196	36.8843	35.5995	34.0680	30.8040	31.8460
DKK	7.59359	7.54328	7.32804	7.35934	7.48361	7.49930	7.43556	7.45382	7.45210	7.43050	7.43070
DEM	1.93639	1.92453	1.87375	1.90954	1.96438	1.96913	1.95583	1.95583	1.95583	-	-
EEK	15.4911	15.3962	14.9900	15.2763	15.7150	15.7530	15.6466	15.6466	15.6466	15.6466	15.6466
GRD	268.568	288.026	302.989	305.546	309.355	330.731	325.820	336.678	340.750	-	-
ESP	149.124	158.918	163.000	160.748	165.887	167.184	166.386	166.386	166.386	-	-
FRF	6.63368	6.58262	6.52506	6.49300	6.61260	6.60141	6.55957	6.55957	6.55957	-	-
IEP	0.799952	0.793618	0.815525	0.793448	0.747516	0.786245	0.787564	0.787564	0.787564	-	-
ITL	1 841.23	1 915.06	2 130.14	1 958.96	1 929.30	1 943.65	1 936.27	1 936.27	1 936.27	-	-
CYP	0.582941	0.583931	0.591619	0.591904	0.582628	0.577418	0.578850	0.573924	0.575890	0.575300	0.584090
LVL	0.793600	0.664101	0.689537	0.699605	0.659401	0.660240	0.625601	0.559227	3.582300	3.459400	3.452700
LTL	5.08682	4.73191	5.23203	5.07899	4.53616	4.48437	4.26405	3.69516	0.56010	0.58100	0.64070
HUF	107.611	125.030	164.545	193.741	211.654	240.573	252.767	260.045	256.590	242.960	253.620
MTL	0.447021	0.448852	0.461431	0.458156	0.437495	0.434983	0.425773	0.404138	0.403000	0.408900	0.426100
NLG	2.17521	2.15827	2.09891	2.13973	2.21081	2.21967	2.20371	2.20371	2.20371	-	-
ATS	13.6238	13.5396	13.1824	13.4345	13.8240	13.8545	13.7603	13.7603	13.7603	-	-
PLN	2.12217	2.70153	3.17049	3.42232	3.71545	3.91784	4.22741	4.00817	3.67210	3.85740	4.39960
PTE	188.370	196.896	196.105	195.761	198.589	201.695	200.482	200.482	200.482	-	-
SIT	132.486	152.766	154.880	171.778	180.996	185.958	194.473	206.613	43.300	42.694	41.489
SKK	36.0317	38.1182	38.8649	38.9229	38.1061	39.5407	44.1229	42.6017	217.9797	225.9772	233.8493
FIM	6.69628	6.19077	5.70855	5.82817	5.88064	5.98251	5.94573	5.94573	5.94573	-	-
SEK	9.12151	9.16308	9.33192	8.51472	8.65117	8.91593	8.80752	8.44519	9.25510	9.16110	9.12420
GBP	0.779988	0.775903	0.828789	0.813798	0.692304	0.676434	0.658735	0.609478	0.621870	0.628830	0.691990
BGN	0.03231	0.06439	0.08787	0.22515	1.90157	1.96913	1.95584	1.94792	1.94820	1.94920	1.94900
ROL	885.8	1 971.6	2 661.8	3 922.2	8 111.5	9 984.9	16 345.2	19 921.8	26 004.0	31 270.0	37 551.0
TRL	12 879	35 535	59 912	103 214	171 848	293 736	447 237	574 816	1 102 425	1 439 680	1 694 851
JPY	130.148	121.322	123.012	138.084	137.077	146.415	121.317	99.475	108.680	118.060	130.970
USD	1.17100	1.18952	1.30801	1.26975	1.13404	1.12109	1.06578	0.92194	0.89560	0.94560	1.13120

(1) National currencies marked as not applicable were replaced by the euro on 1 January 2002.

Source: Eurostat, Exchange rates (theme2/exint/exchrt/eurer/eurer_an).

Table 23

Population, as of 1 January (thousands)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
EU-15	368 935	370 323	371 442	372 476	373 487	374 345	375 277	376 482	:	:	:
BE	10 068	10 101	10 131	10 143	10 170	10 192	10 214	10 239	10 263	10 310	10 356
CZ	10 326	10 334	10 333	10 321	10 309	10 299	10 290	10 278	10 267	10 206	10 203
DK	5 181	5 197	5 216	5 251	5 275	5 295	5 314	5 330	5 349	5 368	5 384
DE	80 975	81 338	81 539	81 817	82 012	82 057	82 037	82 163	82 260	82 440	82 537
EE	1 527	1 507	1 492	1 476	1 462	1 454	1 446	1 372	1 367	1 361	1 356
EL	10 349	10 410	10 443	10 465	10 487	10 511	10 522	10 554	:	:	:
ES	39 057	39 136	39 197	39 249	39 308	39 388	39 519	39 733	40 122	40 409	:
FR	57 369	57 565	57 753	57 936	58 116	58 299	58 497	58 749	59 043	59 342	59 630
IE	3 569	3 583	3 598	3 620	3 652	3 694	3 735	3 777	3 826	3 900	3 964
IT	56 960	57 138	57 269	57 333	57 461	57 563	57 613	57 680	57 844	:	:
CY	714	723	730	736	741	746	752	755	698	706	715
LV	2 606	2 566	2 530	2 502	2 480	2 458	2 439	2 380	2 364	2 346	2 331
LT	3 736	3 724	3 718	3 712	3 707	3 704	3 701	3 699	3 487	3 476	3 463
LU	395	401	407	413	418	424	429	436	440	444	448
HU	10 310	10 277	10 246	10 212	10 174	10 135	10 092	10 043	10 200	10 175	10 142
MT	363	366	369	371	374	377	379	380	391	395	:
NL	15 239	15 342	15 424	15 494	15 567	15 654	15 760	15 864	15 987	16 105	16 193
AT	7 962	8 015	8 040	8 055	8 068	8 075	8 083	8 103	8 021	8 039	8 067
PL	38 418	38 505	38 581	38 609	38 639	38 660	38 667	38 654	38 644	38 632	38 219
PT	9 965	9 983	10 013	10 041	10 070	10 108	10 150	10 198	10 263	10 329	10 407
SI	1 994	1 989	1 989	1 990	1 987	1 985	1 978	1 988	1 990	1 994	1 995
SK	5 314	5 336	5 356	5 368	5 379	5 388	5 393	5 399	5 379	5 379	5 379
FI	5 055	5 078	5 099	5 117	5 132	5 147	5 160	5 171	5 181	5 195	5 206
SE	8 692	8 745	8 816	8 837	8 844	8 848	8 854	8 861	8 883	8 909	8 941
UK	58 099	58 293	58 500	58 704	58 905	59 090	59 391	59 623	59 863	:	:
BG	8 485	8 460	8 427	8 385	8 341	8 283	8 230	8 191	7 929	7 892	7 846
RO	22 779	22 748	22 712	22 656	22 582	22 526	22 489	22 455	22 430	21 833	21 773
TR	:	:	:	:	:	:	:	:	:	:	:

Source: Eurostat, Demography - population (theme3/demo/dpop/pjan).

Table 24

Gross domestic product in constant prices, annual rate of change (%)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003 (1)
EU-15	-0.4	2.8	2.4	1.6	2.5	2.9	2.8	3.4	1.5	1.0	0.7
BE	-1.0	3.2	2.4	1.2	3.6	2.0	3.2	3.7	0.8	0.7	0.8
CZ	0.1	2.2	5.9	4.3	-0.8	-1.0	0.5	3.3	3.3	2.0	2.9
DK	0.0	5.5	2.8	2.5	3.0	2.5	2.3	3.0	1.0	1.0	0.0
DE	-1.1	2.3	1.7	0.8	1.4	2.0	2.0	2.9	0.6	0.2	-0.1
EE	:	-2.0	4.3	3.9	9.8	4.6	-0.6	7.1	5.0	6.0	4.8
EL	-1.6	2.0	2.1	2.4	3.6	3.4	3.6	4.2	4.1	3.9	4.7
ES	-1.0	2.4	2.8	2.4	4.0	4.3	4.2	4.2	2.7	2.0	2.4
FR	-0.9	2.1	1.7	1.1	1.9	3.4	3.2	3.8	1.8	1.2	0.2
IE	2.7	5.8	9.9	8.1	10.9	8.8	11.1	10.0	5.7	6.9	1.2
IT	-0.9	2.2	2.9	1.1	2.0	1.8	1.6	2.9	1.8	0.4	0.3
CY	0.7	5.9	6.2	1.9	2.5	5.0	4.8	5.2	4.1	2.0	2.0
LV	-14.9	0.6	-1.6	3.7	8.4	4.8	2.8	6.8	7.7	6.1	7.4
LT	-16.2	-9.8	3.3	4.7	7.3	5.1	-3.9	3.8	5.9	6.8	8.9
LU	4.2	3.8	1.3	3.7	7.7	7.5	6.0	8.9	1.0	1.3	1.8
HU	:	:	1.5	1.3	4.6	4.9	4.2	5.2	3.7	3.5	2.9
MT	4.5	5.7	6.2	4.0	4.9	3.4	4.1	4.8	-0.4	1.7	0.4
NL	0.9	2.6	3.0	3.0	3.8	4.3	4.0	3.3	1.3	0.2	-0.8
AT	0.4	2.6	1.6	2.0	1.6	3.9	2.7	3.5	0.7	1.4	0.7
PL	:	:	:	6.0	6.8	4.8	4.1	4.0	1.1	1.4	3.7
PT	-2.0	1.0	4.3	3.5	3.9	4.5	3.5	3.5	1.7	0.4	-1.3
SI	2.8	5.3	4.1	3.5	4.6	3.8	5.2	4.6	3.0	2.9	2.3
SK	:	5.2	6.5	5.8	5.6	4.0	1.3	2.2	3.3	4.4	4.2
FI	-1.1	4.0	3.8	4.0	6.3	5.3	4.1	6.1	0.7	2.3	1.9
SE	-1.8	4.1	3.7	1.1	2.1	3.6	4.5	3.6	1.2	2.1	1.6
UK	2.5	4.7	2.9	2.6	3.4	2.9	2.4	3.1	2.0	1.6	2.2
BG	-1.5	1.8	2.9	-9.4	-5.6	4.0	2.3	5.4	4.0	4.8	4.3
RO	1.5	3.9	7.1	3.9	-6.1	-4.8	-1.2	1.8	5.3	4.9	4.9
TR	8.0	-5.5	7.2	7.0	7.5	3.1	-4.7	7.4	-7.4	7.8	5.8

(1) Forecasts for Belgium, Estonia, Ireland, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Slovenia, Slovakia, Bulgaria and Turkey.
Source: Eurostat, National Accounts - Aggregates (theme2/aggs/aggs_gdp/a_gdp_k).

Table 25

Gross domestic product in constant prices in the EU-15, annual rate of change (%)

NACE label (NACE code)	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total (A to Q)	-0.3	2.5	2.4	1.7	2.5	3.0	2.7	3.7	1.8	1.1
Agriculture, hunting, forestry and fishing (A & B)	-0.6	-0.5	2.2	4.1	0.5	1.7	2.6	-0.9	-2.0	-0.1
Mining & quarrying; manufacturing; electricity, gas & water supply (C to E)	-3.5	4.3	3.1	0.0	3.0	3.0	1.1	3.8	0.6	0.4
Construction (F)	-4.1	2.2	0.0	-1.1	-1.3	0.8	2.4	2.3	-0.1	0.1
Distributive trades; hotels & restaurants; transport, storage & comm. (G to I)	0.1	2.7	2.2	1.6	3.4	4.0	4.6	4.9	2.8	1.5
Financial intermediation; real estate, renting & business activities (J & K)	1.9	1.9	3.5	3.7	3.7	4.1	3.7	4.6	3.0	2.0
Public administration, community, social & personal services (L to Q)	1.4	1.6	1.4	1.7	1.0	1.6	1.5	1.9	1.4	0.8

Source: Eurostat, National Accounts - Breakdowns by branch of activity (theme2/brkdowns/b_a06_k).

Table 26

Long-term interest rate for government bond yields following the Maastricht Treaty, annual average rates (%)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
EU-15	8.3	8.5	8.9	7.5	6.3	4.9	4.7	5.4	5.0	4.9	4.2
BE	7.2	7.8	7.5	6.5	5.8	4.8	4.8	5.6	5.1	5.0	4.2
DK	7.3	7.8	8.3	7.2	6.3	4.9	4.9	5.6	5.1	5.1	4.3
DE	6.5	6.9	6.9	6.2	5.6	4.6	4.5	5.3	4.8	4.8	4.1
EL	23.3	20.7	17.0	14.5	9.9	8.5	6.3	6.1	5.3	5.1	4.3
ES	10.2	10.0	11.3	8.7	6.4	4.8	4.7	5.5	5.1	5.0	4.1
FR	6.8	7.2	7.5	6.3	5.6	4.6	4.6	5.4	4.9	4.9	4.1
IE	7.7	7.9	8.3	7.3	6.3	4.8	4.7	5.5	5.0	5.0	4.1
IT	11.2	10.5	12.2	9.4	6.9	4.9	4.7	5.6	5.2	5.0	4.3
LU	6.9	7.2	7.2	6.3	5.6	4.7	4.7	5.5	4.9	4.7	3.3
NL	6.4	6.9	6.9	6.2	5.6	4.6	4.6	5.4	5.0	4.9	4.1
AT	6.7	7.0	7.1	6.3	5.7	4.7	4.7	5.6	5.1	5.0	4.2
PT	11.2	10.5	11.5	8.6	6.4	4.9	4.8	5.6	5.2	5.0	4.2
FI	8.8	9.1	8.8	7.1	6.0	4.8	4.7	5.5	5.0	5.0	4.1
SE	8.5	9.7	10.2	8.0	6.6	5.0	5.0	5.4	5.1	5.3	4.6
UK	7.6	8.2	8.3	7.9	7.1	5.6	5.0	5.3	5.0	4.9	4.6

Source: Eurostat, Interest rates (theme2/exint/intrt/govyield/mcby/mcby_a).

Table 27

Harmonised consumer price indices, annual rate of change (%)

	1993 (1)	1994 (1)	1995 (1)	1996 (2)	1997 (2)	1998	1999	2000	2001	2002	2003
EU-15	3.4	2.8	2.8	2.4	1.7	1.3	1.2	2.1	2.2	2.1	2.0
BE	2.5	2.4	1.3	1.8	1.5	0.9	1.1	2.7	2.4	1.6	1.5
CZ	:	:	:	9.1	8.0	9.7	1.8	3.9	4.5	1.4	-0.1
DK	0.9	1.8	2.0	2.1	1.9	1.3	2.1	2.7	2.3	2.4	2.0
DE	:	:	:	1.2	1.5	0.6	0.6	2.1	1.9	1.3	1.0
EE	:	:	:	19.8	9.3	8.8	3.1	3.9	5.6	3.6	1.4
EL	:	:	:	7.9	5.4	4.5	2.1	2.9	3.7	3.9	3.4
ES	4.9	4.6	4.6	3.6	1.9	1.8	2.2	3.5	2.8	3.6	3.1
FR	2.2	1.7	1.8	2.1	1.3	0.7	0.6	1.8	1.8	1.9	2.2
IE	:	:	:	2.2	1.2	2.1	2.5	5.3	4.0	4.7	4.0
IT	4.5	4.2	5.4	4.0	1.9	2.0	1.7	2.6	2.3	2.6	2.8
CY	:	:	:	:	3.3	2.3	1.1	4.9	2.0	2.8	4.0
LV	:	:	:	:	8.1	4.3	2.1	2.6	2.5	2.0	2.9
LT	:	:	:	24.7	8.8	5.0	0.7	0.9	1.3	0.4	-1.1
LU	:	:	:	1.2	1.4	1.0	1.0	3.8	2.4	2.1	2.5
HU	:	:	:	23.5	18.5	14.2	10.0	10.0	9.1	5.2	4.7
MT	:	:	:	:	:	:	:	:	:	:	:
NL	1.6	2.1	1.4	1.4	1.9	1.8	2.0	2.3	5.1	3.9	2.2
AT	3.2	2.7	1.6	1.8	1.2	0.8	0.5	2.0	2.3	1.7	1.3
PL	:	:	:	:	15.0	11.8	7.2	10.1	5.3	1.9	0.7
PT	5.9	5.0	4.0	2.9	1.9	2.2	2.2	2.8	4.4	3.7	3.3
SI	:	:	:	9.9	8.3	7.9	6.1	8.9	8.6	7.5	5.7
SK	:	:	:	5.8	6.0	6.7	10.4	12.2	7.2	3.5	8.5
FI	3.3	1.6	0.4	1.1	1.2	1.4	1.3	3.0	2.7	2.0	1.3
SE	4.8	2.9	2.7	0.8	1.8	1.0	0.6	1.3	2.7	2.0	2.3
UK	2.5	2.0	2.7	2.5	1.8	1.6	1.3	0.8	1.2	1.3	1.4
BG	:	:	:	:	:	18.7	2.6	10.3	7.4	5.8	2.3
RO	:	:	:	38.8	154.9	59.1	45.8	45.7	34.5	22.5	15.3
TR	:	:	:	:	:	:	:	:	:	:	:

(1) EU-15, Belgium, Denmark, Spain, France, Italy, Portugal, Finland, Sweden and the United Kingdom, estimates.

(2) EU-15 and Ireland, estimates.

Source: Eurostat, Harmonized indices of consumer prices (theme2/price/hicp/haind and theme1/cc/cc_b/b_pri_cc/bpri02cc).

Table 28

Consumer confidence (balance) (1)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
EU-15	-25.7	-13.5	-8.0	-14.8	-10.2	-3.8	-2.5	1.2	-4.3	-8.8	-15.2
BE	-24.7	-10.3	-8.6	-13.1	-12.8	1.7	2.6	13.5	0.6	-2.7	-10.8
CZ	:	:	-7.8	-7.2	-26.3	-28.8	-31.0	-19.6	-3.5	-6.6	-15.7
DK	-2.6	11.3	14.3	8.0	14.0	10.3	4.3	11.3	9.2	8.8	3.5
DE	-25.3	-10.9	-6.0	-19.9	-18.0	-5.1	-1.6	2.9	-3.3	-11.4	-18.6
EE	:	-32.9	-22.0	-23.7	-27.2	-24.2	-35.8	-33.8	-21.8	-7.2	-8.7
EL	-31.1	-29.6	-37.3	-27.3	-29.9	-34.8	-27.0	-15.3	-26.6	-27.8	-39.7
ES	-30.9	-16.3	-12.8	-9.4	-2.9	0.1	1.7	2.2	-4.0	-11.6	-13.7
FR	-29.9	-18.6	-13.8	-29.8	-21.5	-11.6	-8.7	-2.8	-11.1	-15.8	-24.7
IE	-20.8	-10.3	-4.6	-0.2	11.7	12.4	14.0	12.5	-1.6	-7.5	-15.7
IT	-31.9	-13.1	-5.3	-12.0	-14.1	-7.7	-9.9	-7.6	-2.8	-8.6	-14.3
CY	:	:	:	:	:	:	:	:	:	-23.3	-25.4
LV	-13.3	-28.0	-33.0	-37.0	-32.8	-2.2	:	:	:	-12.6	-13.5
LT	:	:	:	:	:	:	:	:	:	-20.4	-10.3
LU	:	:	:	:	:	:	:	:	:	7.4	0.0
HU	:	-28.8	-51.4	-43.3	-31.8	-15.4	-27.6	-29.8	-20.0	-5.3	-23.8
MT	:	:	:	:	:	:	:	:	:	:	:
NL	-15.6	-2.3	7.2	7.9	19.5	23.2	19.3	24.4	3.8	-1.6	-14.9
AT	:	:	-6.7	-12.7	-9.2	-1.7	4.7	5.9	3.0	4.4	-3.3
PL	:	:	:	:	:	:	:	:	:	-35.0	-33.0
PT	-33.2	-30.9	-22.8	-25.1	-13.7	-14.8	-14.1	-18.0	-24.2	-33.7	-42.5
SI	:	:	:	:	:	:	:	:	-32.8	-30.3	-34.8
SK	:	:	:	:	:	:	:	:	:	:	:
FI	-8.3	8.8	11.8	12.0	18.3	18.2	17.4	19.7	11.9	13.2	11.4
SE	:	:	2.0	-4.8	4.4	10.0	12.4	21.8	5.0	9.6	4.9
UK	-17.8	-15.8	-10.4	-5.5	3.2	-1.8	-3.6	-3.8	-4.6	-3.8	-6.3
BG	:	:	:	:	:	:	:	:	:	:	:
RO	:	:	:	:	-20.2	-22.0	-20.3	-15.1	-13.9	-20.4	-19.8
TR	:	:	:	:	:	:	:	:	:	:	:

(1) Average of monthly seasonally adjusted data.

Source: Directorate-General for Economic and Financial Affairs, Business and consumer surveys (theme1/euroind/bs/bssi_m).

Table 29

Gross fixed capital formation as a percentage of GDP (%)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003 (1)
EU-15	19.9	19.8	19.8	19.6	19.4	19.9	20.2	20.6	20.2	19.4	19.0
BE	20.0	19.5	19.9	19.9	20.4	20.6	20.9	21.2	20.9	19.8	19.4
CZ	28.4	28.7	32.0	32.0	30.6	29.1	27.8	28.3	27.5	25.9	26.0
DK	17.1	17.3	18.6	18.6	19.6	20.6	20.3	21.7	20.3	20.6	19.4
DE	23.0	23.1	22.4	21.8	21.4	21.4	21.5	21.6	20.3	18.6	17.7
EE	24.2	26.8	25.9	26.7	28.1	29.6	24.9	25.4	26.5	28.5	30.2
EL	20.3	18.6	18.6	19.5	19.8	21.1	21.7	22.6	23.9	23.9	26.0
ES	21.3	21.1	22.0	21.6	21.9	22.8	24.1	25.3	25.4	25.2	25.6
FR	19.4	19.1	18.8	18.5	18.0	18.4	19.2	20.1	20.1	19.5	19.3
IE	15.5	16.5	17.5	19.1	20.7	22.2	23.7	24.1	23.5	22.1	22.3
IT	18.4	18.0	18.3	18.3	18.3	18.5	19.1	19.8	19.7	19.8	19.1
CY	:	:	19.2	20.4	19.0	19.2	18.1	17.6	17.3	18.8	17.0
LV	13.8	14.9	15.2	18.3	18.8	27.3	25.2	26.5	27.0	26.4	25.3
LT	23.1	23.1	23.0	23.0	24.4	24.3	22.1	18.5	20.2	20.4	20.8
LU	23.7	22.4	21.6	21.3	22.3	22.6	24.0	20.5	22.9	22.5	21.7
HU	18.9	20.1	20.1	21.4	22.2	23.6	23.9	24.2	23.5	23.4	22.0
MT	29.5	29.7	31.9	28.7	25.3	24.5	23.4	26.3	4.4	5.0	5.4
NL	20.7	20.3	20.3	21.1	21.5	21.5	22.5	22.5	21.7	20.7	20.1
AT	23.2	23.5	23.3	23.3	23.6	23.6	23.5	23.9	23.2	22.1	22.7
PL	15.9	17.9	18.6	20.7	23.5	25.2	25.5	24.9	20.7	19.0	18.4
PT	22.2	22.3	22.8	23.3	25.6	26.9	27.4	28.6	27.1	24.6	22.1
SI	18.8	20.1	21.4	22.5	23.4	24.6	27.4	26.7	24.0	22.6	23.0
SK	30.4	26.6	25.2	32.4	34.3	36.2	30.3	29.3	28.8	27.6	25.8
FI	16.4	15.5	16.3	17.0	18.0	18.7	19.0	19.2	20.5	19.0	18.0
SE	15.3	15.1	15.5	15.7	15.2	16.0	17.0	17.3	17.5	16.7	15.7
UK	15.7	15.9	16.3	16.5	16.5	17.6	17.0	16.7	16.8	16.3	16.2
BG	13.0	13.8	15.3	13.5	11.0	13.0	15.1	15.7	18.2	18.1	19.4
RO	17.9	20.3	21.4	23.0	21.2	18.2	17.7	18.9	20.5	21.1	22.3
TR	26.5	24.6	23.8	25.1	26.4	24.6	21.9	22.4	18.2	16.7	17.7

(1) Belgium, France, Ireland, Cyprus, Latvia, Luxembourg, Malta, the Netherlands, Poland, Portugal, Slovenia, Bulgaria, Romania and Turkey, forecasts.

Source: Eurostat, National Accounts - ESA95 - aggregates (theme2/aggs).

Table 30

Business enterprise expenditure on R&D relative to GDP (%) (1)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
EU-15	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3
BE	1.2	1.2	1.2	1.3	1.3	1.4	1.4	1.5	1.6	1.6
DK	1.0	:	1.1	1.1	1.2	1.3	1.3	1.5	1.7	:
DE	1.6	1.5	1.4	1.5	1.6	1.6	1.7	1.7	1.8	1.7
EL	0.1	:	0.1	0.1	0.1	:	0.2	:	:	:
ES	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	:
FR	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
IE	0.8	0.9	1.0	0.9	0.9	0.9	0.9	0.8	0.8	:
IT	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.6	:
LU	:	:	:	:	:	:	:	1.6	:	:
NL	0.9	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	:
AT	0.8	:	:	:	:	1.1	:	:	:	:
PT	:	:	0.1	:	0.1	:	0.2	:	0.3	:
FI	1.4	1.5	1.4	1.7	1.8	2.0	2.2	2.4	2.4	2.5
SE	2.2	:	2.5	:	2.7	2.8	2.8	:	3.3	:
UK	1.4	1.4	1.3	1.2	1.2	1.2	1.3	1.2	1.3	1.2

(1) Estimates.

Source: Eurostat, R&D expenditure at the national level (theme9/rd_ex_p/rd_nat/nat_exp/nat_exp).

Table 31

Industrial confidence indicator (balance) (1)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
EU-15	-24.8	-3.6	-1.8	-14.5	-2.9	-2.7	-8.0	3.3	-10.1	-11.6	-11.1
BE	-28.8	-6.3	-9.1	-17.8	-2.9	-7.8	-8.6	1.9	-14.0	-11.9	-15.0
CZ	:	-7.2	2.9	-0.8	3.8	-8.7	-10.5	15.3	3.0	-0.5	2.8
DK	-9.5	12.5	5.4	-8.7	5.5	-0.8	-12.9	5.7	-1.7	-4.0	-6.4
DE	-31.6	-10.3	-6.5	-19.8	-7.4	-4.3	-13.4	-2.6	-16.2	-18.3	-16.8
EE	-4.1	8.1	7.2	-2.8	6.7	7.9	-7.5	3.5	9.7	13.5	11.2
EL	-6.0	-0.1	3.8	-2.4	3.6	4.3	1.3	8.8	4.3	3.1	-0.4
ES	-34.8	-8.7	-3.3	-14.4	-1.4	1.4	-3.1	3.2	-4.2	-5.7	-0.9
FR	-34.4	-3.3	-2.3	-17.5	-5.3	5.3	-2.2	11.8	-4.0	-9.2	-8.6
IE	-12.8	2.5	7.1	-1.1	3.3	3.2	5.0	9.8	-7.7	-7.2	-8.8
IT	-16.4	2.8	5.7	-12.5	1.0	-0.8	-2.8	11.8	-4.3	-3.5	-3.9
CY	:	:	:	:	:	:	:	:	0.3	1.9	1.3
LV	:	-23.1	-18.3	-18.8	-12.3	-15.7	-17.3	-9.0	-1.8	1.1	3.8
LT	:	-25.8	-6.9	-16.3	-17.8	-22.7	-26.0	-14.9	-7.6	-8.8	-10.2
LU	-25.0	-7.7	9.7	-22.0	4.2	6.7	-11.0	5.3	-15.5	-22.5	-16.9
HU	:	:	:	-2.1	4.3	0.8	-6.9	2.3	-4.3	-6.8	-6.4
MT	:	:	:	:	:	:	:	:	:	:	:
NL	-10.3	-0.9	1.5	-2.4	2.5	1.7	-0.4	4.1	-3.5	-4.8	-8.3
AT	-27.2	-7.5	-12.2	-23.9	-9.5	-8.6	-13.8	-2.8	-13.3	-15.8	-11.0
PL	:	:	:	:	:	-14.6	-20.0	-13.2	-21.8	-20.0	-13.2
PT	-24.8	-3.9	-3.9	-9.6	0.4	2.2	-4.3	2.1	-5.8	-12.0	-15.9
SI	:	:	:	-11.7	-0.1	-3.8	-8.5	7.0	-2.3	-4.6	-4.4
SK	2.8	4.5	1.6	2.7	1.6	6.4	-3.0	9.5	6.7	5.3	6.4
FI	-4.5	18.2	7.8	-11.3	11.2	2.0	-3.8	17.4	-6.8	-5.7	-5.8
SE	:	:	:	:	-0.9	3.1	-7.1	10.8	-18.7	-13.1	-6.8
UK	-10.9	1.8	2.6	-5.1	-1.4	-15.5	-14.3	-6.6	-15.6	-14.6	-17.2
BG	:	:	:	:	:	:	:	:	:	:	:
RO	:	:	:	:	:	:	:	:	:	:	:
TR	:	:	:	:	:	:	:	:	:	:	:

(1) Average of monthly seasonally adjusted data.

Source: Directorate-General for Economic and Financial Affairs, Business and consumer surveys (theme1/euroind/bs/bssi_m).

Table 32

Capacity utilisation rates for total industry (%) (1)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
EU-15	78.0	79.9	83.0	80.9	81.8	83.3	82.2	84.1	82.9	81.1	80.7
BE	74.8	77.6	80.9	79.5	81.4	82.7	80.9	84.0	82.3	79.6	78.7
CZ	76.2	78.5	80.4	81.6	82.8	82.6	81.5	84.6	85.7	83.3	85.1
DK	77.7	81.8	83.4	81.7	83.3	85.5	82.2	82.5	82.8	81.2	80.6
DE	78.8	82.6	84.8	82.0	84.5	85.7	84.7	86.4	84.4	82.3	82.0
EE	:	56.8	56.8	57.4	62.4	68.3	63.5	66.7	72.6	74.5	73.7
EL	76.0	74.5	76.6	75.6	74.4	75.8	75.7	78.1	77.6	77.0	76.5
ES	72.8	74.5	78.4	77.1	78.3	80.3	79.7	80.6	79.6	77.2	78.9
FR	81.4	80.4	85.4	83.5	82.3	83.8	85.3	87.5	87.4	85.3	84.8
IE	73.6	74.9	79.9	77.6	75.9	76.6	75.9	78.6	78.4	75.9	75.1
IT	74.4	75.2	78.1	76.5	76.4	78.5	76.0	78.8	78.9	77.3	76.3
CY	:	:	:	:	:	:	:	:	:	68.9	68.7
LV	:	48.1	50.3	53.7	56.2	61.8	57.1	59.4	63.3	71.0	69.9
LT	51.8	49.5	44.3	46.4	50.6	53.0	51.5	53.6	60.6	63.6	66.9
LU	80.1	81.3	82.9	79.0	82.4	88.0	84.9	87.8	88.7	85.1	84.7
HU	:	:	:	77.4	79.9	79.9	78.6	82.0	81.7	78.8	79.4
MT	:	:	:	:	:	:	:	:	:	:	:
NL	81.0	82.4	84.4	83.9	84.4	85.3	84.0	84.7	84.6	82.9	81.7
AT	:	:	:	80.2	82.0	83.7	81.9	84.5	83.1	80.2	80.0
PL	:	:	:	:	76.5	76.7	73.6	72.4	69.3	69.9	72.9
PT	73.9	77.3	79.7	78.9	80.9	81.4	80.8	81.2	81.7	79.4	79.0
SI	:	:	:	77.5	78.8	80.4	77.9	79.7	80.9	81.0	80.9
SK	:	74.3	74.0	78.0	80.0	82.3	79.5	84.5	84.9	78.4	74.2
FI	82.3	86.9	87.7	83.2	87.2	88.9	86.1	86.8	85.7	82.7	81.9
SE	:	:	:	85.0	85.7	85.1	85.8	87.5	83.6	83.1	83.6
UK	80.0	82.8	84.4	82.5	83.8	83.7	79.4	81.3	79.7	79.0	78.2
BG	:	:	:	:	:	:	:	:	:	:	:
RO	:	:	:	:	:	:	:	:	:	:	:
TR	:	:	:	:	:	:	:	:	:	:	:

(1) Average of quarterly seasonally adjusted data.

Source: Directorate-General for Economic and Financial Affairs, Business and consumer surveys (theme1/euroind/bs/bsin_q).

Table 33

Labour force characteristics, Q2-2002 (1)

	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Number of persons employed (thousands)															
Total	124 987	2 576	3 415	1 635	24 531	398	2 402	11 336	14 716	1 174	14 723	213	553	777	118
Male	43 914	839	1 289	558	9 087	171	753	3 537	5 182	423	4 640	83	237	322	40
Female	81 073	1 737	2 127	1 077	15 444	227	1 649	7 799	9 534	751	10 082	130	316	455	78
Full-time and part-time work (% share of persons employed)															
Full-time	87.0	86.0	96.2	84.6	82.4	95.5	97.0	93.9	88.8	85.6	92.5	94.0	94.1	93.4	90.8
Part-time	13.0	14.0	3.8	15.4	17.6	4.5	3.0	6.1	11.2	14.4	7.5	6.0	5.9	6.6	9.2
Unemployment rate (% share of labour force aged 15-64) (2)															
Total	7.7	6.9	7.1	4.3	8.6	9.6	9.8	11.1	8.7	4.3	9.3	3.4	13.4	13.2	2.6
Male	6.9	6.3	5.8	4.3	8.8	10.4	6.4	7.7	7.8	4.7	7.1	2.7	15.1	13.4	1.9
Female	8.7	7.8	8.6	4.4	8.3	8.9	14.9	16.3	9.8	3.8	12.7	4.2	11.7	13.0	3.6
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR	
Number of persons employed (thousands)															
Total	2 633	105	4 687	2 612	8 001	3 298	633	1 435	1 502	2 606	18 910	1 833	4 565	:	
Male	1 032	28	1 581	978	3 026	1 192	252	556	557	871	6 681	804	1 873	:	
Female	1 600	77	3 106	1 634	4 975	2 107	381	879	945	1 735	12 229	1 028	2 693	:	
Full-time and part-time work (% share of persons employed)															
Full-time	96.9	92.4	64.9	:	92.9	94.9	95.9	98.4	88.5	84.1	79.3	98.1	98.2	:	
Part-time	3.1	7.6	35.1	:	7.1	5.1	4.1	1.6	11.5	15.9	20.7	1.9	1.8	:	
Unemployment rate (% share of labour force aged 15-64) (2)															
Total	5.6	:	3.7	4.2	20.2	4.8	18.7	8.6	10.5	5.0	5.1	18.3	8.8	:	
Male	6.1	:	3.8	3.7	19.6	4.1	18.7	7.0	10.7	5.4	5.6	19.0	9.1	:	
Female	5.1	:	3.5	4.8	21.0	5.7	18.8	10.5	10.2	4.7	4.4	17.5	8.3	:	

(1) NACE Sections C to K; France, Q1-2002.

(2) For the total population, not just those employed in NACE Sections C to K.

Source: Eurostat, Labour Force Survey.

Table 34

Average number of hours usually worked per week by persons aged 15-64, Q2-2002 (hours) (1)

NACE label (NACE Section(s))	EU-25	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Industry and services (C to K)	38.5	38.2	41.8	36.0	38.1	41.0	44.0	39.4	38.6	38.0	37.3	38.7	43.6	40.1	39.7
Mining and quarrying (C)	40.9	:	39.2	:	40.4	:	41.3	39.1	39.5	:	36.3	:	:	:	:
Manufacturing (D)	38.5	37.1	40.0	35.9	38.2	40.0	42.5	38.8	38.1	38.6	36.4	37.6	42.9	39.6	39.4
Electricity, gas & water supply (E)	38.5	35.1	39.9	:	39.5	:	38.8	38.2	36.5	:	35.7	:	42.2	39.6	:
Construction (F)	40.4	39.1	45.3	37.3	40.8	41.2	41.7	39.6	39.9	41.3	37.8	37.0	45.4	40.8	40.5
Distributive trades (G)	37.6	39.1	42.8	34.1	35.8	42.2	45.1	39.8	38.5	35.3	39.1	39.8	44.3	40.3	39.2
Hotels and restaurants (H)	39.2	43.2	44.7	31.5	39.1	:	49.1	42.8	42.2	34.9	41.4	42.7	44.8	40.7	42.0
Transport, storage & communication (I)	40.0	38.3	42.6	37.8	40.4	42.4	45.6	40.1	38.1	40.9	37.1	39.3	44.0	41.7	40.5
Financial intermediation (J)	37.1	36.4	41.1	36.2	38.5	:	39.5	38.0	38.1	37.0	34.5	35.2	:	:	39.1
Real estate, renting & business activities (K)	37.1	37.7	41.8	37.6	37.2	40.9	42.1	36.9	38.2	37.3	35.4	37.5	42.1	38.4	39.0

NACE label (NACE Section(s))	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Industry and services (C to K)	41.7	40.7	32.0	38.0	41.9	40.4	40.2	41.0	36.9	35.5	37.1	41.7	42.9	:
Mining and quarrying (C)	41.6	45.5	:	38.5	40.7	:	:	39.0	:	:	47.5	40.3	40.6	:
Manufacturing (D)	40.7	41.4	33.2	38.0	41.3	39.2	39.5	39.9	37.5	35.7	39.6	40.9	41.6	:
Electricity, gas & water supply (E)	41.2	40.2	33.5	38.9	40.0	:	39.1	39.8	35.8	34.7	39.0	39.9	41.3	:
Construction (F)	43.2	41.5	36.7	39.3	44.4	40.0	42.1	43.1	39.5	36.9	41.8	41.9	45.8	:
Distributive trades (G)	41.7	40.4	29.2	36.1	42.7	40.9	40.3	41.4	35.8	34.9	32.7	43.0	45.2	:
Hotels and restaurants (H)	42.8	38.9	28.1	40.4	41.2	48.2	41.3	42.4	34.9	34.6	29.8	43.2	45.0	:
Transport, storage & communication (I)	42.9	40.9	34.3	39.9	43.0	41.1	42.1	41.6	38.6	36.6	40.9	41.6	43.2	:
Financial intermediation (J)	40.5	39.5	31.8	37.4	39.7	36.1	38.5	40.3	34.9	34.1	35.9	40.6	41.2	:
Real estate, renting & business activities (K)	42.2	40.7	32.1	37.1	40.0	37.5	40.1	42.1	35.1	34.8	36.9	41.1	42.4	:

(1) France, Q1-2002.

Source: Eurostat, Labour Force Survey (theme3/lfs/worktime/ewhana).

Energy



The internal market for energy products has undergone major changes in recent years, and the functioning of these markets is an issue still under review. Access to markets for suppliers and choice for consumers are key issues. Other major policy issues affecting the energy sector are energy efficiency, the security of supply of fuels, the environmental impact of the energy sector, the related role of renewable energy sources, and safety, particularly with respect to nuclear energy.

STRUCTURAL PROFILE

In 2001 the energy sector generated in excess of EUR 200 billion of gross value added, equivalent to almost 5 % of the wealth created by the EU-25's non-financial business sector (total of NACE Sections C to I and K). By comparison, at 1.1 million persons, employment in the EU-15 energy sector accounted for just 1.2 % of employment in the non-financial business sector.

The energy sector is essentially made up of three very different parts, namely extraction, processing and distribution - see Table 1.1 overleaf. The mining and extraction of energy products (NACE Divisions 10 to 12) generated 26.3 % of EU-25 value added in the energy sector in 2001, compared with 25.7 % for EU-15: the main difference was the higher importance of the mining of hard coal (NACE Division 10) in the new Member States. Fuel processing (NACE Division 23) accounted for 12.7 % of the EU's value added in the energy sector, both before and after enlargement, although there was a shift in emphasis within this sector as enlargement left the value added of nuclear fuel processing (NACE Group 23.3) unchanged at EUR 3.4 billion, while the manufacture of coke oven products (NACE Group 23.1) tripled, albeit to only EUR 0.3 billion. The network supply of electricity, gas, steam and hot water (NACE Division 40) was the largest segment within the energy sector, generating just over 60 % of value added in both the EU-15 and EU-25.

In employment terms the dominance of the network distribution part of the energy sector was even clearer, NACE Division 40 accounting for 74.1 % of employment in the EU-15's energy sector, with 838 000 persons employed in 2001. The processing of energy products (NACE Division 23) accounted for 12.4 % of the energy sector's employment, slightly less than the 13.5 % share of mining and extraction of energy producing materials (NACE Divisions 10 to 12).

This chapter describes the activities involved in the supply of energy, which include the mining and quarrying of energy producing materials (NACE Divisions 10 to 12), the manufacture of coke, refined petroleum products and nuclear fuel (NACE Division 23) and the supply of electricity, gas, hot water and steam (NACE Division 40). Unlike most of the chapters in this publication, this one focuses mainly on products, namely solid fuels, oil, gas and electricity.

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.

Table 1.1
Energy, key indicators, 2001

	Value added (EUR million)		Share of energy total (%)	
	EU-25	EU-15	EU-25	EU-15
Mining of coal and lignite; extraction of peat (NACE Division 10)	10 321	4 743	4.7	2.4
Extraction of crude petroleum and natural gas; excluding surveying (NACE Division 11)	47 347	47 021	21.6	23.3
Mining of uranium and thorium ores (NACE Division 12)	-2	1	0.0	0.0
Manufacture of coke oven products (NACE Group 23.1)	322	96	0.1	0.0
Manufacture of refined petroleum products (NACE Group 23.2)	24 238	22 232	11.0	11.0
Processing of nuclear fuel (NACE Group 23.3)	3 372	3 372	1.5	1.7
Electricity, gas, steam and hot water supply (NACE Division 40) (1)	133 928	124 212	61.0	61.6
Total	219 525	201 677	100.0	100.0

	Employment (thousands)		Share of energy total (%)	
	EU-25	EU-15	EU-25	EU-15
Mining of coal and lignite; extraction of peat (NACE Division 10)	:	105 748	:	9.4
Extraction of crude petroleum and natural gas; excluding surveying (NACE Division 11)	:	46 871	:	4.1
Mining of uranium and thorium ores (NACE Division 12)	:	105	:	0.0
Manufacture of coke oven products (NACE Group 23.1)	:	1 464	:	0.1
Manufacture of refined petroleum products (NACE Group 23.2)	:	106 139	:	9.4
Processing of nuclear fuel (NACE Group 23.3)	:	32 159	:	2.8
Electricity, gas, steam and hot water supply (NACE Division 40)	:	838 498	:	74.1
Total	:	1 130 984	:	100.0

(1) 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms).

The United Kingdom generated close to two thirds (63.6 %) of the EU-15's value added in 2001 in the mining and extraction of energy products sector, ahead of the Netherlands (10.8 %); in both of these countries the extraction of crude petroleum and/or natural gas from the North Sea was responsible for the highest shares. In employment terms, Germany's workforce of 70 200 accounted for 45.9 % of the EU-15 total, mainly from its coal and lignite mining sector. This sector was also significant (in employment terms) in Poland and the Czech Republic ⁽¹⁾.

In the fuel processing sector, Germany accounted for more than a quarter of the EU-15 value added and the United Kingdom close to one fifth. Greece was very highly specialised in this sector, generating more than EUR 1 billion of value added in 2001.

In electricity, gas, steam and hot water supply there was much less specialisation across the Member States, with Germany accounting for 24.0 % of EU-15 value added.

⁽¹⁾ Poland, incomplete data set; Slovenia, no recent data available.

LABOUR AND PRODUCTIVITY

The difference in terms of value added and employment shares accounted for by the mining and extraction of energy producing materials results from a relatively low level of employment in the extraction of crude petroleum and natural gas (and incidental services) and a relatively high level of employment in the mining of coal and lignite (and peat extraction). These differences are reflected in the apparent labour productivity figures. For EU-15, excluding the very small uranium and thorium ore mining division, these ranged from EUR 44 900 per person employed within coal and lignite mining, to over EUR 1 million per person employed in the extraction of crude petroleum and natural gas sector. Average personnel costs did not vary to the same extent, with the same two divisions recording the lowest (EUR 49 000 per employee) and the highest (EUR 83 300) values.

Table 1.2

Mining and quarrying of energy producing materials; manufacture of coke, refined petroleum products and nuclear fuel; electricity, gas, steam and hot water supply (NACE Divisions 10, 11, 12, 23 and 40)
Labour force characteristics, 2002

	Share of men (%)	Share of full-time (%)	Share of employees (%)
EU-25	:	:	:
EU-15	81.9	95.2	98.1
BE	80.9	97.5	99.7
CZ	79.3	99.0	97.4
DK	88.0	100.0	100.0
DE	82.6	95.6	99.0
EE	78.5	94.2	100.0
EL	86.6	98.7	99.4
ES	82.6	98.1	98.9
FR	79.5	91.6	99.8
IE	84.3	94.8	98.0
IT	82.7	96.7	95.5
CY	88.5	100.0	98.1
LV	80.0	98.5	100.0
LT	84.6	99.6	100.0
LU	83.9	95.0	100.0
HU	77.0	99.1	98.6
MT	85.5	100.0	96.5
NL	81.2	79.8	99.8
AT	86.1	:	99.4
PL	:	:	:
PT	82.2	97.9	96.3
SI	88.6	99.0	98.7
SK	86.3	99.4	96.7
FI	80.2	93.9	96.1
SE	77.4	92.3	98.1
UK	80.9	96.2	96.8

Source: Eurostat, Labour Force Survey.

PRODUCTION, EXTERNAL TRADE AND CONSUMPTION OF ENERGY PRODUCTS

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.

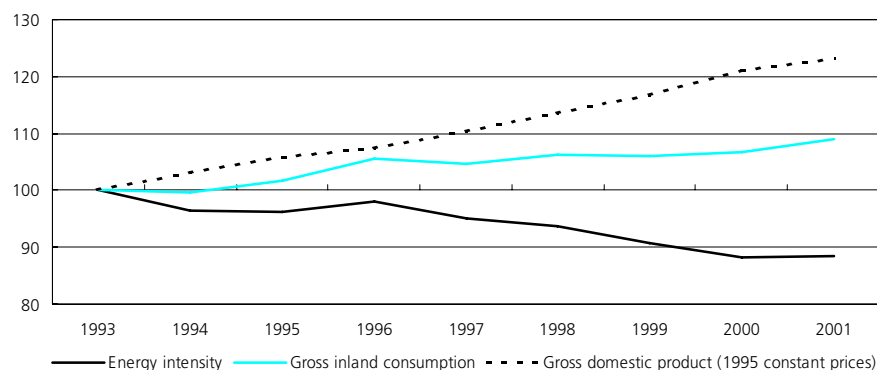
Primary energy production in the EU-25 increased by 3.4 % between 1993 and 2001 to reach 896 million toe (tonnes of oil equivalent). This rate of increase was slower than that recorded for gross inland consumption over the same period, namely a 9.1 % increase to 1.69 billion toe. Consequently the EU's dependency on energy imports has grown, net imports increasing by 17.9 % to 826 million toe in 2001, equivalent to more than 90 % of primary production. It should be noted that EU-15 net imports (766 million toe) were higher than primary production (757 million toe) in 2001.

Energy intensity measures the energy consumption of an economy and its overall energy efficiency, and is calculated by dividing gross inland energy consumption by GDP (at 1995 constant prices); this indicator is measured in kgoe (kilogram of oil equivalent) per thousand euro. Despite the increase in gross inland energy consumption, the energy intensity of the EU-25 economy declined from 239.9 kgoe per thousand euro in 1993 to 212.4 in 2001, meaning that less energy was required to produce the same amount of GDP (see Figure 1.1). While this fall in energy intensity within the EU-25 was stronger than the equivalent rate of change for the EU-15, energy intensity in the EU-25 was still 9.4 % higher than in the EU-15 (194.1 kgoe per thousand euro) in 2001.

The enlargement of the EU has had a major impact on the energy sector, mainly because of the different production and consumption profiles of several of the new Member States, notably Poland and the Czech Republic. Figures 1.2 to 1.4 (overleaf) show the product mix of the EU in terms of primary production, net imports and gross inland consumption.

The importance of solid fuels in primary production is significantly higher within an EU made up of 25 Member States as compared with 15. Poland alone produced 73.4 % as much solid fuels in 2001 as the EU-15, while production in the Czech Republic was equivalent to 26.1 % of the EU-15 total. The higher share of solid fuels in primary production in the EU-25 was at the expense of all other fuel types, but most notably crude oil and petroleum products, and gas.

Figure 1.1
Energy intensity, EU-25 (1993=100)



Source: Eurostat, Energy statistics (theme8/sirene/es_quant/es_10/es_100a); National accounts - Aggregates (theme2/aggs/aggs_gdp/a_gdp_k).

Enlargement had an impact on net imports in various ways. Firstly the high levels of production of solid fuels in some of the new Member States meant that they were net exporters of these products, contrasting with the net import situation in many of the EU-15 Member States. Furthermore, a high proportion of the net exports of the new Member States were the result of trade with the EU-15 Member States, and hence within the calculation of net imports for the EU-25 these cancel out. The enlargement to 25 Member States has in fact reduced the EU's net imports of solid fuels, from 119.1 million toe in the EU-15 in 2001 to only 103.5 million toe in the EU-25. Net imports of electricity were also lower for the EU-25 than for the EU-15. Overall the EU had higher net energy imports in 2001 with 25 Member States than it did with 15 Member States, mainly due to a larger deficit for gas in relative terms and for crude oil and petroleum products in absolute terms.

NOTE ON EXTERNAL TRADE

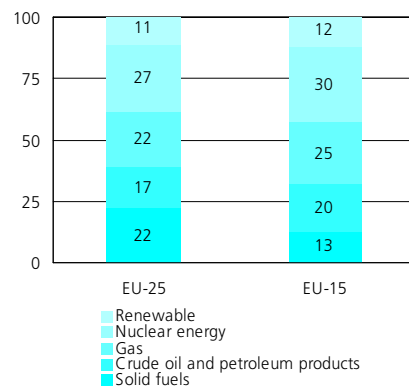
Note that unlike the rest of this publication the EU's imports and exports for energy products (from the Sirene database) are generally measured as the sum of the external trade of the Member States. In practical terms this means that internal trade between EU Member States is counted in the EU's total, rather than considering the EU as a whole and only counting extra-EU trade flows.

For the energy sector, the enlargement from 15 Member States to 25, by definition, therefore increases both the exports and imports of energy products, as the trade flows of the 10 newest Member States are simply added to those of the previous 15 Member States.

As a result of the contrasting positions with respect to primary production and net imports, the mix of fuels for gross inland consumption was less different between the EU-15 and the EU-25. Nevertheless, the dominant position of fossil fuels was reinforced, with solid fuels, oil and gas accounting for 79.4 % of EU-25 gross inland consumption in 2001, compared with 78.1 % in the EU-15. This net increase results from a higher use of solid fuels outweighing a lower use of crude oil and petroleum products, and gas.

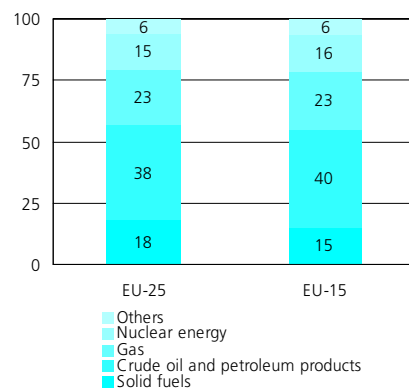
An analysis of the product mix of gross inland consumption over time shows a different picture (see Figure 1.5). Focusing on the EU-25 aggregate, the product mix in 2001 compared with 10 years earlier indicated a lower dependence on fossil fuels, and a higher use of other sources. Among the fossil fuels the importance of solid fuels fell the greatest over

Figure 1.2
Primary production by fuel type, 2001 (%)



Source: Eurostat, Energy statistics (theme8/sirene/es_quant/es_10).

Figure 1.4
Gross inland consumption by fuel type, 2001 (%)



Source: Eurostat, Energy statistics (theme8/sirene/es_quant/es_10).

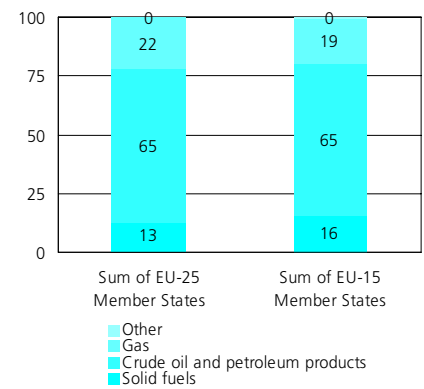
the 10 years, from 26.0 to 18.1 % in 2001. This was mainly compensated by an increase in the use of gas, rising from 17.4 to 22.8 % (and in the process overtaking solid fuels as the second most important energy source since 1997). This change has, to a large extent, been the result of changes in inputs for conventional thermal power stations.

The overall declining share of fossil fuels in gross inland consumption was balanced mainly by an increased use of nuclear energy and renewable energy sources⁽²⁾. The share of nuclear energy rose from 12.9 % in 1991 to 14.6 % of gross inland consumption in 2001. Renewable energy sources increased their share from 4.5 % of total gross inland consumption in 1991 to 6.0 % in 2001 - see Subchapter 1.2 for more information on the use of various energy sources within the domain of electricity generation.

Figure 1.6 provides an overview of the change in the destination of final energy use in the

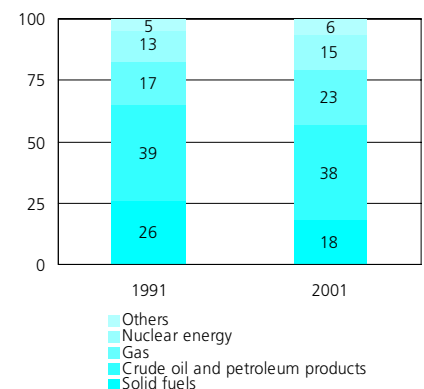
⁽²⁾ Hydroelectric, wind, solar, geothermal energy and biomass/waste.

Figure 1.3
Net imports by fuel type, 2001 (%)



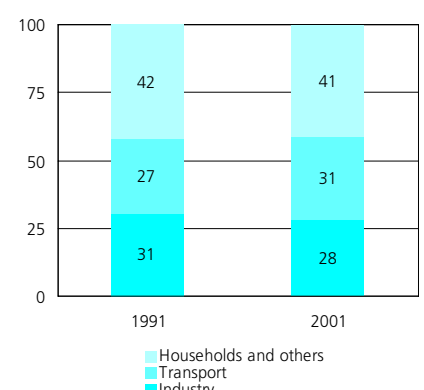
Source: Eurostat, Energy statistics (theme8/sirene/es_quant/es_10).

Figure 1.5
Gross inland consumption by fuel type, EU-25 (%) (1)



(1) Provisional.
Source: Eurostat, Energy statistics (theme8/sirene/es_quant/es_10).

Figure 1.6
Final energy consumption by end-use, EU-25 (%) (1)



(1) Excluding Austria; provisional.
Source: Eurostat, Energy statistics (theme8/sirene/es_quant/es_10).

years between 1991 and 2001. Most notably the share of energy used for transport in the EU-25 increased, while the share consumed by industry, households and other fell.

1.1: CRUDE OIL AND NATURAL GAS

This subchapter looks at crude oil, petroleum products and natural gas. Although the analysis is based on product statistics, the activities related to these products are covered by the extraction of crude petroleum and natural gas and related supporting services (NACE Division 11), the manufacture of refined petroleum products (NACE Group 23.2) and the manufacture and distribution of gas (NACE Group 40.2). The related activities of exploration and surveying are covered in Chapter 22 and the retail sale of automotive fuels is covered in Chapter 16.

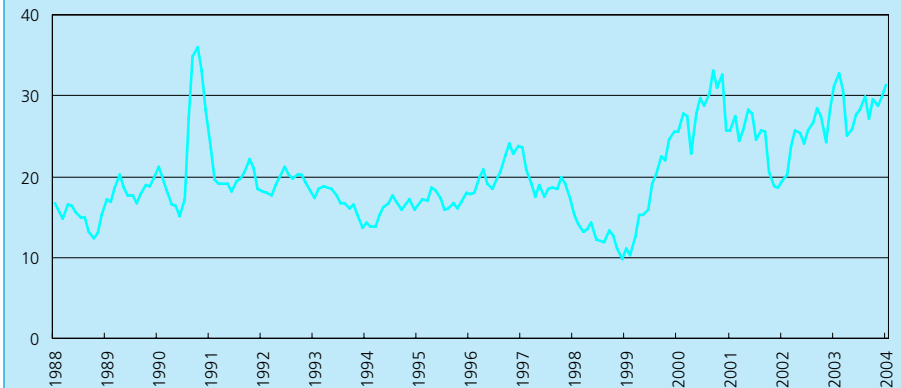
The gas market in the EU has been changing through the implementation of the 1998 Gas Directive⁽³⁾ which aimed to open up the market, focusing on transparency and non-discrimination. The directive allowed for a phased opening of markets, starting with gas fired power generators and large final customers in the first stage, and then moving in two further stages to smaller consumers. The impact of the implementation has been the subject of benchmarking exercises. Market developments, implementation choices and outstanding obstacles have motivated a replacement⁽⁴⁾ to the Gas Directive which was adopted in June 2003. Its aim is to have a gas market open for all non-household customers by July 2004, and for all customers by July 2007, as well as further unbundling the sector's supply and distribution enterprises. On 10 December 2003 the European Commission proposed a regulation⁽⁵⁾ on conditions for access to the gas transmission networks to provide a legal basis for existing voluntary rules.

⁽³⁾ Directive 98/30/EC of the European Parliament and of the Council concerning common rules for the internal market in natural gas.

⁽⁴⁾ Directive 2003/55/EC of the European Parliament and of the Council concerning common rules for the internal market in natural gas and repealing Directive 98/30/EC.

⁽⁵⁾ Proposal for a regulation of the European Parliament and of the Council on conditions for access to the gas transmission networks, COM(2003) 741 final, 10 December 2003.

Figure 1.7 Brent Spot Price FOB (USD/barrel), unweighted monthly average



Source: http://www.eia.doe.gov/oil_gas/petroleum/info_glance/prices.html, Energy Information Administration (United States).

Table 1.3 Production and proven reserves of crude oil, 2002

	Production (million tonnes)	Proven reserves (million tonnes) (1)	Production capacity (years) (2)
North America	467.8	27 621	59.0
Latin America	517.8	15 167	29.3
Africa	376.5	10 563	28.1
Western Europe	308.0	2 469	8.0
Eastern Europe	454.8	10 827	23.8
Middle East	1 021.0	93 539	91.6
Far East & Oceania	380.8	5 281	13.9
World	3 526.7	165 468	46.9

(1) As of 1 January 2003.

(2) Ratio of reserves divided by production.

Source: CPDP.

Figure 1.7 shows a long time-series of oil prices. From a high above USD 37 in early September 2000, crude oil prices fell through to the end of the year and stabilised generally between USD 25 and 30 until the middle of September 2001 when they dropped below USD 20. Prices bottomed out at USD 16 in the middle of November 2001, since when they have returned to the range of USD 25 to 30, with a peak close to USD 35 shortly before the start of the Iraq war in the first quarter of 2003.

Table 1.3 shows world production and reserves of crude oil, from which it is clear that western Europe's production is less than 10 % of the world total, and its reserves relative to production are very low. It should be noted that Norway, which is a major oil producer, is included in the western European total.

PRODUCTION AND CONSUMPTION OF ENERGY PRODUCTS

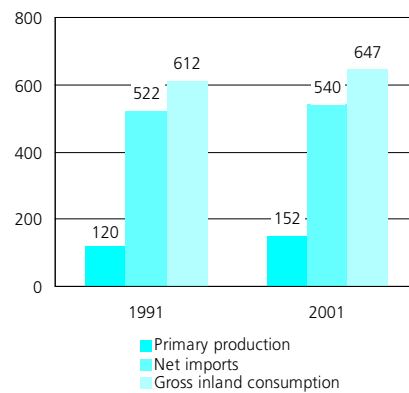
EU-25 primary production of crude oil, petroleum products and natural gas was 348.9 million toe in 2001, of which gas accounted for more than half. Among the Member States, the United Kingdom was by far the largest producer of hydrocarbons in the EU, contributing 77.9 % of EU-25's primary production of crude oil and petroleum products and 48.3 % of its natural gas in 2001. Denmark was the EU's second largest primary producer of crude oil and petroleum products with an 11.3 % share and the Netherlands was the only other Member State to have a share of primary natural gas production in excess of 10 %, accounting for 28.2 %. Among the new Member States, Poland (1.8 %) and Hungary (1.3 %) were the only ones to contribute more than 1 % to the EU-25's primary production of natural gas, and Hungary also provided 1.0 % of the EU-25's primary production of crude oil and petroleum products.

As can be seen in Figures 1.8 and 1.9 the origin of supply of gross inland consumption is very different for the two types of hydrocarbons, with primary production of natural gas exceeding net imports, while net imports of crude oil and petroleum were 3.6 times higher than primary production in 2001. Nevertheless, the importance of primary production of crude oil and petroleum products has increased as in 1991 primary production was equivalent to 19.7 % of gross inland consumption, a share that had risen to 23.4 % by 2001. The reverse was true for natural gas, where primary production was 51.4 % of gross inland consumption in 2001, 4.3 percentage points lower than 10 years earlier.

Gross inland consumption of these hydrocarbons increased from 886.1 million toe in 1991 to 1 031.1 million toe in 2001. Crude oil and petroleum provided two thirds of this total (62.8 %) in 2001, less than in 1991. This falling share was the result of slower growth in the gross inland consumption of crude oil and petroleum products (0.6 % annual average) compared with that for natural gas (3.4 % annual average) during the 10-year period considered.

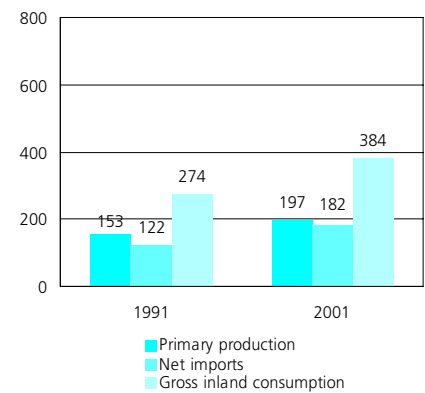
These two types of hydrocarbons are also strikingly different in their use. Crude oil is essentially a transformation input, while only one quarter of the gross inland consumption of natural gas is transformed.

Figure 1.8
Main indicators for crude oil and petroleum products, EU-25 (million toe)



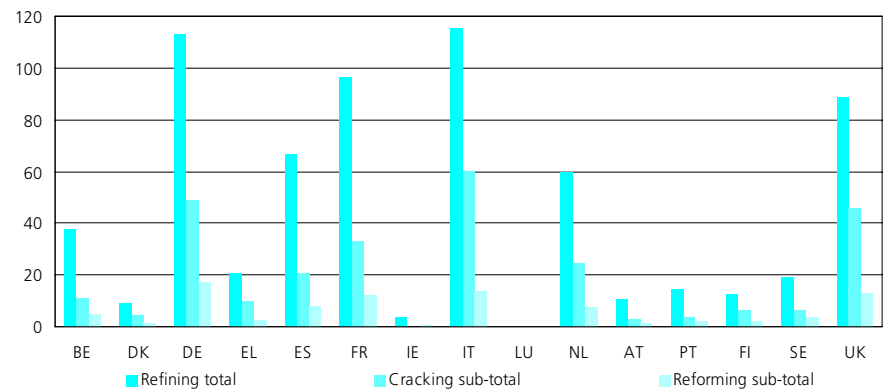
Source: Eurostat, Energy statistics (theme8/sirene/es_quant/es_10/es_102a).

Figure 1.9
Main indicators for natural gas, EU-25 (million toe)



Source: Eurostat, Energy statistics (theme8/sirene/es_quant/es_10).

Figure 1.10
Capacity for refining crude oil, 2000 (million tonnes/year)



Source: Eurostat, Energy statistics (theme8/sirene/es_quant/es_11/es_111a).

Analysing crude oil in more detail, EU-25 transformation reached 747 million tonnes in 2001, of which 5.0 % was for conventional thermal power stations, and 94.6 % was for refineries. Figure 1.10 provides an overview of refining capacity for crude oil in the EU-15 Member States, which shows the relatively high importance of these processes in Belgium and the Netherlands. EU-25 transformation output of all petroleum products was 696 million tonnes in 2001, split as follows: gas/diesel oil, 35.9 %; motor spirit, 21.9 %; residual fuel oils, 15.5 %; naphtha, 6.4 %; kerosene/jet fuels, 6.3 %; refinery gas, 3.6 %; liquefied petroleum gases (LPG), 3.1 %; and various other petroleum products, 7.2 %. Four fifths of the transformation output of petroleum products (80.8 %) was available for final consumption in 2001, with 84.5 % of this consumed as energy and 15.5 % for non-energy purposes.

In contrast an analysis of the gross inland consumption of natural gas shows that one quarter (25.3 %) was taken for transformation, of which nearly all (23.6 %) was for use in conventional thermal power stations and the remainder in district heating plants, essentially in Germany, the United Kingdom and the Nordic Member States. After consumption by the energy sector, the remaining 70.3 % of gross inland consumption was available for final consumption, with only a small part (3.4 % of gross inland consumption) used by the chemical sector for non-energy purposes. Households (29.4 % of gross inland consumption) and industry (24.6 %) were the main final energy users of natural gas.

Table 1.4

Crude oil and feedstocks**Trade indicators, sum of EU-25 Member States**

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Exports (million tonnes)	67	68	76	98	96	94	96	100	111	117	105
Imports (million tonnes)	554	572	570	575	566	585	599	624	591	613	613
Trade balance (million tonnes)	-487	-504	-494	-477	-470	-491	-503	-525	-481	-497	-508
Cover ratio (%)	826.9	842.8	750.6	586.0	590.2	620.9	624.4	625.5	534.8	525.3	586.4

Source: Eurostat, Energy statistics (theme8/sirene/es_quant/es_10/es_123a and es_133a).

Table 1.5

All petroleum products**Trade indicators, sum of EU-25 Member States**

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Exports (million tonnes)	176	183	192	189	181	193	200	205	198	210	210
Imports (million tonnes)	211	205	208	201	203	213	212	219	223	233	242
Trade balance (million tonnes)	-34	-22	-16	-12	-21	-20	-12	-14	-25	-23	-33
Cover ratio (%)	83.8	89.3	92.5	94.0	89.6	90.5	94.4	93.8	89.0	90.0	86.6

Source: Eurostat, Energy statistics (theme8/sirene/es_quant/es_10/es_123a and es_133a).

Table 1.6

Natural gas**Trade indicators, sum of EU-25 Member States**

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Exports (thousand Terajoules)	1 488	1 605	1 656	1 662	1 609	1 926	1 820	1 717	1 927	2 273	2 589
Imports (thousand Terajoules)	7 182	7 243	7 105	7 255	7 880	8 834	8 984	9 241	10 175	10 781	11 056
Trade balance (thousand Terajoules)	-5 694	-5 638	-5 449	-5 593	-6 271	-6 908	-7 164	-7 524	-8 249	-8 508	-8 467
Cover ratio (%)	20.7	22.2	23.3	22.9	20.4	21.8	20.3	18.6	18.9	21.1	23.4

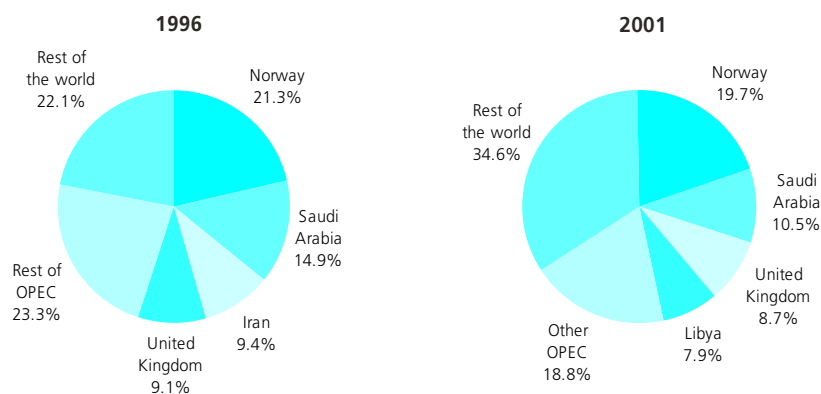
Source: Eurostat, Energy statistics (theme8/sirene/es_quant/es_10/es_124a and es_134a).

EXTERNAL TRADE

The importance of crude oil imports for the EU has already been noted with respect to production and consumption. Table 1.4 shows that the EU-25's exports of crude oil and feedstocks were relatively small compared with imports, and that the negative trade balance (net imports) widened over the last few years for which data are available, with imports nearly six times higher than exports in 2001. Table 1.5 shows the situation for petroleum products, where the level of exports and imports was much closer, although the EU ran a deficit of between 12 and 34 million tonnes each year during the decade from 1991 to 2001. The trade situation for natural gas was similar to that for crude oil, with imports several times higher than exports, and a trade deficit generally widened over the 10-year period considered - see Table 1.6.

Considering both intra- and extra-external trade flows, Norway was the most important supplier of crude oil to the EU-15 in 2001, as it had been in 1996. The only Member State among the top suppliers was the United Kingdom, which occupied third place behind Saudi Arabia in 2001. Collectively OPEC provided 45.6 % of the EU-15's crude oil imports in 2001 - see Figure 1.11.

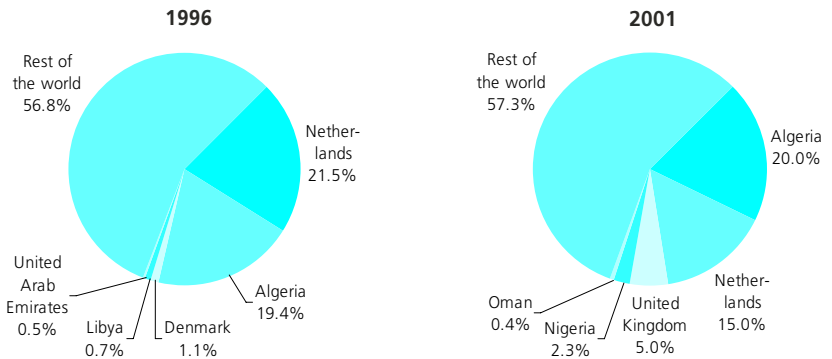
Figure 1.11

Crude oil**Sum of EU-15 Member States: origin of imports**

Source: Eurostat, Energy statistics (theme8/sirene/es_quant/es_10/es_123a).

Comparing Figures 1.11 and 1.12 it is clear that the origins of natural gas imports were much more diverse than those for crude oil. Furthermore, in 2001 two Member States, Denmark and the Netherlands, were among the top five countries satisfying the import requirements of the 15 EU Member States, and a third, the United Kingdom was the sixth most important source. It should, however, be noted that a full breakdown of the origins of EU-15 imports of natural gas is not available, and most importantly, information on imports from Norway and the countries of the former Soviet Union are not available.

Figure 1.12
Natural gas
Sum of EU-15 Member States: origin of imports (1)



(1) Data not available for all partner countries, notably Norway, Russia and other countries of the former Soviet Union.
Source: Eurostat, Energy statistics (theme8/sirene/es_quant/es_10/es_124a).

1.2: ELECTRICITY GENERATION AND DISTRIBUTION

This subchapter covers the generation and consumption of electricity, whether generated from fossil, nuclear or renewable fuels.

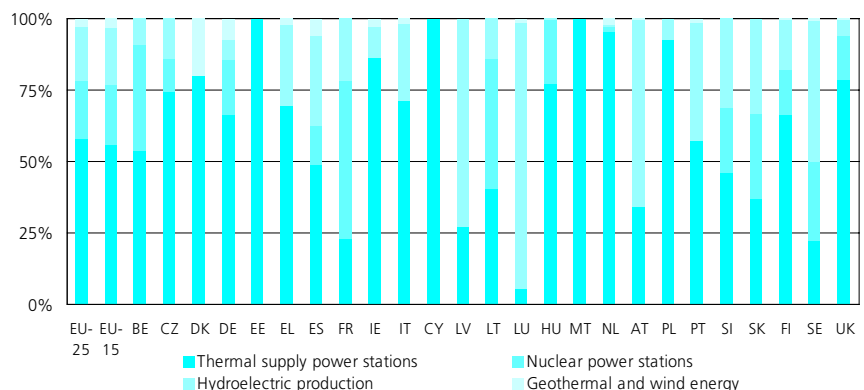
The development of an internal energy market has led to changes in the electricity sector, notably the unbundling of generation, transmission and distribution. The Electricity Directive (6) legislates for access to networks to be based on objective, transparent and non-discriminatory criteria. An amendment (7) to this directive was adopted in June 2003. Like the amendment to the Gas Directive (see previous subchapter) the aim is to have an electricity market open for all non-household customers by July 2004, and for all customers by July 2007. In addition a regulation (8) on cross-border exchanges in electricity provides guidelines on the compensation of transit flows, the harmonisation of national transmission tariffs and the allocation of cross-border interconnection capacity.

(6) Directive 96/92/EC of the European Parliament and of the Council concerning common rules for the internal market in electricity.

(7) Directive 2003/54/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in electricity and repealing Directive 96/92/EC.

(8) Regulation 1228/2003/EC of the European Parliament and of the Council on conditions for access to the network for cross-border exchanges in electricity.

Figure 1.13
Mix of net electricity capacity, 2001



Source: Eurostat, Energy statistics (theme8/sirene/es_quant/es_11/es_113a).

CAPACITY

The EU-25's net installed capacity of electricity generation was 670.7 GW in 2001, compared with 590.7 GW for the EU-15. Thermal power stations provided 58.2 % of this capacity, nuclear power plants 19.9 %, hydroelectric plants 19.3 % and the remainder was split between wind energy (2.6 %) and geothermal energy (0.1 %). A comparison between the EU-25 and the EU-15 is provided in Figure 1.13. It shows that enlargement has led to a greater proportion of capacity being based on thermal power stations, and less on the other sources, notably concerning geothermal plants and wind turbines. In the majority of the Member States more than half of the generation capacity was based on thermal supply power

stations. In Latvia, Luxembourg, Austria and Sweden, hydroelectric production accounted for close to or more than half of generation capacity, while in France more than half of electricity generation capacity was in nuclear power stations and in Lithuania 46 % of capacity was in nuclear power stations. In both Slovenia and Slovakia there was a more diverse range of generating power stations, with thermal power stations, hydroelectric production and nuclear power stations all contributing at least one quarter of total capacity. In none of the Member States did geothermal and wind energy sources dominate generation capacity. However, in Denmark they accounted for 19 % of capacity (in a country which has no nuclear or hydroelectric capacity).

The use of nuclear fuels remains controversial, as they are seen as a lower emission alternative to fossil fuels, while they raise specific security and safety concerns, both in operation and at the end of life. With enlargement the number of countries without a nuclear capacity increased from 6 to 11, while some of the other Member States were in the process of running down their existing nuclear capacities.

GENERATION AND NET IMPORTS

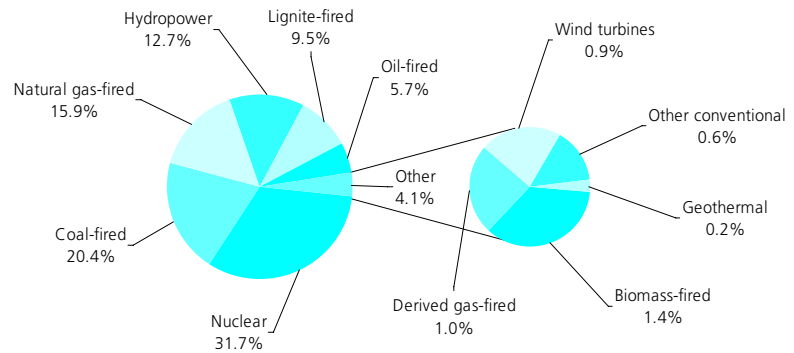
Gross electricity generation is the electricity measured at the outlet of the main transformers, in other words, including the consumption of electricity in plant auxiliaries and in transformers. Gross electricity generation in 2001 was 3 005 TWh. Just over half of this total was generated in conventional thermal power stations (54.5 %) and just under one third (31.7 %) in nuclear power stations. The remainder was generated in hydroelectric power plants (12.7 %), wind turbines (0.9 %) and geothermal power plants (0.2 %) - see Figure 1.14. Compared with the breakdown of capacity, the importance of nuclear power in terms of gross generation was relatively high as was the much smaller geothermal electricity production, while the other sources were relatively less important for generation, particularly wind turbines.

Enlargement has led to a greater share of electricity being generated from conventional thermal power stations. In fact, the contribution of coal and lignite power stations to gross electricity generation was 25.6 % in the EU-15 and 29.9 % in the EU-25 in 2001. However, natural gas fired power stations generated 15.9 % of electricity in the EU-25 compared with 17.1 % in the EU-15. Once more this reinforces the relatively high importance of solid fuels as an energy source in the new Member States, although the use of these fuels was diverse: the Czech Republic, Estonia and Poland were heavily dependent on coal and/or lignite for electricity generation, with 70 % or more of gross electricity generation from these fuels, while several other new Member States had a lower reliance, notably Cyprus, Latvia, Lithuania and Malta who generated very little or no electricity from these sources.

By 2010 renewable sources should generate enough electricity for one fifth of the EU's gross national electricity consumption (gross national electricity generation from all fuels plus net electricity imports). Figure 1.15 shows the current position of the EU and of each country. Renewable sources include wind, solar, geothermal, wave, tidal, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases.

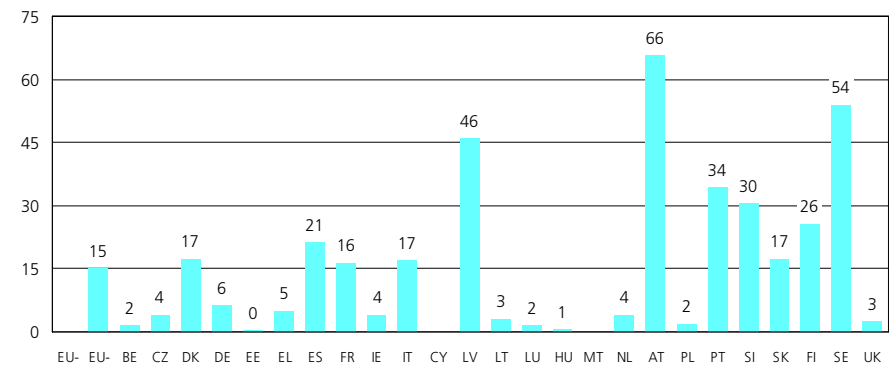
The analysis above focuses on electricity production. However, within Europe there are

Figure 1.14
Gross electricity generation by type of power plant, EU-25, 2001



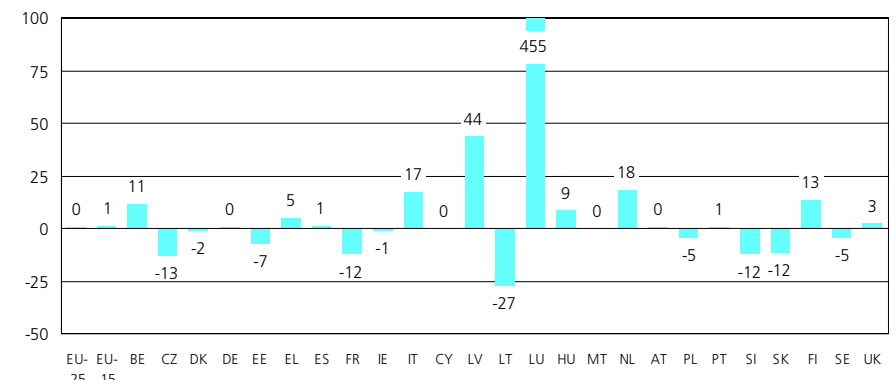
Source: Eurostat, Energy statistics (theme8/sirene/es_quant/es_10/es_105a).

Figure 1.15
Contribution of electricity from renewables to total electricity consumption, 2001 (%) (1)



(1) EU-25, Cyprus and Malta, not available.
Source: Eurostat, Energy statistics (theme8/sirene/es_indic/es_33a/es_333a).

Figure 1.16
Net electricity imports relative to gross electricity generation, 2001 (%) (1)



(1) A negative sign indicates net exports.
Source: Eurostat, Energy statistics (theme8/sirene/es_quant/es_10/es_105a).

some major movements of electricity across borders. Some countries are particularly dependent on external sources for their electricity supply, for example, Luxembourg, where the level of net imports is four and a half times greater than gross electricity generation - see Figure 1.16. Among the larger Member States only France and Poland are net exporters of electricity.

CONSUMPTION

Electricity accounted for 19.7 % of the EU-25's final energy consumption in 2001, and 20.2 % of the EU-15 total. Industrial consumers (41.4 %) were the largest final electricity consumers in 2001 in the EU-25, followed by households (28.8 %) and services (22.3 %) with very little difference in the pattern of consumption recorded in the EU-15.

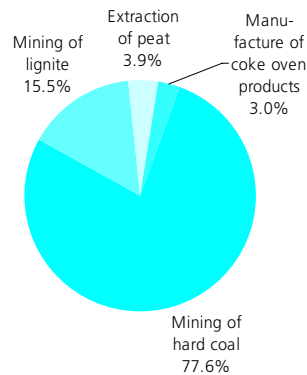
1.3: OTHER ENERGY ACTIVITIES

This subchapter covers the mining and extraction of hard coal, lignite and peat (NACE Division 10), and the manufacture of coke oven products (NACE Group 23.1). It also addresses nuclear fuels in the form of mining of uranium and thorium ores (NACE Division 12) and the processing of nuclear fuels (NACE Group 23.3), which includes the production of enriched uranium, fuel elements for nuclear reactors, radioactive elements for industrial or medical use and the treatment of nuclear waste. Finally, steam and hot water supply are covered by NACE Group 40.3.

MINING AND PROCESSING OF COAL AND LIGNITE SECTOR: STRUCTURAL PROFILE AND EMPLOYMENT

Mining and processing of coal and lignite (NACE Division 10 and NACE Group 23.1) generated EUR 10.6 billion of value added in the EU-25 in 2001. Figure 1.17 shows that the mining of hard coal dominated this activity. Employment in the EU-15 in 2001 was 107 200, of which 91 300 were occupied in the mining of hard coal (Group 10.1). Mining and processing of coal and lignite is an important sector in several of the new Member States. This was notably the case for the mining of hard coal and lignite (Groups 10.1 and 10.2) which employed 170 900 persons in Poland in 2001, which was more than in the EU-15. The mining of hard coal, lignite and peat (NACE Division 10) employed 45 000 persons in the Czech Republic and 7 700 persons in Slovakia.

Figure 1.17
Share of value added in solid fuels, EU-25, 2001

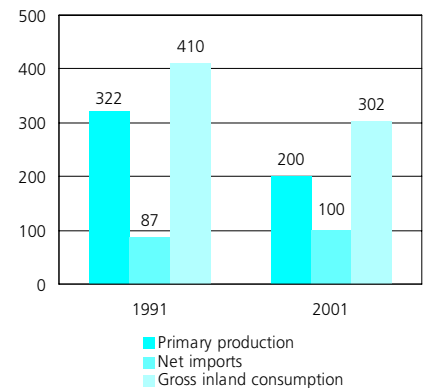


Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms).

HARD COAL AND LIGNITE PRODUCTS

Figure 1.18 shows the shift in supplying gross inland consumption of hard coal and lignite between 1991 and 2001, with primary production in the EU-25 falling by more than one third over the period studied. This was accompanied by a modest increase in net imports - see Table 1.7 for details on the trade deficit which widened from 1994 onwards. Overall gross inland consumption of hard coal and lignite fell by 26.3 % to reach 301.7 million toe in 2001.

Figure 1.18
Main indicators for hard coal and lignite, EU-25 (million toe)



Source: Eurostat, Energy statistics (theme8/sirene/es_quant/es_10/es_101a).

Poland contributed 35.4 % of the EU-25's primary production, Germany 29.0 % and the Czech Republic 12.6 %, with no other country reporting a double-digit share. Germany's share of EU-25 primary production of lignite was 54.5 % and Poland's share of primary production of hard coal was 45.3 %.

Table 1.7

Hard coal and lignite Trade indicators, sum of EU-25 Member States

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Exports (million tonnes)	45	41	44	49	53	48	48	50	43	44	52
Imports (million tonnes)	181	174	154	156	163	166	171	175	170	188	210
Trade balance (million tonnes)	-135	-132	-110	-107	-111	-119	-123	-125	-127	-144	-158
Cover ratio (%)	25.1	23.8	28.6	31.5	32.2	28.6	28.0	28.3	25.4	23.5	24.7

Source: Eurostat, Energy statistics (theme8/sirene/es_quant/es_10/es_122a and es_132a).

Figure 1.19 shows the shift in the origin of the EU-15's imports of hard coal in the five years between 1996 and 2001. Most notable was the considerable fall in the share of imports from the United States, which had been the largest single provider in 1996. In absolute terms the imports from the United States fell from 34.7 million tonnes to 19.7 million tonnes by 2001.

The vast majority of hard coal and lignite was consumed as a transformation input in 2001, 86.3 % of hard coal and 98.1 % of lignite. Most of this was used in conventional thermal power stations, although nearly one quarter (22.9 %) of the hard coal that was transformed was used as input in coke oven plants.

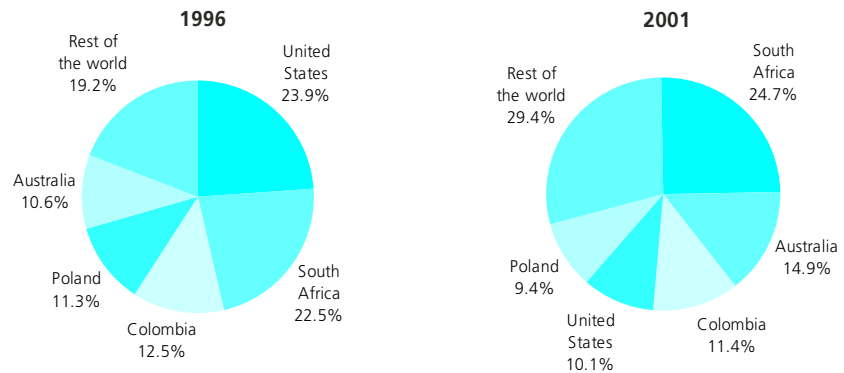
Energy available for final consumption in 2001 was just 13.3 % of gross inland consumption for hard coal and 1.6 % in the case of lignite. Around two thirds of this was consumed by industry and just over one quarter by households.

COAL AND LIGNITE DERIVATIVES

The part of hard coal and lignite consumption that is not used in conventional thermal power stations is mainly transformed into solid derivatives, namely coke, patent fuels and brown coal briquettes. The gross inland consumption (net imports and stock changes) of these products in the EU-25 in 2001 was just 4.0 million toe. By comparison, the transformation output of these products was 36.8 million toe, of which 90.7 % was coke. Furthermore, gases derived from coke ovens, blast-furnaces and gasworks generated 22.0 million toe, mainly blast furnace and coke oven gas. A large proportion of these derived products were further transformed, notably coke used in blast furnaces, and coke oven and gaswork gases, which are used as input for conventional thermal power stations.

The energy available for final consumption in the EU-25 was 27.3 million toe from solid derivatives and 9.3 million toe from derived gases. Four fifths of this energy from solid derivatives was consumed by industry, although almost all patent fuels were consumed by households. Of the energy available for final consumption from coke oven and blast furnace gases, some 98.5 % was consumed by industry, nearly all by the iron and steel sector. Final energy consumption of gasworks gas was mainly by households.

Figure 1.19
Hard coal
Sum of EU-15 Member States: origin of imports



Source: Eurostat, Energy statistics (theme8/sirene/es_quant/es_10/es_122a).

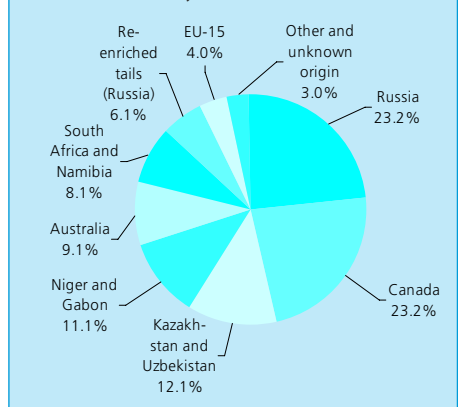
NUCLEAR FUELS: STRUCTURAL PROFILE AND EMPLOYMENT

According to the Euratom supply agency, preliminary figures indicate that worldwide natural uranium production in 2002 was 35 000 tU. The mining of uranium and thorium ores in the EU is a very small activity, with an estimated 3 500 employees in 2001, most of these in the new Member States, notably the Czech Republic.

According to the Euratom supply agency, EU-15 production supplies about 4 % of the utilities' requirements, mainly from stocks or clean-up operations at closed mines. Russia and Canada were the largest suppliers to EU-15 utilities in 2002 - see Figure 1.20.

The processing of nuclear fuel is a much larger activity, employing 32 200 persons in 2001 in the EU-15, of which half were employed in the United Kingdom. There was little or no activity in many Member States, including all of the new Member States. Value added by the nuclear fuels processing sector in the EU-15 was EUR 3.4 billion in 2001.

Figure 1.20
Origin of natural uranium deliveries to EU-15 utilities, 2002



Source: Euratom supply agency, annual report 2002.

STEAM AND HOT WATER SUPPLY: STRUCTURAL PROFILE AND EMPLOYMENT

The most recent data available for the EU report that 46 800 persons were employed in the supply of steam and hot water in the EU-15 in 1999, approximately 5.2 % of the supply of electricity, gas, steam and hot water sector (NACE Division 40). Although data availability for the new Member States is incomplete, it is clear that this activity was important in the Czech Republic and Lithuania where it contributed more than one third of employment in the supply of electricity, gas, steam and hot water sector. It was also relatively important, although to a lesser extent, in Hungary, whereas there was no steam and hot water supply in Cyprus and Malta.

In value added terms, steam and hot water supply generated EUR 4.8 billion in 1999 in the EU-15, 3.7 % of the supply of the electricity, gas, steam and hot water sector.

Table 1.8

Interior flows of solid fuels, 2001 (thousand toe)

	EU-25	EU-15	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT
Primary production	604 031	341 332	0	66 106	-	206 178	12 186	66 344	22 678	2 295	4 357	139	-	69	35
Net imports	163 865	187 814	11 836	-7 996	6 790	41 522	1 070	1 318	18 436	16 751	2 941	20 045	72	93	112
Gross inland consumption	774 349	532 198	11 114	58 574	7 028	249 442	13 636	68 487	41 201	19 298	7 161	19 871	66	262	169
Transformation input	727 857	511 083	8 946	52 523	6 601	243 272	11 757	67 007	40 398	17 607	6 128	18 944	-	136	35
-conventional thermal power stations	617 717	435 114	3 781	45 250	6 600	216 929	10 667	66 742	36 516	8 131	5 430	11 222	-	108	-
Transformation output	55 993	40 627	3 232	3 802	0	12 544	139	138	2 648	5 174	327	4 829	-	1	9
Consumption of the energy branch	2 898	1 138	11	11	-	674	94	-	35	288	-	74	-	5	4
Available for final consumption	99 587	60 604	5 389	9 842	427	18 040	1 924	1 618	3 416	6 577	1 360	5 682	66	122	139
Final non-energy consumption	1 841	1 599	0	-	-	272	139	0	0	0	-	0	-	3	-
Final energy consumption	95 525	58 651	5 200	9 023	412	17 056	390	1 596	2 778	7 871	1 306	5 615	65	118	136
	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Primary production	-	13 914	:	-	1 207	162 832	0	4 133	3 424	5 711	910	31 513	26 611	33 289	65 831
Net imports	160	1 556	:	13 483	4 929	-25 060	4 807	506	5 698	6 587	3 445	34 764	4 048	3 641	8 303
Gross inland consumption	160	15 289	:	13 382	6 849	139 709	5 158	5 260	9 186	14 562	4 516	63 969	31 425	34 631	75 588
Transformation input	0	14 619	:	13 555	5 816	124 701	4 895	5 109	7 894	12 810	3 915	61 189	30 414	32 574	57 437
-conventional thermal power stations	0	13 169	:	9 156	3 172	103 369	4 788	5 109	4 931	10 663	1 056	50 928	27 787	30 148	54 999
Transformation output	-	772	:	2 214	1 394	8 946	67	-	1 697	909	1 148	6 003	1 842	1 413	2 589
Consumption of the energy branch	-	0	:	0	2	1 615	-	0	31	-	-	54	23	375	0
Available for final consumption	160	1 442	:	2 041	2 425	22 339	330	151	2 958	2 661	1 749	8 729	2 830	3 095	20 740
Final non-energy consumption	-	-	:	148	1 158	100	0	-	-	0	21	0	-	502	-
Final energy consumption	154	1 439	:	1 992	1 028	23 114	329	150	2 439	2 536	1 767	9 011	1 633	1 610	20 740

Source: Eurostat, Energy statistics (theme8/sirene/es_quant/es_10/es_101a).

Table 1.9

Interior flows of crude oil and petroleum products, 2001 (thousand toe)

	EU-25	EU-15	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT
Primary production	149 854	146 531	-	183	16 887	3 278	263	191	338	1 786	-	4 097	-	-	515
Net imports	540 858	495 856	29 335	8 121	-6 433	129 315	729	19 699	72 804	94 957	8 260	84 825	2 498	1 423	2 039
Bunkers	46 419	45 037	5 429	-	1 122	2 280	102	3 584	6 884	2 767	161	2 900	193	197	102
Gross inland consumption	644 803	596 907	23 708	8 147	8 910	130 475	919	16 419	67 194	93 830	7 862	87 295	2 376	1 210	2 622
Transformation input	746 597	695 369	40 514	6 685	9 529	118 312	113	23 529	63 635	92 043	4 643	114 615	2 050	110	7 297
-conventional thermal power stations	37 079	33 710	260	223	1 336	1 163	12	1 934	5 266	1 000	1 247	17 230	894	52	189
-refineries	706 502	659 364	40 254	6 357	8 143	116 365	1	21 595	58 349	91 024	3 396	97 381	1 156	1	6 861
Transformation output	695 999	649 583	39 883	6 309	7 945	114 292	1	21 483	57 806	90 683	3 358	96 535	1 151	2	6 732
Consumption of the energy branch	37 141	34 154	1 509	350	197	6 542	16	1 068	3 859	5 355	221	5 103	19	11	481
Available for final consumption	555 773	515 617	21 568	7 416	7 129	119 913	791	13 305	57 506	85 770	6 359	64 112	1 458	1 091	1 576
Final non-energy consumption	90 068	83 163	5 442	2 369	264	22 319	44	685	9 372	12 707	0	9 605	89	60	167
Final energy consumption	471 828	438 291	16 072	5 246	6 747	98 561	819	12 824	47 182	75 431	6 846	56 559	1 344	1 111	1 374
	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Primary production	-	1 540	-	2 263	1 012	767	-	1	54	0	0	116 679	34	6 238	2 520
Net imports	2 342	4 757	1 361	41 605	11 466	18 790	16 642	2 310	2 974	9 992	16 344	-35 297	4 065	5 124	26 476
Bunkers	-	-	521	15 140	-	267	483	-	-	584	1 429	2 274	96	-	237
Gross inland consumption	2 370	6 612	840	28 746	12 906	19 744	15 704	2 339	3 087	8 765	14 913	77 810	4 030	11 146	28 662
Transformation input	0	8 658	563	83 245	10 025	19 742	15 086	191	5 819	12 578	21 664	85 951	5 806	14 898	28 187
-conventional thermal power stations	0	1 084	563	647	412	230	2 007	32	90	138	419	651	203	2 498	2 627
-refineries	-	7 551	-	82 598	9 516	19 330	13 079	155	5 726	12 117	20 918	84 629	5 564	12 207	25 560
Transformation output	-	7 450	-	81 306	9 349	18 411	13 061	154	6 206	11 943	19 846	82 093	5 411	12 152	25 374
Consumption of the energy branch	0	373	-	3 158	734	1 318	911	0	419	499	267	4 731	160	846	1 648
Available for final consumption	2 370	5 031	277	23 649	11 488	17 095	12 768	2 302	3 119	7 631	12 828	69 221	3 475	7 554	24 201
Final non-energy consumption	12	1 004	0	7 590	1 427	2 090	1 940	205	877	1 038	1 915	8 847	663	895	3 458
Final energy consumption	2 356	4 035	277	15 893	10 077	14 974	10 712	2 250	2 107	7 557	10 933	60 541	3 059	6 070	20 611

Source: Eurostat, Energy statistics (theme8/sirene/es_quant/es_10/es_102a).

Table 1.10

Interior flows of gas, 2001 (thousand toe)

	EU-25	EU-15	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT
Primary production	197 220	190 973	0	122	7 589	15 932	-	40	471	1 359	659	12 483	:	-	-
Net imports	182 014	148 881	13 134	7 736	-3 054	58 197	710	1 670	15 827	31 456	2 925	44 810	:	1 087	2 171
Gross inland consumption	383 972	343 727	13 180	8 032	4 631	75 591	710	1 683	16 400	33 793	3 584	58 099	:	1 270	2 171
Transformation input	105 353	95 300	3 450	1 766	2 266	16 231	463	1 265	3 177	3 330	1 851	19 046	:	837	1 119
-conventional thermal power stations	98 803	91 672	3 430	1 234	2 189	15 032	233	1 265	3 177	3 330	1 851	19 046	:	497	778
Transformation output	21 958	16 979	1 337	1 435	0	5 474	93	0	1 002	2 521	0	1 240	:	-	-
Exchanges, transfers, returns	0	0	-	-	0	0	0	-	0	0	-	-	:	-	-
Consumption of the energy branch	17 885	14 382	284	369	582	1 702	20	31	240	851	0	310	:	21	3
Distribution losses (1)	3 437	2 494	-	200	4	753	0	10	110	192	47	191	:	11	33
Available for final consumption (1)	278 579	248 530	10 782	7 132	1 779	62 379	321	377	13 875	31 942	1 686	39 792	:	400	1 016
Final non-energy consumption	13 070	10 121	741	-	-	2 150	153	59	505	1 900	451	993	:	-	626
Final energy consumption	262 328	234 997	10 070	7 088	1 771	56 697	167	317	13 370	30 084	1 234	38 798	:	387	390
	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Primary production	-	2 477	:	55 713	1 471	3 492	-	5	151	-	-	95 257	16	10 974	257
Net imports	695	7 783	:	-20 172	5 008	7 178	2 252	800	5 666	3 707	767	-8 340	2 458	2 308	13 218
Gross inland consumption	695	10 711	:	35 547	6 930	10 377	2 255	806	6 168	3 707	767	86 866	2 465	13 282	13 372
Transformation input	57	2 931	:	11 839	1 972	1 201	1 215	124	1 611	2 549	517	26 533	962	4 210	9 261
-conventional thermal power stations	57	2 432	:	11 839	1 868	905	1 202	61	993	2 367	451	24 567	719	2 959	9 261
Transformation output	0	256	:	1 298	694	2 414	27	-	780	547	673	2 166	346	694	1 162
Exchanges, transfers, returns	-	-	:	-	-	-	0	-	-	-	0	0	-	-	-
Consumption of the energy branch	-	208	:	1 575	826	1 857	4	5	1 021	267	107	7 602	262	1 296	298
Distribution losses	0	338	:	0	256	318	2	-	42	0	75	856	81	392	17
Available for final consumption	637	7 490	:	23 431	4 569	9 414	1 061	-	4 276	1 438	742	54 041	1 506	8 079	4 958
Final non-energy consumption	-	331	:	2 211	235	1 710	-	108	22	33	-	843	541	877	99
Final energy consumption	637	7 099	:	21 546	4 334	7 520	1 049	569	4 111	1 379	724	52 985	933	7 085	4 858

(1) EU-15 and France, provisional.

Source: Eurostat, Energy statistics (theme8/sirene/es_quant/es_10/es_103a).

Table 1.11

Interior flows of electricity, 2001 (thousand toe)

	EU-25	EU-15	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT
Net imports	1 037	2 871	783	-820	-49	234	-53	215	297	-5 880	-22	4 160	-	162	-341
Gross inland consumption	1 037	2 871	783	-820	-49	234	-53	215	297	-5 880	-22	4 160	-	162	-341
Transformation output	223 163	195 916	6 708	6 206	2 870	46 965	729	4 318	16 093	40 407	2 038	19 251	305	124	1 207
-conventional thermal power stations	141 155	119 290	2 723	4 938	2 870	32 236	729	4 318	10 616	4 202	2 038	19 251	305	124	230
-nuclear power stations	82 009	76 626	3 985	1 268	-	14 730	-	-	5 478	36 206	-	0	-	-	977
Exchanges, transfers, returns	32 724	31 308	41	177	372	2 661	1	245	4 126	6 459	80	4 126	-	244	28
Consumption of the energy branch (1)	23 096	18 940	490	768	184	4 889	118	524	1 500	4 400	133	2 028	18	56	222
Distribution losses (1)	17 465	14 899	323	422	171	2 822	117	426	1 738	2 580	164	1 663	20	85	122
Available for final consumption (1)	216 364	196 255	6 719	4 373	2 839	42 150	441	3 829	17 279	34 006	1 800	23 846	267	389	551
Final energy consumption (1)	216 363	196 255	6 719	4 373	2 839	42 150	441	3 829	17 279	34 006	1 800	23 846	267	389	551
	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Net imports	485	273	-	1 486	18	-579	21	-152	-323	856	-627	894	-595	-113	356
Gross inland consumption	485	273	-	1 486	18	-579	21	-152	-323	856	-627	894	-595	-113	356
Transformation output	29	3 115	171	7 980	1 756	12 157	2 741	917	2 315	5 260	7 055	32 443	3 594	3 349	8 483
-conventional thermal power stations	29	1 901	171	7 638	1 756	12 157	2 741	465	845	3 302	855	24 715	1 913	2 880	8 483
-nuclear power stations	-	1 215	-	342	-	-	-	452	1 471	1 958	6 200	7 727	1 681	468	-
Exchanges, transfers, returns	4	16	-	81	3 470	201	1 229	326	424	1 141	6 839	432	149	1 283	2 070
Consumption of the energy branch	19	376	10	636	348	2 230	207	88	271	351	845	2 386	511	815	707
Distribution losses	15	402	0	361	263	1 221	349	63	114	260	1 015	2 750	527	586	2 006
Available for final consumption	484	2 626	161	8 549	4 634	8 328	3 434	941	2 031	6 646	11 408	28 633	2 110	3 118	8 196
Final energy consumption	484	2 626	161	8 549	4 634	8 328	3 434	941	2 031	6 646	11 408	28 632	2 109	3 118	8 196

(1) EU-25, EU-15 and Germany, provisional.

Source: Eurostat, Energy statistics (theme8/sirene/es_quant/es_10/es_105a).

Table 1.12

Interior flows of other energy sources, 2001 (thousand toe)

	EU-25	EU-15	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT
NUCLEAR ENERGY															
Primary production	:	229 878	11 956	3 805	:	44 189	:	:	16 434	108 617	:	0	:	:	2 931
DERIVED HEAT (1)															
Transformation output	:	26 707	420	3 494	2 959	9 950	687	26	74	:	:	:	:	864	1 212
-conventional thermal power stations	:	17 700	420	2 584	2 394	7 101	230	26	74	:	:	:	:	329	502
Consumption of the energy branch	:	289	-	367	57	232	10	-	-	:	:	:	:	33	41
Distribution losses	:	2 533	33	168	582	982	118	-	-	:	:	:	:	161	287
Available for final consumption	:	23 888	387	2 960	2 324	8 737	559	26	74	:	:	:	:	671	884
RENEWABLE ENERGIES															
Primary production (1)	:	91 374	681	689	2 156	9 859	551	1 318	8 262	18 046	261	13 480	44	1 701	658
Transformation input	:	18 878	353	286	1 198	2 235	104	31	714	1 823	24	3 629	-	222	57
-conventional thermal power stations	:	15 910	337	276	785	1 580	3	31	714	1 561	24	3 629	-	6	-
Exchanges, transfers, returns	:	-31 317	-41	-177	-372	-2 666	-1	-245	-4 127	-6 459	-80	-4 128	-	-244	-28
Available for final consumption (1)	:	41 265	389	226	627	4 957	434	1 042	3 418	9 763	157	5 723	44	1 031	596
	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
NUCLEAR ENERGY															
Primary production	:	3 368	:	1 026	:	:	:	1 356	4 412	5 874	18 601	23 182	5 044	1 405	:
DERIVED HEAT															
Transformation output	24	1 726	:	2 518	1 167	8 873	86	212	743	3 002	3 982	2 498	1 310	5 157	:
-conventional thermal power stations	24	1 289	:	2 510	761	4 986	86	162	714	2 290	2 014	0	956	3 467	:
Consumption of the energy branch	-	208	:	-	0	1 256	-	18	135	-	0	0	178	515	:
Distribution losses	-	-	:	378	123	-	-	0	41	220	215	-	186	681	:
Available for final consumption	24	1 518	:	2 140	1 044	7 618	86	194	568	2 782	3 767	2 498	945	3 960	:
RENEWABLE ENERGIES															
Primary production	50	407	:	1 610	6 672	4 071	3 896	776	722	7 574	14 813	2 697	696	3 413	9 062
Transformation input	30	65	:	1 302	678	130	243	24	-	1 615	3 312	1 691	0	9	164
-conventional thermal power stations	30	63	:	1 302	378	114	243	16	-	1 486	2 190	1 621	-	0	164
Exchanges, transfers, returns	-4	-16	:	-82	-3 471	-201	-1 229	-326	-424	-1 141	-6 839	-432	-149	-1 283	-2 070
Available for final consumption	16	326	:	227	2 470	3 738	2 424	426	298	4 818	4 661	573	543	2 119	6 828

(1) EU-15 and Germany, provisional.

Source: Eurostat, Energy statistics (theme8/sirene/es_quant/es_10).

Table 1.13

Mining, quarrying and processing of energy materials, energy and water supply
Main indicators, 2001

	EU-25	EU-15	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT
MINING AND QUARRYING OF ENERGY PRODUCING MATERIALS (NACE Subsection CA)															
Number of persons employed (thousands)	:	152.7	0.1	49.1	1.0	70.2	5.9	0.2	16.7	9.4	1.3	6.5	0.0	1.5	1.5
Value added (EUR million)	57 665	51 764	9	805	3 429	4 572	53	34	792	530	159	3 303	0	14	62
Gross investment in tangible goods (EUR million)	:	:	9	230	818	493	17	:	205	610	:	716	0	4	28
Simple wage adjusted labour productivity (%)	469	571	251	175	5 602	123	137	:	132	86	:	850	~	216	594
MANUFACTURE OF COKE, REFINED PETROLEUM PRODUCTS AND NUCLEAR FUEL (NACE Division 23) (1)															
Number of persons employed (thousands)	:	139.8	5.0	3.6	0.2	23.9	:	3.3	8.4	28.7	0.2	24.6	0.1	:	:
Value added (EUR million)	27 932	25 701	1 274	99	20	6 626	-9	1 060	1 819	3 287	11	3 675	14	:	:
Gross investment in tangible goods (EUR million)	:	:	144	78	2	667	1	:	396	802	:	890	1	:	:
Simple wage adjusted labour productivity (%)	291	286	285	270	185	345	-338	:	388	158	:	311	200	:	:
ELECTRICITY, GAS, STEAM AND HOT WATER SUPPLY (NACE Division 40) (2)															
Number of persons employed (thousands)	:	838.5	19.4	48.0	13.3	238.8	:	22.1	38.8	167.5	9.8	115.4	:	16.5	25.1
Value added (EUR million)	133 928	124 212	5 119	2 097	2 100	29 850	122	2 045	10 131	19 723	1 216	17 258	:	389	373
Gross investment in tangible goods (EUR million)	:	:	1 055	1 028	539	11 597	99	:	3 668	5 587	:	5 844	:	166	170
Simple wage adjusted labour productivity (%)	263	263	307	436	467	189	146	:	528	199	:	336	:	361	225
	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
MINING AND QUARRYING OF ENERGY PRODUCING MATERIALS (NACE Subsection CA) (3)															
Number of persons employed (thousands)	0	2	0	6	1	171	0	0	9	1	1	39	22	141	:
Value added (EUR million)	0	40	0	5 592	160	4 617	-1	110	125	107	35	32 918	127	108	:
Gross investment in tangible goods (EUR million)	:	9	0	779	30	443	0	25	59	27	8	6 986	23	1 279	:
Simple wage adjusted labour productivity (%)	~	124	~	1 495	372	183	-73	105	235	302	163	1 057	145	15	:
MANUFACTURE OF COKE, REFINED PETROLEUM PRODUCTS AND NUCLEAR FUEL (NACE Division 23) (4)															
Number of persons employed (thousands)	:	15	:	6	:	:	3	:	:	4	3	27	:	14	:
Value added (EUR million)	0	725	:	1 470	:	1 629	405	12	:	451	219	4 659	:	230	:
Gross investment in tangible goods (EUR million)	:	288	:	113	:	451	342	1	:	121	101	1 192	48	105	:
Simple wage adjusted labour productivity (%)	:	401	:	343	:	570	313	122	:	221	175	300	:	300	:
ELECTRICITY, GAS, STEAM AND HOT WATER SUPPLY (NACE Division 40) (5)															
Number of persons employed (thousands)	1	43	:	27	32	107	14	:	31	15	23	102	40	129	:
Value added (EUR million)	214	1 342	:	5 727	4 279	6 837	2 531	164	1 092	1 902	4 726	17 425	515	908	:
Gross investment in tangible goods (EUR million)	:	599	:	916	1 121	1 569	826	184	426	498	1 650	6 804	216	4 151	:
Simple wage adjusted labour productivity (%)	308	255	:	317	209	513	418	105	435	309	457	351	246	143	:

(1) Denmark and Estonia, 1999.

(2) EU-25 and EU-15, 2000 except the number of persons employed; Germany, 2000 except the number of persons employed and investment; Estonia, 1999.

(3) Poland, NACE Groups 10.1 and 10.2 only; Portugal and Slovenia, 1999.

(4) Hungary and Slovenia, 1999; Poland, 2000.

(5) Poland, NACE Group 40.1 only.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms).

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 are used in jewellery and for some industrial processes.

This chapter also covers the mining of metal ores, although as shown later, this is a small subsector in the EU, and metal processing sectors within the EU rely heavily on imports. EU metal ore mining faces strong competition from large-scale operations in non-Community countries with lower cost bases.

In 2000 the European Commission published a communication ⁽¹⁾ on promoting sustainability in the non-energy extractive industry. One of the initiatives taken since then was the adoption by the Commission in June 2003 of a proposal for a directive ⁽²⁾ of the European Parliament and of the Council on the management of waste from extractive industries. The aim is to help prevent serious accidents or pollution resulting from the mismanagement of mining waste.

⁽¹⁾ COM (2000) 265.

⁽²⁾ COM (2003) 319.

STRUCTURAL PROFILE

Non-energy mining and quarrying generated EUR 13.8 billion of value added in the EU-25 in 2001, 19.3 % of all mining and quarrying. The 10 new Member States collectively contributed 10.5 % of the total, similar to their 10.2 % share in the mining and quarrying of energy producing materials, but nearly double their 5.6 % share of manufacturing value added. The enlargement of the EU not only increased the size of the non-energy mining and quarrying sector by just over 10 %, but also changed its structure. In 2001, the mining of metal ores (NACE Division 13) accounted for 4.9 % of the value added generated in the non-energy mining and quarrying sector in the EU-15, but 9.7 % of sectoral value added in the EU-25. The significance of this can be seen from another perspective: value added in the mining of metal ores in the 10 new Member States in 2001 was EUR 739.9 million, 55.2 % of the EU-25 total, whereas in the other mining and quarrying sector (NACE Division 14), it was EUR 713.9 million, 5.7 % of the EU-25 total.

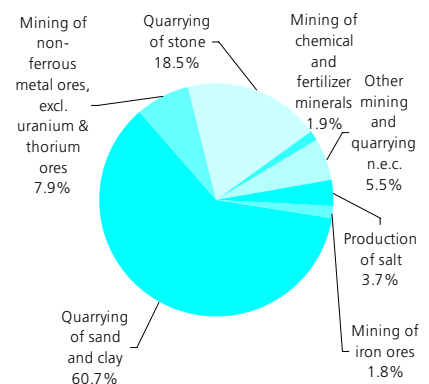
Looking in more detail it can be seen that the main contribution of the ten new Member States to the mining of metal ores was in the mining of non-ferrous metal ores (NACE Group 13.2), where the combined contribution of these 10 countries was EUR 732.5 million of value added, 67.1 % of the EU-25 total. As a result, iron ore mining (NACE Group 13.1) accounted for 18.5 % of metal ore mining in the EU-25 in value added terms, whereas the corresponding proportion for the EU-15 was 40.0 %.

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 stone, sand, salt and other minerals. Together these NACE divisions make up NACE Subsection CB. Mineral prospecting is not covered by these activities.

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.

Figure 2.1
Mining and quarrying except energy producing materials (NACE Subsection CB)
Share of value added at factor cost, EU-25, 2001



Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 2.1
Mining and quarrying except energy producing materials (NACE Subsection CB)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to manufacturing (EU-25=100) (1)	Largest number of persons employed (thousands) (1)	Main EU-25 trading partners: origin of imports, 2002 (EUR billion)	Main EU-25 trading partners: destination of exports, 2002 (EUR billion)
1	United Kingdom (2.8)	Cyprus (518)	Germany (37.0)	Brazil (2.0)	India (3.9)
2	Germany (2.4)	Malta (518)	United Kingdom (32.8)	South Africa (2.0)	Israel (2.2)
3	France (1.7)	Luxembourg (518)	France (31.1)	Australia (1.3)	China (0.5)
4	Italy (1.5)	Belgium (502)	Italy (30.3)	Canada (1.2)	United States (0.5)
5	Spain (1.3)	Sweden (486)	Spain (25.4)	Zaire (1.1)	Hong Kong (0.3)

(1) Poland, Portugal and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Within other mining and quarrying, enlargement had a much smaller effect on the structure of the subsector, with the share of each of the five groups the same for EU-15 as for EU-25, plus or minus one percentage point. The largest part of this subsector was the quarrying of sand and clay (NACE Group 14.2) which generated more than two thirds (67.2 %) of the EU-25's value added in this subsector, followed by the quarrying of stone (NACE Group 14.1), with one fifth (20.5 %) of the total. The mining of chemical and fertiliser minerals and the production of salt (NACE Groups 14.3 and 14.4) together accounted for a combined share of 6.1 % of value added, the same amount as the miscellaneous category of other mining and quarrying not elsewhere classified (NACE Group 14.5).

Of the 18 Member States with data available ⁽³⁾ for metal ore mining (NACE Division 13), ten reported no activity in this subsector, namely Denmark, Germany, Estonia, Cyprus, Latvia, Lithuania, Luxembourg, Malta, the Netherlands and the United Kingdom. Within the remaining EU-15 Member States, Sweden had the largest metal ore mining activity, with EUR 398.1 million of value added in 2001, 29.7 % of the EU-25 total. Although detailed data are not available for Poland, the estimated Polish share of EU-25 value added in this subsector was in excess of 45 %. Given the more widespread availability of construction and industrial mineral deposits, the share of each Member State in the EU-25's other mining and quarrying subsector was more closely related to the size of each country: the United Kingdom (22.4 %), Germany (19.4 %), France (13.6 %), Italy (12.2 %) and Spain (9.9 %) headed the list in value added terms.

⁽³⁾ Belgium, Czech Republic, Austria, Poland, Portugal, Slovenia and Finland, not available.

The whole non-energy mining and quarrying sector employed 203 100 persons in the EU-15 in 2001, of which 94.7 % (192 400) were paid employees. The total number of persons employed in this sector in the EU-25 is not yet available, but the number of paid employees was 255 200. This sector accounted for 55.8 % of the paid employees in all mining and quarrying activities in the EU-15, while in the EU-25 the share was just 38.8 %.

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 was characterised by a high proportion of large enterprises (250 or more persons employed) that collectively generated 92.6 % of this subsector's value added in the EU-25 in 2001; micro and small enterprises (less than 50 persons employed) contributed less than 1 %

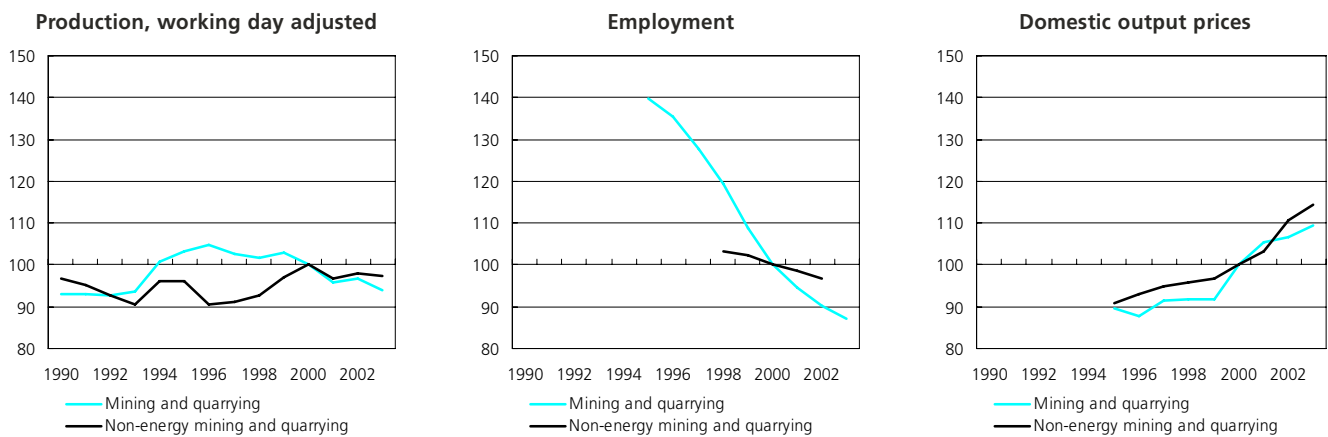
of the total. The local sourcing of many construction materials, resulting from widespread availability, relatively high transport costs and low barriers to entry, is reflected in the importance of smaller enterprises in related quarrying activities. Micro and small enterprises accounted for 58.7 % of value added in the quarrying of stone (NACE Group 14.1) and 47.3 % in the quarrying of sand and clay (NACE Group 14.2). In the case of stone quarrying, large enterprises generated just under 10 % of value added, the lowest proportion across any of the mining and quarrying NACE groups. On the other hand, the mining of chemical and fertiliser materials and salt production (NACE Groups 14.3 and 14.4) were more reliant on large enterprises, although not to the same extent as metal ore mining. In both of these activities large enterprises generated more than half of the value added.

Table 2.2
Share of size-class in value added, EU-25, 2001 (%)

	Micro	Small	Medium-sized	Large	Total
Mining and quarrying, except of energy producing materials (NACE Subsection CB)	10.7	32.6	25.5	31.2	100
Mining of metal ores (Division 13)	0.2	0.6	6.5	92.6	100
Mining of iron ores (Group 13.1)	0.6	1.1	4.4	94.0	100
Mining of non-ferrous metal ores, except uranium and thorium ores (Group 13.2)	0.2	0.5	7.0	92.3	100
Other mining and quarrying (Division 14)	11.8	36.0	27.6	24.6	100
Quarrying of stone (Group 14.1)	17.1	41.5	31.4	9.9	100
Quarrying of sand and clay (Group 14.2)	10.8	36.5	25.4	27.3	100
Mining of chemical and fertilizer minerals (Group 14.3)	5.9	15.3	22.6	56.2	100
Production of salt (Group 14.4)	1.2	9.9	31.3	57.6	100
Other mining and quarrying n.e.c. (Group 14.5)	13.9	36.6	37.7	11.7	100

Source: Eurostat, Structural Business Statistics (theme4/sbs/sizclass/indus_ms).

Figure 2.2
Mining and quarrying except energy producing materials (NACE Subsection CB)
Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

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 2.5 % per annum. This was in contrast to the mining and quarrying of energy producing materials, where an average decline of 1.5 % per annum was registered over the same period. Since 2000 the production index for non-energy mining and quarrying displayed no clear direction, recording a sharp contraction in 2001 (-3.4 %), followed by modest growth in 2002 (1.3 %) and an even more modest contraction in 2003 (-0.7 %). Overall, the evolution of production for non-energy mining and quarrying followed a similar progression to that recorded for the mining and quarrying of energy producing materials.

Unsurprisingly, as it dominates non-energy mining and quarrying, other mining and quarrying recorded a very similar development to the evolution of the production index for the whole of non-energy mining and quarrying. However, 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 a decline of 3.3 % per annum in output between 1995 (the beginning of the series) and 2001. Much of the output growth recorded in the mining of metal ores in 2002 (1.9 %) was short-lived, as 2003 saw a return to negative rates of change (-1.4 %).

Output prices are available for the EU-15 for both parts of non-energy mining and quarrying. The activity of other mining and quarrying experienced regular year-on-year price growth since 1981 (the beginning of the series), with average growth of 2.7 % per annum during the 10 years to 2003. For the mining of metal ores, price developments were much less regular, as prices grew on average by 7.5 % per annum between 1992 and 1995, before recording alternating positive and negative price changes in excess of +/-10 % for four of the next five years. Since 2000 the development of domestic output prices for metal ore mining were more subdued, with growth of 2.4 % in 2001 followed by more moderate price reductions in 2002 (-1.3 %) and 2003 (-0.2 %).

LABOUR AND PRODUCTIVITY

Like nearly all mining and quarrying activities, the non-energy mining and quarrying workforce in the EU-15 was characterised by a relatively high reliance on full-time, male, paid employment. In metal ore mining, 96.2 % of the workforce was male and in other mining and quarrying the proportion was 90.0 %, respectively the highest and fourth highest of all NACE divisions in the business economy (NACE Sections C to K). Some 92.7 % of the non-energy mining and quarrying workforce were paid employees, below the 95.0 % average for all mining and quarrying, but far above the 83.7 % average for the business economy. In metal ore mining the whole workforce (100.0 %) worked on a full-time basis, and in other mining and quarrying the proportion was 96.4 %, respectively the highest and fifth highest of all NACE divisions in the business economy.

The EU-15's non-energy mining and quarrying sector reported apparent labour productivity of EUR 60 800 per person employed in 2001. This was considerably below the mining and quarrying average (EUR 180 100) which is influenced by the very high values recorded for crude oil and natural gas extraction, but was higher, for example, than the mining of coal and lignite, and was also higher than the manufacturing average. Metal ore mining (EUR 51 200) recorded lower apparent labour productivity than other mining and quarrying (EUR 61 300), with salt production (EUR 69 000) and the quarrying of sand and clay (EUR 68 700) recording the highest values for this ratio.

Despite the relatively high apparent labour productivity, average personnel costs in 2001 were relatively low, EUR 33 700 per employee in the EU-15. This was lower than the mining and quarrying average and also below the manufacturing average. In contrast to apparent labour productivity, the mining of metal ores recorded higher average personnel costs than other mining and quarrying, EUR 38 700 per employee compared to EUR 33 300.

Table 2.3 Mining and quarrying except energy producing materials (NACE Subsection CB)
Labour force characteristics, 2002

	Share of men (%)	Share of full-time (%)	Share of employees (%)
EU-25	:	:	:
EU-15	90.4	96.6	92.7
BE	100.0	100.0	94.8
CZ	90.4	100.0	91.1
DK	:	:	:
DE	89.4	93.2	97.8
EE	:	:	:
EL	94.6	100.0	92.1
ES	93.7	100.0	93.0
FR	88.7	96.1	90.9
IE	97.1	98.6	92.2
IT	85.1	95.9	83.5
CY	:	:	:
LV	:	:	:
LT	:	:	:
LU	:	:	:
HU	95.1	100.0	100.0
MT	100.0	91.1	91.1
NL	:	:	:
AT	90.8	:	96.0
PL	:	:	:
PT	96.2	99.7	91.6
SI	:	:	:
SK	93.2	100.0	96.4
FI	93.6	100.0	77.1
SE	:	:	:
UK	89.4	95.1	97.3

Source: Eurostat, Labour Force Survey.

Table 2.4 Mining and quarrying except energy producing materials (NACE Subsection CB)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Mining and quarrying except energy producing materials	60.8	180.4	33.7
Mining of iron ores	70.1	145.6	48.1
Mining of non-ferrous metal ores, except uranium and thorium ores	43.4	124.5	34.8
Quarrying of stone	46.4	168.9	27.4
Quarrying of sand and clay	68.7	197.9	34.7
Mining of chemical and fertilizer minerals	44.6	99.0	45.0
Production of salt	69.0	165.3	41.7
Other mining and quarrying n.e.c.	55.5	165.0	33.6

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 2.5
Metal ores and other mining and quarrying products (CPA Subsection CB)
External trade, EU-25, 2002 (EUR million)

	Exports	Imports	Trade balance	Cover ratio (%)
Metal ores and other mining and quarrying products	12 310	16 806	-4 496	73.2
Iron ores	165	641	-476	25.8
Non-ferrous metal ores, except uranium and thorium ores	187	3 595	-3 408	5.2
Stone	477	769	-292	62.1
Sand and clay	364	873	-509	41.7
Chemical and fertilizer minerals	195	707	-512	27.6
Salt	55	47	8	117.4
Other mining and quarrying products n.e.c.	10 866	10 173	693	106.8

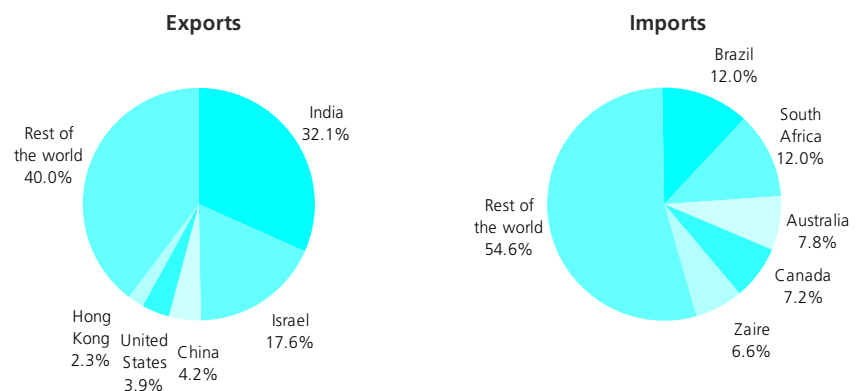
Source: Eurostat, Comext.

EXTERNAL TRADE

The EU-25's exports of metal ores and other mining and quarrying products (CPA Subsection CB) were valued at EUR 12.3 billion in 2002, and were exceeded by imports valued at EUR 16.8 billion. The resulting trade deficit of EUR 4.5 billion was split EUR 3.9 billion for metal ores (CPA Division 13) and EUR 612.1 million for other mining and quarrying products (CPA Division 14). The only CPA groups among metal ores and other mining and quarrying products for which the EU-25 did not record a deficit in 2002 were salt (CPA Group 14.4) and other mining and quarrying products not elsewhere classified (CPA Group 14.5), with trade surpluses of EUR 8.2 million and EUR 693.1 million respectively.

The United Kingdom recorded the largest trade surplus (intra- and extra-EU combined) of metal ores and other mining and quarrying products in 2002, valued at EUR 711.1 million, while Sweden, Greece, Portugal and Cyprus were the only other Member States to record a surplus. Germany (EUR 2.5 billion) and Italy (EUR 1.6 billion) recorded the largest deficits, with Spain, France, Belgium, Finland and the Netherlands all recording deficits between EUR 0.75 billion and EUR 1.2 billion.

Figure 2.3
Metal ores and other mining and quarrying products (CPA Subsection CB)
Share in extra-EU trade, 2002



Source: Eurostat, Comext

Table 2.6

Mining of metal ores (NACE Division 13)
Main indicators, 2001

	BE	CZ (1)	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	:	0	0	0	0	91	95	49	161	12	0	0	0	0
Value added at factor cost (EUR million)	:	-2	0	0	0	52	30	16	41	-2	0	0	0	0
Purchases of goods and services (EUR million)	:	:	0	0	0	:	69	33	:	11	0	0	0	0
Gross investment in tangible goods (EUR million)	:	:	0.0	0.0	0.0	:	13.8	2.2	:	0.1	0.0	0.0	0.0	:
Number of persons employed (thousands)	:	0.1	0.0	0.0	0.0	0.9	0.9	0.6	1.1	0.3	0.0	0.0	0.0	0.0
App. labour productivity (EUR thous./pers. emp.)	:	-12.9	:	:	:	55.7	32.7	28.6	38.1	-7.2	:	:	:	:
Average personnel costs (EUR thous./employee)	:	21.7	:	:	:	:	36.9	30.2	:	34.1	:	:	:	:
Wage adjusted labour productivity (%)	:	-59.1	:	:	:	:	88.5	94.8	:	-21.1	:	:	:	:
Gross operating rate (%)	:	-1 200	:	:	:	:	-3.8	-1.4	:	-163.3	:	:	:	:
	HU	MT	NL	AT	PL	PT (2)	SI	SK	FI (2)	SE	UK	BG	RO	TR
Production (EUR million)	28	0	0	:	:	115	:	24	82	1 319	0	209	:	:
Value added at factor cost (EUR million)	11	0	0	:	:	59	:	8	23	398	0	47	:	:
Purchases of goods and services (EUR million)	16	0	0	:	:	56	:	16	59	928	0	173	:	:
Gross investment in tangible goods (EUR million)	1.9	0.0	0.0	:	:	10.1	:	0.9	3.0	169.1	0.2	15.1	:	:
Number of persons employed (thousands)	1.0	0.0	0.0	:	:	1.3	:	1.6	0.5	5.9	0.0	8.9	:	:
App. labour productivity (EUR thous./pers. emp.)	11.7	:	:	:	:	45.7	:	5.2	45.0	67.6	-1.1	5.3	:	:
Average personnel costs (EUR thous./employee)	10.1	:	:	:	:	25.0	:	4.6	44.8	41.7	7.6	3.9	:	:
Wage adjusted labour productivity (%)	116.5	:	:	:	:	182.9	:	112.1	100.5	162.2	-14.0	133.3	:	:
Gross operating rate (%)	5.8	:	:	:	:	23.9	:	3.6	0.1	11.8	-119.0	5.6	:	:

(1) 2000.

(2) 1999.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 2.7

Other mining and quarrying (NACE Division 14)
Main indicators, 2001

	BE	CZ (1)	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	:	268	261	5 321	13	315	2 924	5 324	646	4 031	47	8	28	60
Value added at factor cost (EUR million)	:	109	111	2 422	5	164	1 227	1 693	234	1 517	24	5	11	28
Purchases of goods and services (EUR million) (3)	:	:	0	3 256	8	:	1 745	3 744	400	2 575	21	4	17	32
Gross investment in tangible goods (EUR million) (3)	:	:	19.3	448.7	1.8	:	322.8	434.5	59.6	346.9	15.3	0.6	3.2	:
Number of persons employed (thousands)	:	7.7	1.5	37.0	0.5	3.3	24.5	30.5	2.9	30.0	0.6	0.5	1.3	0.3
App. labour productivity (EUR thous./pers. emp.)	:	14.1	75.8	65.4	10.9	49.8	50.1	55.5	80.8	50.6	38.0	10.9	8.1	96.0
Average personnel costs (EUR thous./employee) (4)	:	6.9	39.7	41.5	6.0	:	24.5	36.3	35.3	27.8	20.8	4.7	5.0	40.6
Wage adjusted labour productivity (%) (4)	:	206.3	191.2	157.8	180.6	:	204.0	152.6	181.7	181.9	192.9	229.6	162.4	236.4
Gross operating rate (%) (3)	:	20.7	19.8	16.4	17.4	:	22.5	10.7	13.7	21.2	23.3	35.1	14.9	26.7
	HU	MT	NL	AT	PL	PT	SI	SK	FI (2)	SE	UK	BG	RO (1)	TR
Production (EUR million)	129	12	749	:	:	884	:	68	268	382	7 478	90	128	:
Value added at factor cost (EUR million)	59	7	242	:	:	370	:	26	104	140	2 787	30	58	:
Purchases of goods and services (EUR million)	88	5	674	:	:	540	:	45	188	258	4 915	64	84	:
Gross investment in tangible goods (EUR million)	13.5	0.6	61.7	:	:	199.2	:	5.7	42.1	54.9	524.8	14.7	25.1	:
Number of persons employed (thousands)	2.9	0.4	2.8	:	:	13.6	:	2.8	1.8	2.2	32.8	6.6	13.6	:
App. labour productivity (EUR thous./pers. emp.)	20.3	19.0	86.7	:	:	27.3	:	9.3	59.0	63.1	85.1	4.6	4.2	:
Average personnel costs (EUR thous./employee)	8.3	11.6	41.9	:	:	13.7	:	5.6	29.4	36.2	37.5	2.6	3.2	:
Wage adjusted labour productivity (%)	246.0	164.4	207.0	:	:	199.3	:	168.2	200.6	174.3	227.1	173.1	132.7	:
Gross operating rate (%)	24.2	29.7	14.4	:	:	21.3	:	14.8	19.5	17.3	20.4	14.8	12.6	:

(1) 2000.

(2) 1999.

(3) Ireland, 1999.

(4) Cyprus, 2000; Ireland, 1999.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Food, beverages and tobacco



Food and beverages traditionally accounted for the largest share of household consumption. However, these products have gradually been overtaken by housing, transport and communications, which now account for a larger share of household consumption in most of the EU-15 Member States, while this transition is only in its infancy in some of the 10 new Member States, where these products generally account for a much higher share of household consumption.

The agro-food subsector is a relatively fragmented one, with, on the one hand, a few very large, multinational corporations competing on the global market with global brands and a large product range (see Table 3.1), and, on the other hand, smaller enterprises often serving local markets concentrating on regional preferences for local specialities. As such, the agro-food subsector has a key role to play in the field of rural development and maintaining industrial activities in rural areas.

Besides its importance in economic terms, the agro-food subsector is at the forefront of issues such as environmental and consumer protection, for example in areas that cover the quality of products, food safety and animal welfare. The subsector is notably characterised by European standards on local products (protection of the origin by geographic indication) and ecological/biological production, as well as rules concerning labelling and genetically modified foods. In this domain, 2002 marked the creation of the European Food Safety Authority, to be based in Parma (Italy), providing independent scientific advice on all matters linked to food and feed safety ⁽¹⁾.

⁽¹⁾ For more information see <http://www.efsa.eu.int>.

Given its tight link with the agricultural sector, the agro-food subsector is greatly affected by the developments to the common agricultural policy (CAP). Agricultural prices on EU markets tend to generally be higher than on the world markets, translating into higher input prices for agro-food enterprises. However, the competitiveness of European enterprises is assisted by export subsidies for transformed agricultural products. Note that the statistics presented in this chapter concern only the activity of manufacturing enterprises, and hence exclude the production of final goods by agricultural establishments, which may be very important for some product categories, for example olive oil or wine.

This chapter refers to the processing of food, beverage and tobacco products and excludes the agricultural activities of growing, farming, rearing and hunting (which are covered in NACE Division 01). NACE Division 15 covers food products and beverages, while Division 16 covers tobacco products.

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 3.1
Largest agro-food enterprises in Europe ranked by sales in food and drink products, 2002-2003

	Country	Sales (EUR billion)	Products
Nestlé	CH	60.4	Cereal, dairy, beverages, confectionery
Unilever	NL/UK	27.4	Dairy, beverages, dressings, frozen foods, cooking products
Diageo	UK	15.0	Alcoholic beverages, dough products
Danone	FR	13.5	Dairy, beverages, biscuits and cereals
Heineken	NL	10.3	Alcoholic beverages
Cadbury Schweppes	UK	8.4	Beverages, confectionery
Parmalat	IT	7.6	Dairy, gourmet, biscuits, beverages
Interbrew	BE	6.9	Alcoholic beverages
Scottish & Newcastle	UK	6.7	Alcoholic beverages
Associated British Foods	UK	6.7	Sugar, starches, baking products, meat, dairy

Source: CIAA.

Table 3.2

Manufacture of food products, beverages and tobacco (NACE Subsection DA)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to manufacturing (EU-25=100) (1)	Largest number of persons employed (thousands) (2)	Main EU-25 trading partners: origin of imports, 2002 (EUR billion)	Main EU-25 trading partners: destination of exports, 2002 (EUR billion)
1	Germany (34.6)	Cyprus (274)	Germany (836.5)	Brazil (4.4)	United States (10.5)
2	United Kingdom (32.2)	Latvia (232)	France (648.9)	United States (3.7)	Japan (3.8)
3	France (28.6)	Lithuania (223)	United Kingdom (514.6)	Argentina (3.5)	Russian Federation (3.4)
4	Italy (18.0)	Greece (174)	Italy (440.0)	Norway (1.5)	Switzerland (2.9)
5	Spain (15.6)	Hungary (171)	Spain (377.0)	New Zealand (1.5)	Canada (1.5)

(1) Austria, Poland and Slovakia, not available.

(2) Austria, Poland, Slovenia and Slovakia, not available.

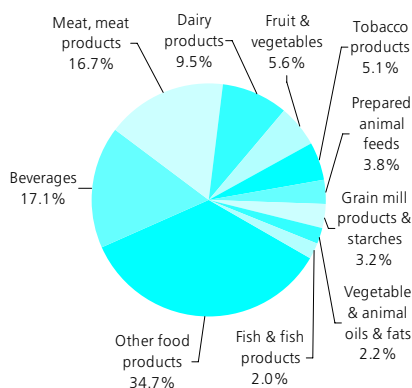
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

STRUCTURAL PROFILE

The manufacture of food, beverages and tobacco constitutes one of the largest industrial sectors in the EU economy in 2001. It generated some EUR 185.3 billion of value added in the EU-25 (of which EUR 17.2 billion originated from the 10 new Member States). As such, with 12.1 % of total manufacturing value added, the food, beverages and tobacco manufacturing sector was the second largest contributor to wealth creation among manufacturing NACE subsections, after the manufacture of basic metals and fabricated metal products (12.6 %, NACE Subsection DJ). Furthermore, the food, beverages and tobacco sector was also the second largest employer among manufacturing NACE subsections, with some 3.6 million persons employed in the EU-15 in 2001, which represented 12.6 % of the manufacturing workforce. The number of persons employed in the EU-25 was around 4.5 million ⁽²⁾.

⁽²⁾ Poland and Slovenia, number of employees; Slovakia, 2000.

Figure 3.1

Manufacture of food products, beverages and tobacco (NACE Subsection DA)
Share of value added at factor cost, EU-25, 2001


Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

The manufacture of food and beverages (NACE Division 15) was by far the largest subsector, accounting for EUR 175.8 billion of value added in the EU-25 in 2001, against only EUR 9.5 billion for the tobacco manufacturing subsector (NACE Division 16). At a more detailed level the largest NACE group within the manufacture of food, beverages and tobacco was the manufacture of other food products (NACE Group 15.8) with EUR 64.3 billion of value added in the EU-25 in 2001, representing over one third (34.7 %) of the sectoral total. This group includes notably the manufacturing of bread and pastry, chocolate and sugar confectionery, noodles and pasta, tea and coffee and all other non-defined or relatively new food processing activities. Beverages, both alcoholic and non-alcoholic (NACE Group 15.9) was the second largest group in terms of value added with EUR 31.7 billion in 2001 (17.1 % of the sectoral total), followed by meat processing (NACE Group 15.1) with EUR 31.0 billion (16.7 %) and dairy products (NACE Group 15.5) with EUR 17.5 billion (9.5 %). None of the remaining groups accounted for more than 6 % of the value added generated in the manufacture of food, beverages and tobacco.

Looking at the weight of these NACE groups in employment terms reveals that the relative share of other food products manufacturing (at 43.5 %) in the total number of persons employed in the EU-15 food, beverages and tobacco manufacturing sector was higher than in value added terms, as was the share of meat processing (21.8 %), whereas the contribution of beverages manufacturing (9.6 %) to the total number of persons employed in the sector was considerably lower than its share of value added.

The highest share of value added in the EU-25's food, beverages and tobacco manufacturing sector was generated in Germany, which reported EUR 34.6 billion of value added in 2001, equivalent to 18.7 % of the EU-25 total, just ahead of the United Kingdom (EUR 32.2 billion); France (EUR 28.6 billion), Italy (EUR 18.0 billion) and Spain (EUR 15.6 billion) followed.

Food, beverages and tobacco manufacturing activities were relatively important in the ten new Member States. Collectively they contributed 9.3 % of the EU-25's value added in this sector, which was their second highest share across all manufacturing NACE subsections; the manufacturing average was 5.6 %. Although data availability does not allow for a thorough analysis of specialisation, Cyprus was clearly specialised in the food, beverages and tobacco manufacturing sector when compared with manufacturing as a whole. Indeed, in that country, the share of food, beverages and tobacco manufacturing in total manufacturing value added was 2.3 times higher than the EU-25 average. High specialisation ratios were also reported by Latvia, Lithuania, Greece and Hungary, whereas Finland recorded the lowest specialisation ratio among the Member States ⁽³⁾.

⁽³⁾ Austria, Poland and Slovakia, not available.

Figure 3.2

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



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/eht).

The EU-25's working day adjusted production index for food, beverages and tobacco manufacturing displayed an unusual trend over the last dozen years. Unlike nearly all manufacturing NACE subsections, it did not experience a contraction in output in the early 1990s, nor again after 2000. In fact food, beverages and tobacco manufacturing has experienced growth each and every year throughout the 1990s and through to 2003, although its increases were relatively modest, the highest being 3.1 % in 1997. Comparing the growth between 1993 (a low point for manufacturing) and 2003 (the latest available data), food, beverages and tobacco manufacturing averaged growth of 1.5 % per annum, compared with a manufacturing average of 2.3 % per annum. The relatively stable pattern of growth observed for food, beverages and tobacco may in part be explained by the relatively inelastic nature of demand, notably for necessity purchases of foodstuffs. At a more detailed level, there was noticeably slower than average growth over the 10 years to 2003 for two food manufacturing groups in the EU-25, namely fish processing, and oils and fats. The former recorded a contraction in production during the mid-1990s, with a sustained recovery since 1997. Oils and fats manufacturing recorded a more prolonged contraction in production during the first half of the 1990s, but rebounded with very strong growth in 1997 (14.6 %) and more modest growth in 1998 (2.7 %). It then experienced five consecutive years of reduced output, although the rate of change became steadily less and less strong, down to -0.2 % in 2003. Tobacco manufacturing also experienced a long-term contraction in output, recording a decline in production in 6 of the last 10 years, averaging -2.3 % per annum between 1993 and 2003.

The domestic output price index for food, beverages and tobacco manufacturing followed a similar path to that of manufacturing in general since 1995 (beginning of the series), with the most notable difference being the small falls in food, beverages and tobacco manufacturing output prices in 1998 (-0.2 %) and 1999 (-0.7 %). Despite these small price falls, between 1995 and 2003 average price increases were 1.4 % per annum, higher than the manufacturing average of 1.0 %, in part due to stronger price increases recorded in the last three years. The output price index for tobacco manufacturing was characterised by uninterrupted increases since 1995, averaging 5.4 % per annum through to 2003.

The food, beverages and tobacco manufacturing sector is composed of a diverse range of enterprises, from SMEs that serve local markets to major multinationals. This diversity was reflected in the distribution of value added creation among enterprise size-classes that, to a large extent, was in line with the manufacturing average. Among some of the NACE groups within the food, beverages and tobacco manufacturing sector, the contribution of these size-classes to value added was quite different from the average observed for the sector as a whole. Indeed, in the manufacture of other food products (NACE Group 15.8), micro enterprises (with less than 10 persons employed) generated 14.7 % of the value added, almost twice the sectoral average. In contrast, in tobacco manufacturing (NACE Group 16.0) this enterprise size-class was the least significant in terms of value added contribution (0.2 %). The contribution of large enterprises (with 250 or more persons employed) to total value added was notably lower for the manufacture of fish products (NACE Group 15.2) and the manufacture of prepared animal feeds (NACE Group 15.7), where they

contributed 38.6 % and 39.6 % respectively of total value added, compared with an average of 54.7 % for food, beverages and tobacco manufacturing. On the other hand, large enterprises generated 82.6 % of the value added in the tobacco manufacturing subsector.

In relation to national manufacturing averages ⁽⁴⁾ there was a relatively high presence of large enterprises in the manufacture of food, beverages and tobacco in the United Kingdom (74.6 % of value added compared with an average of 54.1 %), Denmark (72.3 % compared with 53.5 %) and the Netherlands (68.8 % compared with 52.7 %). However, in Belgium large enterprises accounted for 46.2 % of value added, while their share of national manufacturing value added was some 12 percentage points higher.

⁽⁴⁾ Greece, Ireland, Luxembourg, Malta, Austria, Poland and Slovakia, not available.

LABOUR AND PRODUCTIVITY

The food, beverages and tobacco manufacturing sector has somewhat atypical employment characteristics that diverge from the manufacturing average, insofar as there was a higher presence of women and a greater recourse to part-time work. In 2002, according to labour force survey data, as many as 38.5 % of those persons working in the food, beverages and tobacco manufacturing sector in the EU-15 were women, which was more than 10.0 percentage points above the corresponding share for manufacturing as a whole (28.3 %). At a national level⁽⁵⁾, the largest differences to national manufacturing averages were recorded in Luxembourg, Finland and Germany.

Part-time work in the food, beverages and tobacco manufacturing sector concerned 11.7 % of the persons employed in this sector in the EU-15 in 2002, which was 4.1 percentage points more than the manufacturing average (7.6 %). In Finland and Germany, the proportion of part-time workers was twice as high in this sector as it was for the whole of manufacturing.

The average value added generated by each person employed was equal to EUR 47 000 in the EU-15 in 2001, below the manufacturing average of EUR 51 200. However, average personnel costs were also lower than the manufacturing average, at EUR 28 700 per employee in the EU-15 (EUR 24 200 in the EU-25) against EUR 35 700 for the whole of manufacturing, which resulted in a wage adjusted labour productivity ratio (163.7 %) that was above the manufacturing average (143.3 %). Among the NACE groups within the food, beverages and tobacco manufacturing sector, the lowest wage adjusted labour productivity in the EU-15 was registered by the manufacture of meat products

⁽⁵⁾ Poland, not available.

Table 3.3

Manufacture of food products, beverages and tobacco (NACE Subsection DA)
Labour force characteristics, 2002

	Share of men		Share of full-time		Share of employees	
	Value (%)	Index (manufacturing=100)	Value (%)	Index (manufacturing=100)	Value (%)	Index (manufacturing=100)
EU-25	:	:	:	:	:	:
EU-15	61.5	85.8	88.3	95.6	89.4	97.3
BE	68.4	92.0	88.5	97.1	90.1	95.1
CZ	47.2	76.7	97.7	100.2	96.5	104.3
DK	59.2	86.5	88.6	95.5	99.6	103.1
DE	51.4	71.6	79.8	88.9	93.2	97.7
EE	45.5	87.3	97.2	100.5	97.4	100.9
EL	64.5	91.0	99.1	101.1	75.5	103.0
ES	67.3	90.6	95.0	98.1	85.5	96.8
FR	62.9	88.9	91.5	96.8	88.0	92.8
IE	71.8	103.8	92.5	98.6	95.7	104.1
IT	65.4	93.9	93.3	98.6	74.0	89.5
CY	61.2	97.4	94.9	101.7	90.8	113.5
LV	54.1	87.6	94.9	100.2	97.1	101.6
LT	42.5	83.1	94.3	99.4	98.3	102.0
LU	56.1	69.2	88.7	92.8	94.5	96.1
HU	63.6	106.5	98.0	100.4	95.7	102.6
MT	78.6	112.3	96.2	99.6	97.3	104.5
NL	67.5	87.5	71.2	94.8	97.6	101.5
AT	67.3	90.5	:	:	92.5	97.1
PL	:	:	:	:	:	:
PT	60.7	108.3	96.8	99.8	88.2	101.2
SI	56.4	93.5	97.0	100.3	96.5	102.8
SK	56.5	95.3	98.5	99.8	97.1	101.1
FI	48.6	69.2	90.6	94.9	94.2	100.7
SE	64.1	86.7	87.9	95.9	96.2	102.3
UK	65.3	87.2	89.4	96.9	98.3	103.3

Source: Eurostat, Labour Force Survey.

(NACE Group 15.1), while the highest ratios were recorded by tobacco manufacturing (NACE Group 16.0) and the manufacture of beverages (NACE Group 15.9).

Table 3.4

Manufacture of food products, beverages and tobacco (NACE Subsection DA)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Manufacture of food products; beverages and tobacco	47.0	163.7	28.7
Production, processing, preserving of meat, meat products	35.5	140.9	25.2
Processing and preserving of fish and fish products	33.7	152.1	22.1
Processing and preserving of fruit and vegetables	46.4	170.1	27.3
Manufacture of vegetable and animal oils and fats	65.6	165.1	39.7
Manufacture of dairy products	54.6	162.5	33.6
Manufacture of grain mill products, starches and starch products	60.1	153.9	39.0
Manufacture of prepared animal feeds	60.2	166.5	36.1
Manufacture of other food products	38.4	152.4	25.2
Manufacture of beverages	83.1	207.6	40.0
Manufacture of tobacco products	153.2	297.4	51.5

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 3.5

Food products, beverages and tobacco (CPA Subsection DA)
External trade, EU-25, 2002 (EUR million)

	Exports	Imports	Trade balance	Cover ratio (%)
Food products, beverages and tobacco	47 674	38 556	9 119	123.7
Meat and meat products	5 061	4 950	112	102.3
Processed and preserved fish and fish products	1 920	11 021	-9 101	17.4
Processed and preserved fruit and vegetables	2 857	4 812	-1 955	59.4
Animal and vegetable oils and fats	2 475	6 108	-3 633	40.5
Dairy products and ice cream	5 161	939	4 222	549.8
Grain mill products, starches and starch products	1 817	760	1 056	238.9
Prepared animal feeds	1 248	815	433	153.1
Other food products	11 351	5 304	6 047	214.0
Beverages	13 849	3 573	10 276	387.6
Tobacco products	1 810	234	1 577	775.1

Source: Eurostat, Comext.

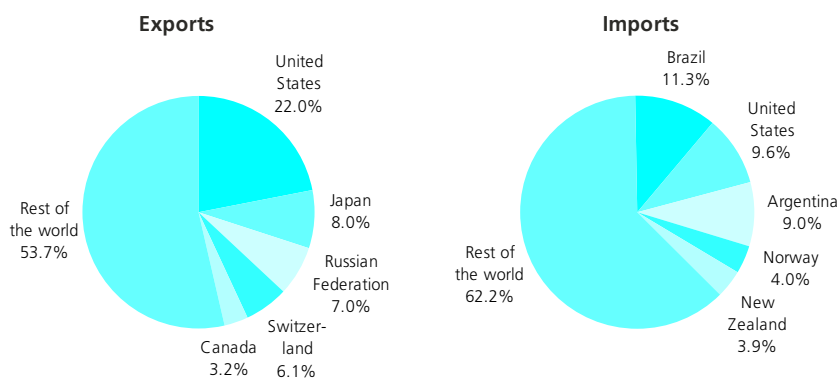
EXTERNAL TRADE

The EU-25 exported to the non-Community countries EUR 47.7 billion of food products, beverages and tobacco (CPA Subsection DA) in 2002 while importing EUR 38.5 billion, which represented 5.7 % of total manufactured exports and 5.3 % of total manufactured imports. Within the CPA groups that make up food products, beverages and tobacco, it was beverages (CPA Group 15.9) and other food products (CPA Group 15.8) that accounted for the highest levels of EU-25 exports in 2002, accounting jointly for more than half of all the EU-25's exports. Fish products (CPA Group 15.2) were the most imported group, accounting for 28.6 % of the EU-25's imports of food products, beverages and tobacco in 2002, while a further 15.8 % of imports were accounted for by oils and fats (CPA Group 15.4). Moreover, fish, and oils and fats, alongside fruits and vegetable products (CPA Group 15.3), were the only CPA groups covered by this chapter for which the EU-25 registered a trade deficit. Imports of fish products, oils and fats, and fruits and vegetables were respectively 5.7, 2.5 and 1.7 times higher than the value of exports.

At a national level, Denmark, Cyprus, Greece and the Netherlands reported a significantly higher share (between two and three times the average for the EU-25 Member States) of food products, beverages and tobacco in their total exports (intra- and extra-EU combined) of manufactured goods. Two of these countries, Greece and Denmark, were joined by Latvia as the countries with the highest import specialisation (intra- and extra-EU combined) in these products relative to imports of all manufactured goods.

The main destination of EU-25 exports of food products, beverages and tobacco was the United States, whose share in EU-25 exports reached 22.0 % in 2002. Other important export markets included Japan (8.0 %), Russia (7.0 %) and Switzerland (6.1 %). On the import side, the most important supplier of EU-25 food products, beverages and tobacco in 2002 was Brazil (11.3 % of EU-25 imports), which surpassed the United States (9.6 %) and Argentina (9.0 %).

Figure 3.3

Food products, beverages and tobacco (CPA Subsection DA)
Share in extra-EU trade, 2002


Source: Eurostat, Comext.

3.1: 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 includes the treatment of hides and skins, the rendering of fats and the processing of animal offal.

The meat supply chain starts with farming and then animals are sold or transferred for slaughter and processing. Finally, there is a distribution process that takes meat products to the final consumer. Pronounced differences exist in the preferences for meat and among different types of meat from country to country. In addition, the meat processing sector across Europe has been marked by several animal and human health safety incidents over recent years, namely dioxin contaminated poultry, foot and mouth disease, BSE, and avian flu, which have raised concerns about food safety issues and reduced demand for meat and meat products.

Pig meat was the most important meat production in the EU-15, estimated at 17.8 million tonnes in the EU-15 in 2003⁽⁶⁾. Poultry meat production was approximately half that amount, with 8.9 million tonnes in the EU-15 in 2003, ahead of bovine meat (7.4 million tonnes). Meat from sheep and goats (1.0 million tonnes) followed at some distance. The same structure could be observed among the 10 new Member States, with slaughtering of pigs in 2000 reaching 2.9 million tonnes⁽⁷⁾, against 1.3 million tonnes for poultry and 0.6 million tonnes for bovines. Note that Poland accounted for at least half of the total number of pigs and bovines that were slaughtered in the 10 new Member States. According to the latest forecasts, pig meat production in the EU-25 was expected to increase to 23.0 million tonnes by 2010, corresponding to an overall growth of 8.0% on 2004. Indeed, pig meat was thought to continue to be favoured by consumers, although less than poultry, whose production was expected to experience an overall rise by 9.2% to 11.9 million tonnes in the EU-25 by 2010. As regards bovine meat production, it was estimated to slightly increase to 8.0 million tonnes by 2006 in the EU-25 and then stabilise at that level in the following years.

⁽⁶⁾ Source: Directorate General for Agriculture, Prospects for agricultural markets 2003-2010, available at: http://europa.eu.int/comm/agriculture/publi/caprep/prospects2003/index_en.htm.

⁽⁷⁾ Source: Eurostat, Agriculture and Fisheries (theme5/zpa1_cc/meat_cc); Cyprus, Estonia, Malta and Slovakia, not available.

Table 3.6
Top meat slaughterers, EU-25, 2002

	Market share (%)	Country
Pork		
Danish Crown/Steff Houlberg	10.0	DK
Dumeco	5.0	NL
NFZ	3.0	DE
Westfleisch	1.7	DE
Socopa	1.5	FR
Beef		
Irish Foods	3.5	IE/UK
Socopa	3.0	FR
Südfleisch	3.0	DE
Cremonini	3.0	IT
Quealy Dawn	2.5	IE
Poultry		
Doux	5.0	FR
LDC	4.0	FR
Grampian	4.0	UK
AIA	3.5	IT
Lohmann Wesjohann	2.0	DE

Source: <http://www.meatnews.com>, Meat Processing Global Top Companies.

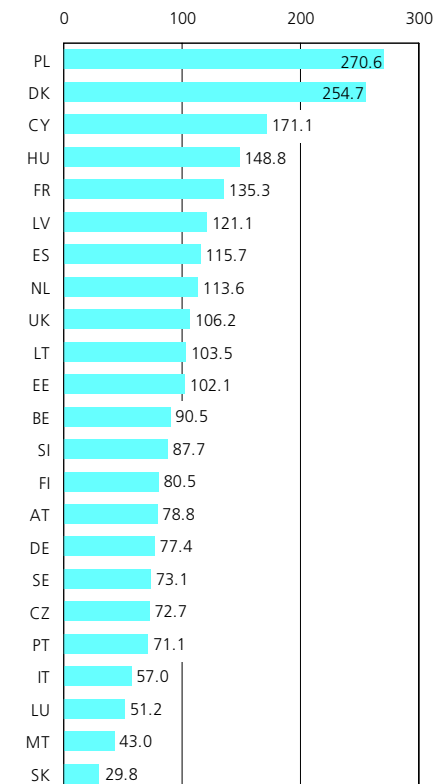
STRUCTURAL PROFILE

The meat processing sector generated a value added of EUR 31.0 billion in the EU-25 in 2001, corresponding to 16.7% of the total for food, beverages and tobacco manufacturing (NACE Subsection DA). The important recourse to labour in the production process is evidenced by the significantly higher weight of the meat processing sector in terms of employment. Indeed, over one fifth (21.8%) of the food, beverages and tobacco workforce were employed processing meat in the EU-15 in 2001.

Germany and France generated the highest level of value added in the meat processing sector in 2001, with EUR 6.4 billion and EUR 5.7 billion respectively, equivalent to approximately one fifth each of the EU-25 total. But in relative terms, two countries⁽⁸⁾ emerged as by far the most specialised in terms of meat processing, namely Poland and Denmark. In these countries, the meat processing sector contributed more than 2.5 times the EU-25 average to national manufacturing value added in 2001. Other countries that displayed relative specialisation in this sector included Cyprus and Hungary, in contrast with Italy, Luxembourg, Malta and Slovakia that were relatively unspecialised.

⁽⁸⁾ Greece and Ireland, not available.

Figure 3.4
Production, processing, preserving of meat, meat products (NACE Group 15.1)
Value added specialisation ratio relative to total manufacturing, 2001 (EU-25=100) (1)



(1) Greece and Ireland, not available.
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 3.7

Production, processing, preserving of meat, meat products (NACE Group 15.1)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Production, processing, preserving of meat, meat products	35.5	140.9	25.2
Production and preserving of meat	38.3	138.5	27.7
Production and preserving of poultrymeat	32.8	139.7	23.5
Production of meat and poultrymeat products	35.1	142.4	24.6

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

LABOUR AND PRODUCTIVITY

The apparent labour productivity of the meat processing sector was relatively low at EUR 35 500 per person employed in the EU-15 in 2001, which was significantly below the average productivity for food, beverages and tobacco manufacturing (EUR 47 000). Although average personnel costs were somewhat lower than the average for food, beverages and tobacco manufacturing, at EUR 25 200 per employee against EUR 28 700, this was not enough to compensate for the apparent labour productivity gap, and the wage adjusted labour productivity ratio of the EU-15's meat processing sector (140.9 %) remained below the food, beverages and tobacco average (163.7 %) in 2001.

Relative to its own national manufacturing average, Poland had the most productive meat processing sector in 2001, as the wage adjusted labour productivity in this sector was more than four times higher than the corresponding ratio for total manufacturing. In fact, Germany, Estonia, Spain, Italy, Latvia and Malta were the only other Member States⁽⁹⁾ where this ratio was higher for meat processing than the national manufacturing average.

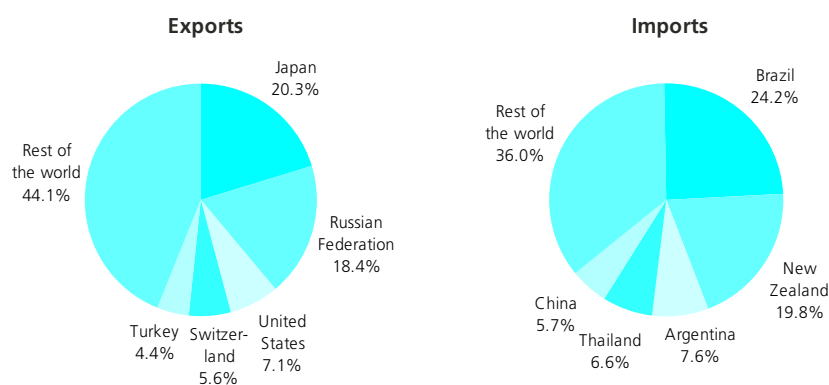
⁽⁹⁾ Greece, Ireland, Cyprus and Slovenia, not available.

EXTERNAL TRADE

The EU-25 ran a small trade surplus of EUR 0.1 billion in meat products in 2002, resulting from exports valued at EUR 5.1 billion and imports of EUR 5.0 billion. Meat exports accounted for 10.6 % of the total EU-25 food, beverage and tobacco exports in 2002, while the relative importance of imports was somewhat higher at 12.8 % of the total. Denmark was by far the most active exporter of meat products, as the share of these products in the country's exports (intra- and extra-EU combined) of manufactured goods was 6.6 times higher than the average for the EU-25 Member States in 2002. Other export specialised countries included Cyprus, the Netherlands, Hungary and Ireland. In contrast, the countries importing the most meat products in 2002 relative to their total imports of manufactured goods were Greece, Italy and Portugal (142.6 %).

Japan (20.3 % of extra-EU exports) and Russia (18.4 %) were by far the main export markets for meat products from the EU-25, with shares in total exports two to three times higher than those of the United States (7.1 %) and Switzerland (5.6 %). On the import side, some of the main suppliers of meat to the EU-25 included Brazil (24.2 % of imports), New Zealand (19.8 %) and, to a lesser extent, Argentina (7.6 %), Thailand (6.6 %) and China (5.7 %).

Figure 3.5
Meat and meat products (CPA Group 15.1)
Share in extra-EU trade, 2002



Source: Eurostat, Comext

Table 3.8

Meat and meat products (CPA Group 15.1)
External trade, EU-25, 2002

	Exports		Imports		Trade balance (EUR million)
	Value (EUR million)	Share of total (%)	Value (EUR million)	Share of total (%)	
Meat and meat products	5 061	100.0	4 950	100.0	112
Fresh and preserved meat, except poultry	3 293	65.1	3 530	71.3	-236
Fresh and preserved poultry meat	1 050	20.7	441	8.9	608
Meat and poultry meat products	719	14.2	979	19.8	-260

Source: Eurostat, Comext.

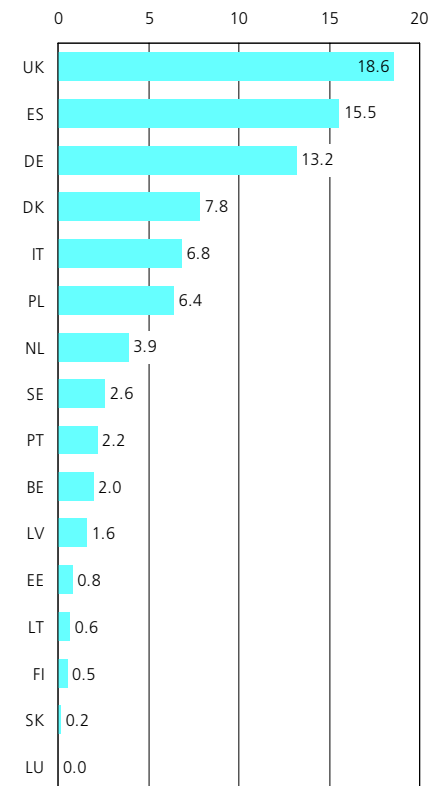
3.2: FISH

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. The manufacture of fish soups and oils and fats derived from aquatic species are not included. Note that vessels engaged both in the fishing and the processing of fish are not covered.

Seafood consumption in the EU has shown a dramatic expansion in recent decades, as consumers become increasingly aware of the important contribution that it can provide towards a balanced diet, combined with health crises that affected the meat processing sector (see Subchapter 3.1). However, because of the depletion of resources for certain popular species, large amounts of processed seafood are purchased in non-Community countries to satisfy demand, widening the negative balance of external trade. A parallel evolution has seen the development of aquaculture, with rearing in 'fish farms' comparable to livestock farming.

The common fisheries policy (CFP) comprises four main areas: firstly, a conservation policy, regulating the amount of fish taken from the sea; secondly, a structural policy, to help enterprises adapt to the constraints imposed by scarce resources; thirdly, a common organisation of the market in fish products; finally, an external policy towards regional and international fisheries organisations for common conservation measures in deep-sea fisheries. On 1 January 2003, a reformed CFP entered into force, aiming to ensure the sustainability of fishing activities in the face of the dangerous depletion of a growing number of fish stocks, with measures such as reducing the fishing fleet, using more selective nets to prevent the capture of young fish, or implementing closures for specific fishing areas where dense concentrations of young fish occur. It is widely agreed that many fish stocks are outside safe biological limits after having been too heavily exploited, in particular cod, hake and whiting.

Figure 3.6
Processing and preserving of fish and fish products (NACE Group 15.2)
Share of EU-25 value added, 2001 (%) (1)



(1) The Czech Republic, Greece, France, Ireland, Cyprus, Hungary, Malta, Austria and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

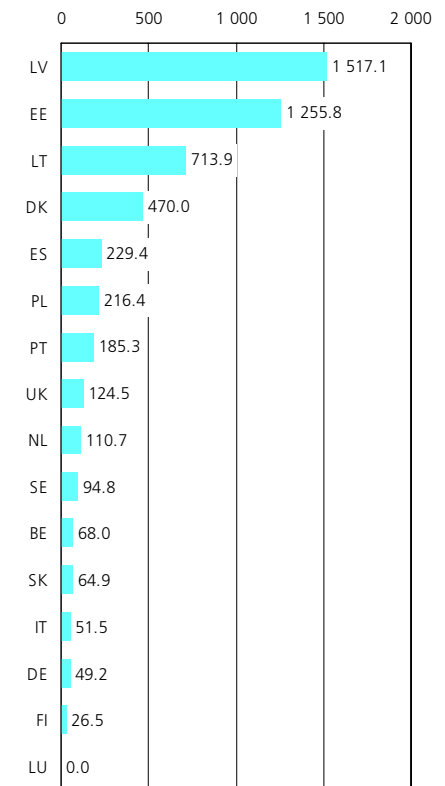
STRUCTURAL PROFILE

The fish processing and fish products' sector was the smallest among food, beverages and tobacco manufacturing at the NACE group level, with a value added estimated at EUR 3.8 billion in the EU-25 in 2001, or 2.0 % of the total for food, beverages and tobacco manufacturing. Its contribution in terms of employment was nevertheless somewhat higher, as it employed 101 500 persons in the EU-15 in 2001, or 2.8 % of the total for food, beverages and tobacco manufacturing. There were more than 31 700 persons employed in the 10 new Member States ⁽¹⁰⁾ in 2001.

In absolute terms, the United Kingdom was the largest contributor to EU-25 value added in the fish processing sector, with EUR 704.9 million, or almost one fifth (18.6 %) of the EU-25 total. Spain (EUR 590.5 million), Germany (EUR 501.1 million) and France (EUR 455.8 million, 2000) were also important producers.

⁽¹⁰⁾ Cyprus and Malta, not available; Hungary, 2000; Slovenia, number of employees, 1999.

Figure 3.7
Processing and preserving of fish and fish products (NACE Group 15.2)
Value added specialisation ratio relative to total manufacturing, 2001 (EU-25=100) (1)

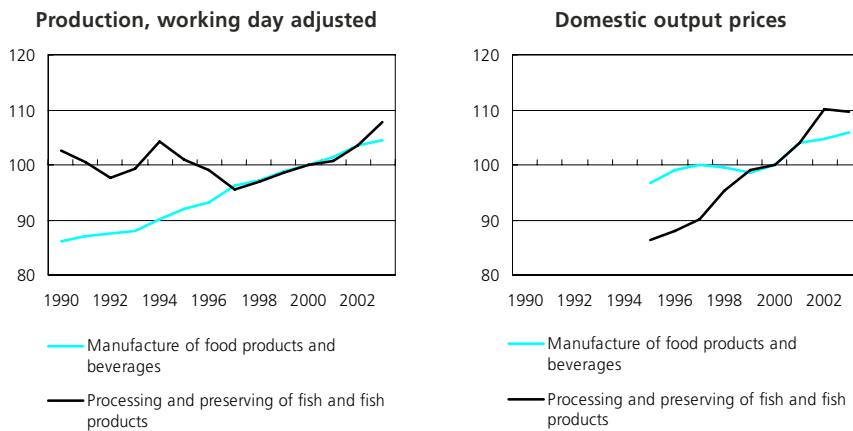


(1) The Czech Republic, Greece, France, Ireland, Cyprus, Hungary, Malta, Austria and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

The statistical impact of enlargement on this sector is great, the 10 new Member States contributing 9.9 % of the EU-25's value added in the fish processing sector in 2001, compared with 9.3 % for food, beverages and tobacco manufacturing as a whole and a manufacturing average of 5.6 %. Relative to their manufacturing sectors as a whole, the Baltic States emerged as by far the most specialised countries for fish processing in the EU-25, with this sector contributing 7 to 15 times more than the EU-25 average to total manufacturing value added. In fact, fish processing was among the top three manufacturing groups in which the Baltic States were each specialised. Denmark was also highly specialised in fish processing (this was the manufacturing NACE group in which it was most specialised), as were Spain and Poland. At the other end of the ranking, Finland was among the least specialised countries, while no fish processing activity was recorded in Luxembourg. Note that no recent data (1999 to 2001) are available for some countries with important coastlines, notably Greece, Cyprus and Malta.

Figure 3.8
Processing and preserving of fish and fish products (NACE Group 15.2)
Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

LABOUR AND PRODUCTIVITY

The fish processing sector reported generally lower apparent labour productivity than the other NACE groups that make up the food, beverages and tobacco manufacturing sector. Each person employed in fish processing in the EU-15 generated on average EUR 33 700 of value added in 2001, which compared to EUR 47 000 for food, beverages and tobacco manufacturing. Apparent labour productivity for fish processing was the lowest of all food, beverages and tobacco NACE groups.

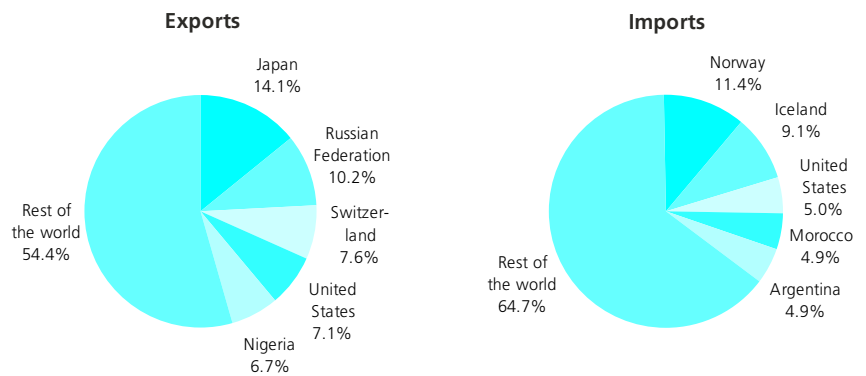
Nevertheless, these low productivity figures were matched by low average personnel costs, that were EUR 22 100 per employee in the EU-15 in 2001 (EUR 17 700 in the EU-25), significantly below the average for food, beverages and tobacco manufacturing (EUR 28 700). As a result, wage adjusted labour productivity in the EU-15's fish processing sector surpassed the manufacturing average, at 152.1 % (compared with 143.5 %), although it remained somewhat below the level recorded for the whole of food, beverages and tobacco manufacturing (163.7 %).

EXTERNAL TRADE

External trade in fish products is characterised by a great recourse to imports combined with limited exports. Indeed, EU-25 imports from non-Community countries reached EUR 11.0 billion in 2002, representing as much as 28.6 % of total imports of food products, beverages and tobacco, while exports were more than five times lower at EUR 1.9 billion, or 4.0 % of the total for food products and beverages. As a consequence, the EU-25 ran a significant trade deficit in these products in 2002 of EUR 9.1 billion. At a country level, only 6 out of the 25 Member States reported a trade surplus (intra- and extra-EU combined) for fish products in 2002, notably Denmark (EUR 887.2 million), the Netherlands (EUR 357.2 million) and Ireland (EUR 152.3 million). When compared with the EU-25 average, fish products contributed significantly more to manufactured exports in Denmark, Latvia and Estonia.

Norway (11.4 % of extra-EU-25 imports) and Iceland (9.1 %) were the largest suppliers of fish products, while the United States, Morocco and Argentina followed with similar shares of EU-25 imports (approximately 5 % each). The main EU-25 markets for exports of fish products were Japan (14.1 % of EU-25 exports) and Russia (10.2 %).

Figure 3.9
Processed and preserved fish and fish products (CPA Group 15.2)
Share in extra-EU trade, 2002



Source: Eurostat, Comext.

3.3: 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. As with the rest of this chapter, the data presented does not cover activities within the confines of farms themselves, as these are considered as agricultural rather than manufacturing activities.

Dairy products are primarily destined for human consumption, with the exception of powdered milk, which is also used for cattle rearing. Practically all dairy products relate to a saturated final market, looking to marketing instruments for product differentiation. For example, since the early 1990s, consumers have tended to prefer low-fat products and fresh foods, which has led to their introduction in most product segments. In line with these trends, health benefits from certain dairy products are put forward as an element of differentiation.

Milk production in the EU is governed by production quotas destined to match supply with demand, and this may affect dairy products manufacturers as it imposes on them higher input prices compared with free market conditions. In the EU-15, milk production was forecast to stay within quotas, growing from 121.6 million tonnes in 2003 to 122.5 million tonnes by 2010, in accordance with quota increases agreed under the Agenda 2000 reform. According to the European Commission Directorate-General for Agriculture ⁽¹¹⁾, in the 10 new Member States, subsistence production had a significant share in total milk production, accounting for about 20 % of output, although it is expected to gradually decline following enlargement. These developments are forecast to offset the foreseen milk quota increases in the new Member States. For the 10 new Member States total milk production was forecast to remain relatively stable at approximately 22 to 23 million tonnes.

⁽¹¹⁾ Prospects for agricultural markets 2003-2010, available at http://europa.eu.int/comm/agriculture/publi/caprep/prospects2003/index_en.htm.

STRUCTURAL PROFILE

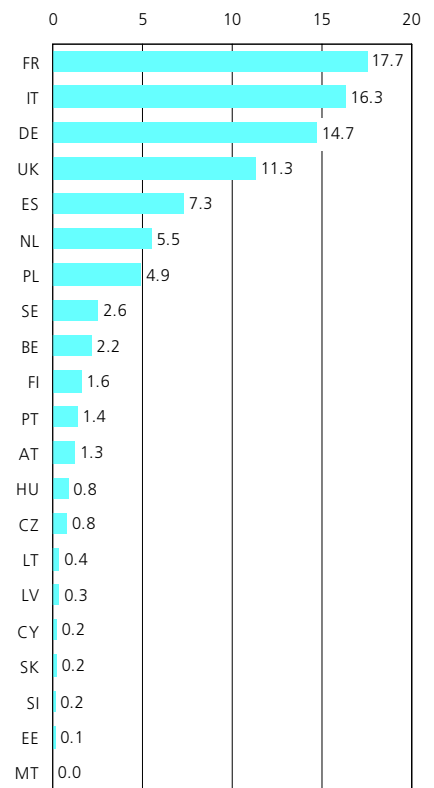
The EU's dairy products' sector was among the largest NACE groups within food, beverages and tobacco manufacturing, as it generated EUR 17.5 billion of value added in the EU-25 in 2001, equivalent to about 9.5 % of the total for food, beverages and tobacco manufacturing. It accounted for a slightly lower share of the workforce with 294 500 persons employed in the EU-15 in 2001 representing 8.3 % of the food, beverages and tobacco manufacturing workforce. The 10 new Member States numbered an additional 87 200 persons employed ⁽¹²⁾ in this sector.

France generated EUR 3.1 billion of value added in this sector in 2001 and was as such the largest producer of dairy products within the EU, accounting for 17.7 % of the EU-25 total. Lithuania stood out as by far the most specialised country in terms of the relative contribution of the dairy products' sector to manufacturing value added, a share that was more than four times higher than the EU-25 average. Specialisation ratios were also more than 300 % in Cyprus and Latvia and more than 200 % in Estonia ⁽¹³⁾. In contrast, Germany, Austria and Malta were the least specialised countries in the EU-25.

⁽¹²⁾ Slovenia, number of employees.

⁽¹³⁾ Denmark, Greece, Ireland and Luxembourg, not available.

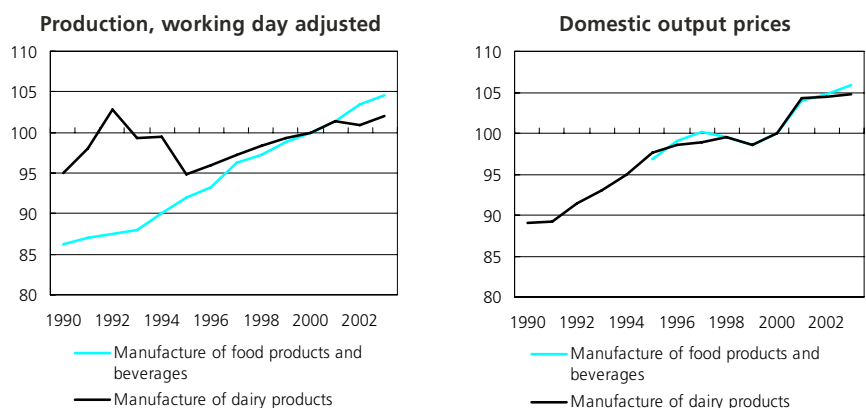
Figure 3.10
Manufacture of dairy products (NACE Group 15.5)
 Share of EU-25 value added, 2001 (%) (1)



(1) Denmark, Greece, Ireland and Luxembourg, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 3.11
Manufacture of dairy products (NACE Group 15.5)
 Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

The main area of growth in recent years has been cheese, whose production increased by 8.5 % overall between 1998 and 2003 to reach 7.5 million tonnes in the EU-15 (see Table 3.9). The 10 new Member States accounted for an additional 1.0 million tonnes of cheese production in 2002 ⁽¹⁴⁾. In contrast, drinking milk production in the EU-15 decreased by 1.9 % over the period considered to 29.2 million tonnes, while butter production remained stable at around 1.9 million tonnes. The 10 new Member States ⁽¹⁵⁾ produced 4.5 million tonnes of drinking milk and 0.3 million tonnes of butter in 2002.

⁽¹⁴⁾ Cyprus, not available.

⁽¹⁵⁾ Cyprus, not available.

Table 3.10
Production of milk and dairy products
in the ten new Member States, 2002
(thousand tonnes)

	Drinking milk	Butter	Cheese
CZ	483.2	54.0	131.1
EE	65.6	8.3	22.3
CY	:	:	:
LV	89.4	5.8	24.3
LT	81.5	17.5	65.3
HU	1 199.2	24.0	156.0
MT	31.9	:	2.5
PL	1 916.7	157.9	484.5
SI	286.5	4.2	22.9
SK	321.9	14.9	42.3

Source: Eurostat, Agriculture and Fisheries
(theme5/zpa1_cc/milk_cc/micoa_cc).

Table 3.9
Production of milk and dairy products, EU-15 (million tonnes)

	1998	1999	2000	2001	2002 (1)	2003 (1)
Drinking milk	29.8	29.4	29.3	29.5	29.4	29.2
Butter	1.9	1.9	1.8	1.8	1.9	1.9
Cheese	6.9	7.0	7.2	7.4	7.4	7.5

(1) Forecasts/estimates.

Source: EDA/ZMP.

LABOUR AND PRODUCTIVITY

Apparent labour productivity in the EU-15's dairy products' manufacturing sector (EUR 54 600 per person employed) was higher than the food, beverages and tobacco manufacturing average in 2001, while average personnel costs (EUR 33 600 per employee in the EU-15 and EUR 26 700 in the EU-25) were lower. As a result, wage adjusted labour productivity in the dairy products manufacturing sector reached 162.5 % in the EU-15 in 2001, against 143.5 % for manufacturing as a whole, and was hence in line with the average for food, beverages and tobacco manufacturing (163.7 %).

EXTERNAL TRADE

The EU-25 was an important exporter of dairy products (CPA Group 15.5), as exports were 5.5 times greater than imports in 2002. EU-25 exports were valued at EUR 5.2 billion in 2002, against EUR 0.9 billion for imports. In relative terms, dairy products represented as much as 10.8 % of the total exports of food products, beverages and tobacco made by the EU-25 in 2002, but only 2.4 % of imports. Cyprus emerged as the most specialised exporter of dairy products when comparing the proportion of this category of goods with the total exports of manufactured goods relative to the corresponding EU-25 average. Lithuania, Denmark and Estonia were also relatively specialised in the export of these goods.

The main extra-EU markets for dairy products were the United States, absorbing 14.7 % of the EU-25's exports, followed by Saudi Arabia (7.9 %), Russia (6.7 %) and Algeria (6.2 %). As regards imports, more than two thirds of the EU-25's imports of dairy products in 2002 came from Switzerland and New Zealand (each 33.2 %).

3.4: MISCELLANEOUS FOOD PRODUCTS

This subchapter deals with five different activities that are each treated separately: the processing and preserving of fruit and vegetables; vegetable and animal oils and fats; grain mill and starch products; prepared animal feed; and other food products (which includes, bread, sugar, confectionery, pasta, tea, coffee, homogenised and dietetic foods).

Of the five groups covered by this subchapter, the manufacture of other food products (NACE Group 15.8) was by far the largest in value added terms, some EUR 64.3 billion in the EU-25 in 2001. The next largest activities were the processing and preserving of fruit and vegetables (NACE Group 15.3) with EUR 10.5 billion of value added and the manufacture of prepared animal feeds and of grain mill and starch products (NACE Groups 15.6 and 15.7) with EUR 7.0 billion of value added each. The smallest subsector was the manufacture of vegetable and animal oils and fats (NACE Group 15.4) with a value added of EUR 4.1 billion.

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

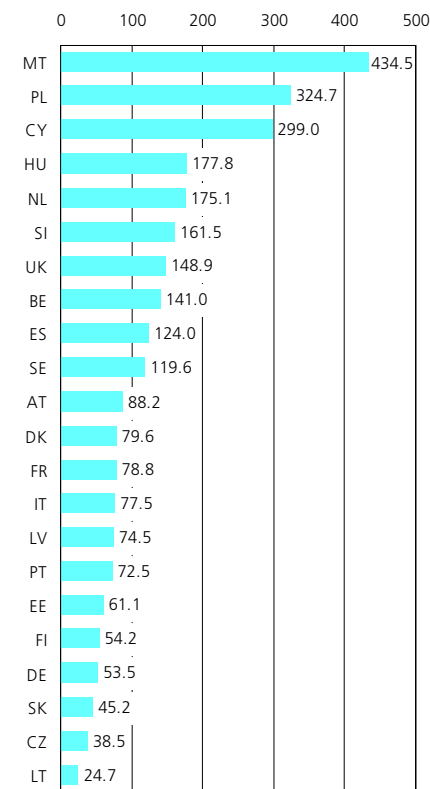
The value added generated in this subsector in the EU-25 in 2001 was estimated at EUR 10.5 billion, or 5.6 % of the total for food, beverages and tobacco manufacturing. A similar share was recorded in terms of employment, as this subsector accounted for 5.5 % of the total number of persons employed in the EU-15 in food, beverages and tobacco manufacturing. In absolute terms, this translated into 197 700 persons working in the processed and preserved fruit and vegetables subsector in the EU-15 in 2001, to which the 10 new Member States added some 63 800 persons employed ⁽¹⁶⁾.

The United Kingdom was the largest producer in this subsector with value added of EUR 2.3 billion in 2001, more than one fifth (22.2 %) of the EU-25 total, followed by Germany (EUR 1.5 billion), France and Italy (EUR 1.1 billion each). Note the high level of value added in Poland (EUR 1.0 billion), which surpassed Spain (EUR 0.9 billion). This was reflected in a high value added specialisation ratio for Poland, when compared with manufacturing as a whole, as the contribution of this subsector to national manufacturing value added was 3.2 times higher in Poland than it was on average in the EU-25; this was the second highest specialisation ratio after Malta ⁽¹⁷⁾. Cyprus, Hungary and the Netherlands were also relatively specialised in this activity, in contrast with Lithuania, the Czech Republic and Slovakia.

⁽¹⁶⁾ Slovenia, number of employees.

⁽¹⁷⁾ Greece, Ireland and Luxembourg, not available.

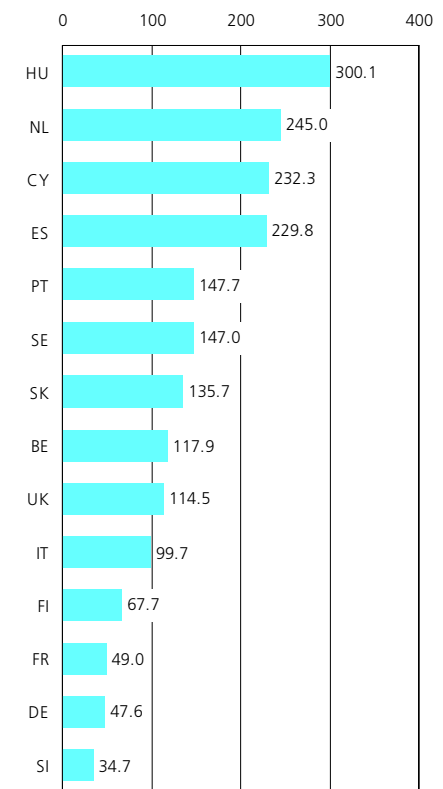
Figure 3.12.
Processing and preserving of fruit and vegetables (NACE Group 15.3)
Value added specialisation ratio relative to total manufacturing, 2001 (EU-25=100) (1)



(1) Greece, Ireland and Luxembourg, not available.
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

In 2002 the EU-25 ran an external trade deficit with non-Community countries for processed and preserved fruit and vegetables (CPA Group 15.3), valued at EUR 2.0 billion. Indeed, while the EU-25 imported EUR 4.8 billion of this category of goods in 2002, or 12.5 % of the total imports of food products, beverages and tobacco, exports were significantly lower at EUR 2.9 billion, or 6.0 % of the total. The largest suppliers of processed and preserved fruit and vegetables to the EU-25 in 2002 were Brazil (17.6 % of EU-25 imports), Turkey (15.1 %), China (12.5 %) and the United States (9.8 %). EU-25 exports were mainly destined for the United States (23.8 % of the total), ahead of Russia (11.5 %), China (6.8 %) and Japan (6.6 %).

Figure 3.13.
Manufacture of vegetable and animal oils and fats (NACE Group 15.4)
Value added specialisation ratio relative to total manufacturing, 2001 (EU-25=100) (1)



(1) The Czech Republic, Denmark, Estonia, Greece, Ireland, Latvia, Lithuania, Luxembourg, Malta, Austria and Poland, not available.
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

VEGETABLE AND ANIMAL OILS AND FATS (NACE GROUP 15.4)

The manufacture of vegetable and animal oils and fats generated an estimated EUR 4.1 billion of value added in the EU-25 in 2001, representing 2.2 % of the total for food, beverages and tobacco manufacturing. As such, this was the second smallest NACE group within food and beverages manufacturing after fish processing. It was also among the smallest in employment terms, with 55 300 persons employed in the EU-15 in 2001, or 1.5 % of the total employed in the whole of food, beverages and tobacco manufacturing. The number of employees (therefore excluding working proprietors and family workers) in the EU-15 was 48 200, and in the EU-25 it was 59 400.

The United Kingdom (EUR 693.5 million) and Spain (EUR 632.8 million) were the largest contributors to EU-25 value added in this subsector. Although data for the Member States is very incomplete, Hungary emerged as particularly specialised in oils and fats manufacturing: the share of the Hungarian oils and fats manufacturing subsector within manufacturing value added was three times higher than the corresponding EU-25 average, and by this measure oils and fats manufacturing was the third most specialised manufacturing NACE group in Hungary. The Netherlands, Cyprus and Spain also reported a relative specialisation in this subsector, in contrast with Slovenia, Germany and France.

The statistical impact of enlargement in this subsector is quite important, as the production of margarine and fat spreads in Poland was, at 323 000 tonnes in 2001, the third largest volume of output in the EU-25 after Germany (574 000 tonnes) and the United Kingdom (409 200 tonnes) - see Table 3.11.

As regards oilseeds, the EU-15's production was 13.7 million tonnes in 2002, while the production of crude vegetable oils and fats stood at 8.6 million tonnes (see Table 3.12). Three crops (soya, rape and sunflower) made up more than 90 % of both oilseeds and vegetable oils and fats production.

The EU-25 is relatively dependent on imports to satisfy its demand for oils and fats. In 2002, the EU-25 imported EUR 6.1 billion of this category of goods (CPA Group 15.4) from non-Community countries, representing as much as 15.8 % of the total imports of food products, beverages and tobacco. In contrast, exports were valued at EUR 2.5 billion, or 5.2 % of total exports. As a consequence, the EU-25 posted a trade deficit for oils and fats equal to EUR 3.6 billion in 2002. The majority of the EU-25's imports of oils and fats came from South America or Asia. In 2002, Argentina (38.9 % of EU-25 imports) and Brazil (32.6 %) were the main suppliers, ahead of Indonesia (14.5 %) and Malaysia (11.1 %).

Table 3.11

Production of margarine, fat spreads, three quarter fat and half-fat margarine (tonnes)

	1990	1995	2000	2001
BE	189 138	275 434	280 935	278 789
CZ	33 975	83 166	90 815	:
DK	108 700	100 000	62 666	62 459
DE	560 570	591 361	568 135	573 973
EE	:	:	:	:
EL	32 200	35 962	38 923	:
ES	81 698	84 479	84 804	86 197
FR	168 219	164 500	136 750	133 365
IE	20 255	16 500	14 345	:
IT	79 976	82 366	58 448	58 549
CY	:	:	:	:
LV	:	:	:	:
LT	:	:	:	:
LU	:	:	:	:
HU	33 193	50 800	60 040	:
MT	:	:	:	:
NL	255 640	340 334	268 930	262 006
AT	48 135	48 536	43 472	42 470
PL	:	:	311 297	323 162
PT	60 019	41 905	49 830	49 825
SI	:	:	:	:
SK	:	:	:	:
FI	37 756	85 400	52 700	43 400
SE	110 539	134 975	137 800	:
UK	475 000	485 000	388 700	409 200

Source: IMACE (International Margarine Association of the Countries of Europe).

Table 3.12

Production of crude vegetable oils, fats and oilseeds, EU-15, 2002 (thousand tonnes)

Total oilseeds	13 655
Soyabeans	790
Rapeseeds	9 295
Sunflower seeds	2 702
Cottonseeds	785
Linseeds	83
Total crude vegetable oils and fats	8 653
Groundnut	7
Soya	3 071
Rape	3 668
Sunflower	1 343
Cotton	101
Other liquid oils	38
Copra	11
Palmkernel	2
Other lauric oils	0
Linseed oil	191
Castor oil	4
Maize germ oil	208
Grape pips oil	9

Source: Fediol - EC Seed Crushers' and Oil Processors' Federation.

GRAIN MILL AND STARCH PRODUCTS (NACE GROUP 15.6)

Value added in this subsector was estimated at EUR 5.9 billion in the EU-25 in 2001, of which the United Kingdom accounted for more than one fifth (22.2 %). In total, the manufacturing of grain mill and starch products contributed 3.2 % to total value added within the food, beverages and tobacco manufacturing sector. Employment reached 88 900 persons employed in the EU-15 in 2001 and 119 800 in the EU-25 ⁽¹⁸⁾.

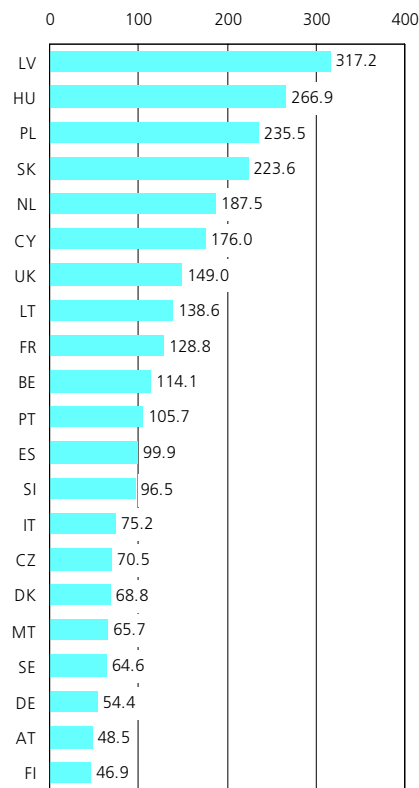
Several of the 10 new Member States ⁽¹⁹⁾ were among the most specialised in the manufacture of grain mill and starch products, led by Latvia, where the contribution of this subsector to manufacturing value added was more than three times higher than the EU-25 average. This subsector was also more than twice as important as the EU-25 average in its contribution to manufacturing value added in Hungary, Poland and Slovakia. The least specialised countries were Finland, Austria and Germany.

External trade in grain mill and starch products (CPA Group 15.6) with non-Community countries was relatively limited in 2002, as it accounted for only 3.8 % of total exports of food products, beverages and tobacco and 2.0 % of total imports. Exports covered imports more than twice, which resulted in a trade surplus of EUR 1.1 billion in 2002. The main export market for this category of goods was Libya, which received in 2002 some 11.5 % of extra EU-25 exports, ahead of the United States (7.9 %) and Switzerland (6.7 %). More than half of the EU-25's imports of grain mill and starch products originated from the United States (24.7 %), India (16.8 %) and Thailand (15.9 %) together.

⁽¹⁸⁾ Estonia, 2002; Slovenia, number of employees.

⁽¹⁹⁾ Estonia, not available.

Figure 3.14
**Manufacture of grain mill products,
starches and starch products
(NACE Group 15.6)**
**Value added specialisation ratio relative to
total manufacturing, 2001 (EU-25=100) (1)**



(1) Estonia, Greece, Ireland and Luxembourg, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 3.13
**Main indicators for industrial dried pasta,
2000**

	Production (tonnes)	Consumption per inhabitant (kg)
BE	99 500	5.4
CZ	48 755	6.5
DK	:	2.0
DE	243 446	6.0
EE	1 400	5.3
EL	132 000	8.7
ES	204 649	5.1
FR	252 600	7.5
IE	:	1.0
IT	3 100 843	28.0
CY	:	:
LV	1 845	4.1
LT	5 976	4.4
LU	:	:
HU	70 000	6.5
MT	:	:
NL	:	4.4
AT	27 000	5.4
PL	150 000	3.0
PT	69 000	6.7
SI	:	:
SK	22 000	5.0
FI	:	3.2
SE	20 000	7.0
UK	27 000	2.5

Source: UNAFPA - Union of Organisations of Manufacturers of Pasta Products in the European Community.

**PREPARED ANIMAL FEED
(NACE GROUP 15.7)**

Value added in the manufacture of prepared animal feed was EUR 7.0 billion in the EU-25 in 2001, representing 3.8 % of the food, beverages and tobacco manufacturing total. In terms of employment, the share of the manufacture of prepared animal feed was slightly lower, some 2.8 % of the number of persons employed in food, beverages and tobacco manufacturing in the EU-15. In absolute terms, 101 000 persons were employed in this subsector in the EU-15 in 2001 and 129 900 in the EU-25 ⁽²⁰⁾.

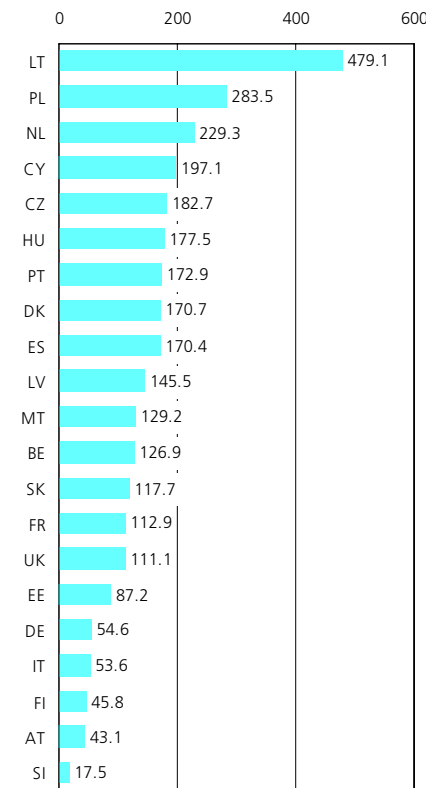
The United Kingdom (EUR 1.2 billion), France (EUR 1.1 billion) and Germany (EUR 1.0 billion) accounted jointly for almost half of the EU-25's output. In relative terms, this subsector was important in Lithuania, where it represented 2.2 % of national manufacturing value added, which was 4.8 times the average observed across the whole of the EU-25. Other relatively specialised countries included Poland, the Netherlands, Cyprus and the Czech Republic ⁽²¹⁾.

Prepared animal feed (CPA Group 15.7) contributed 2.6 % to EU-25 exports of food products, beverages and tobacco and 2.1 % to imports in 2002. The EU-25 ran a small surplus for this category of goods, equal to EUR 0.4 billion. While the United States was by far the largest supplier of these goods, accounting for as much as 72.2 % of the EU-25's imports, they were surpassed by Switzerland (9.1 % of EU-25 exports) as the main client for EU-25 exports. The United States accounted for 7.5 % of exports, while other major destinations for exports included Russia (7.4 %) and Norway (5.6 %).

⁽²⁰⁾ Poland and Slovenia, number of employees.

⁽²¹⁾ Greece, Ireland, Luxembourg and Sweden, not available.

Figure 3.15
**Manufacture of prepared animal feeds
(NACE Group 15.7)**
**Value added specialisation ratio relative to
total manufacturing, 2001 (EU-25=100) (1)**



(1) Greece, Ireland, Luxembourg and Sweden, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

**OTHER FOOD PRODUCTS (NACE
GROUP 15.8)**

In 2001, the value added of the other food products subsector was more than double that of the other four NACE groups covered in this subchapter, reaching EUR 64.3 billion in the EU-15, which represented over one third (34.7 %) of the total for food, beverages and tobacco manufacturing. In employment terms, the weight of this subsector was even more important, as it accounted for 43.5 % of the total number of persons employed in food, beverages and tobacco manufacturing in the EU-15. There were 1.9 million persons employed in the EU-25 ⁽²²⁾ in 2001, of which 1.6 million were in the EU-15.

The manufacture of bread, fresh pastry goods and cakes (NACE Class 15.81) was the largest activity within the other food products' subsector, with value added of EUR 24.1 billion in the EU-15 in 2001, equivalent to 40.2 % of the subsector's value added. Three other classes in the EU-15's other food products subsector generated value added in excess of EUR 5 billion, namely the manufacture of cocoa, chocolate and sugar confectionery (NACE Class 15.84, EUR 9.5 billion), the manufacture of other food products not elsewhere classified (NACE Class 15.89, EUR 6.8 billion), and the manufacture of biscuits, rusks and preserved pastry goods and cakes (NACE Class 15.82, EUR 5.8 billion). The remaining five classes in this subsector collectively generated EUR 13.8 billion of value added, just under one quarter of the subsector's total. In employment terms the dominance of the manufacture of bread, fresh pastry goods and cakes within this subsector was respectively even stronger, as this activity provided employment for 991 000 persons in the EU-15, some 63.8 % of those employed in the manufacture of other food products.

⁽²²⁾ Slovenia, number of employees.

Looking at the size of this sector in the manufacturing economy reveals that Cyprus was the most specialised country in this activity in terms of value added (23). The manufacture of other food products in this country accounted for a share in total manufacturing that was 2.5 times higher than the corresponding EU-25 average in 2001. Lithuania, Poland and the Netherlands also reported relatively high value added specialisation ratios, in contrast to Finland and Sweden.

The development of the working day adjusted production index for the manufacture of other food products over recent years has been very similar to that for food, beverages and tobacco manufacturing as a whole: between 1993 and 2003 average growth was 1.8 % per annum for other food products in the EU-15, compared with 1.4 % per annum for food, beverages and tobacco manufacturing. Several of the activities within the manufacture of other food products in the EU-15 showed particularly interesting developments, most notably the manufacture of other food products not elsewhere classified (NACE Class 15.89) which averaged growth of 5.8 % per annum during the 10 years to 2003. The manufacture of sugar is one of the few activities within other food products' manufacturing that has experienced a decline in production over the same period, with an average rate of change of -0.9 % per annum between 1993 and 2003.

Regarding the external trade performance of the EU-25, exports of other food products (CPA Group 15.8) were valued at EUR 11.4 billion in 2002 and imports at EUR 5.3 billion. As such, the trade surplus was EUR 6.0 billion in 2002, the second highest trade surplus among the CPA groups making up food products, beverages and tobacco (CPA Subsection DA). Of the 25 Member States, 10 recorded external trade deficits (intra- and extra-EU combined) for other food products, of which the largest, by far, was the United Kingdom (EUR 1.9 billion).

(23) Greece and Ireland, not available.

Within the other food products category, the largest trade surpluses recorded by the EU-25 were for the miscellaneous category of other food products (CPA Class 15.89), coffee and tea (CPA Class 15.86), and cocoa, chocolate and sugar confectionery (CPA Class 15.84), all of which were valued between EUR 1.2 billion and EUR 1.5 billion. The EU-25 only recorded a trade deficit for sugar (CPA Class 15.83), and for condiments and seasonings (CPA Class 15.87), both of which were less than EUR 250 million.

Denmark had the highest export specialisation (intra- and extra-EU combined) in other food products, as exports of other food products accounted for 3.4 % of Danish exports of manufactured goods, 2.2 times the average for the EU-25. By this same measure, the Netherlands, Ireland and Malta were also relatively specialised in the export of other food products.

The main EU-25 export markets for other food products were the United States, Switzerland and Russia. Switzerland and the United States were also the main origins of EU-25 imports of other food products, followed by the Côte d'Ivoire, which was mainly caused by a high value of imports of cocoa, chocolate and sugar confectionery (CPA Class 15.84), for which it was the main source of EU-25 imports.

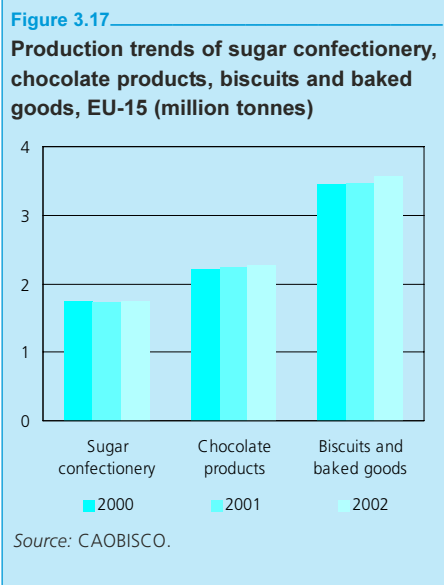
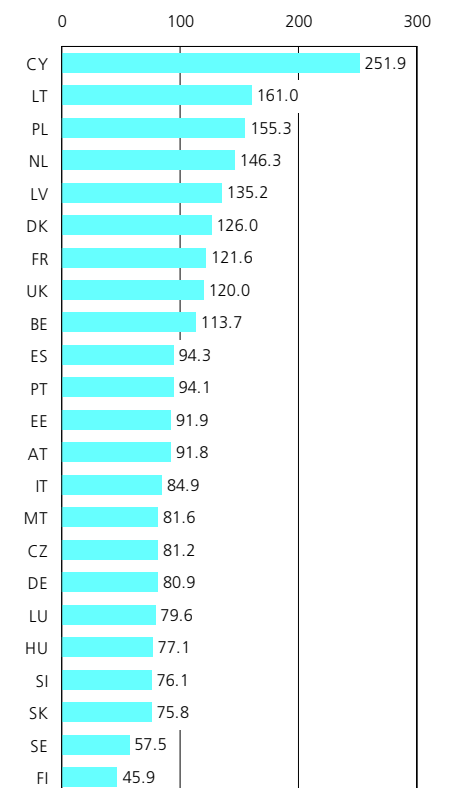


Figure 3.16
Manufacture of other food products (NACE Group 15.8)
Value added specialisation ratio relative to total manufacturing, 2001 (EU-25=100) (1)



(1) Greece and Ireland, not available.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 3.14

Manufacturing of miscellaneous food products (NACE Groups 15.3, 15.4 and 15.6 to 15.8)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Processing and preserving of fruit and vegetables	46.4	170.1	27.3
Manufacture of vegetable and animal oils and fats	65.6	165.1	39.7
Manufacture of grain mill products, starches and starch products	60.1	153.9	39.0
Manufacture of prepared animal feeds	60.2	166.5	36.1
Manufacture of other food products	38.4	152.4	25.2

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 3.15

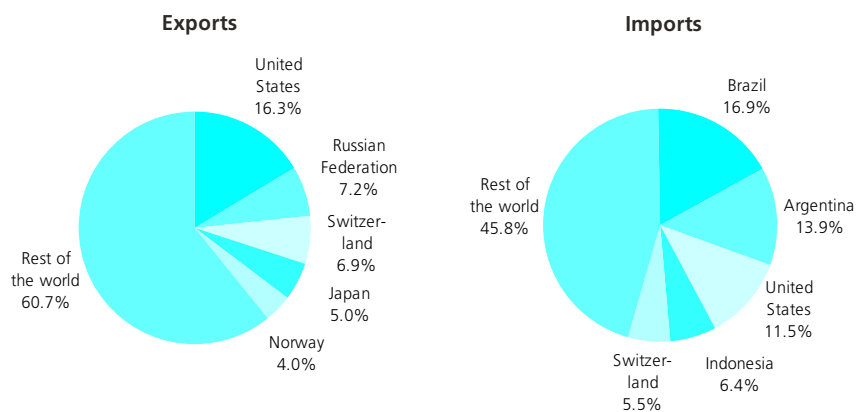
Miscellaneous food products (CPA Groups 15.3, 15.4 and 15.6 to 15.8)
External trade, EU-25, 2002

	Exports		Imports		Trade balance (EUR million)
	Value (EUR million)	Share of total (%)	Value (EUR million)	Share of total (%)	
Processed and preserved fruit and vegetables	2 857	14.5	4 812	27.0	-1 955
Animal and vegetable oils and fats	2 475	12.5	6 108	34.3	-3 633
Grain mill products, starches and starch products	1 817	9.2	760	4.3	1 056
Prepared animal feeds	1 248	6.3	815	4.6	433
Other food products	11 351	57.5	5 304	29.8	6 047

Source: Eurostat, Comext.

Figure 3.18

Miscellaneous food products (CPA Groups 15.3, 15.4 and 15.6 to 15.8)
Share in extra-EU trade, 2002



Source: Eurostat, Comext.

3.5: 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).

The supply of beverages has witnessed a remarkable increase in the past decades, marked by an ever-stronger differentiation of products. In contrast to many food products, this sector is often characterised by high advertising budgets, in a market dominated by multinational corporations. Note the peculiarity of the beer market where exclusive distribution contracts are common, whereby brewers control a network of outlets which exclusively sell their own beer brands alongside other drinks.

STRUCTURAL PROFILE

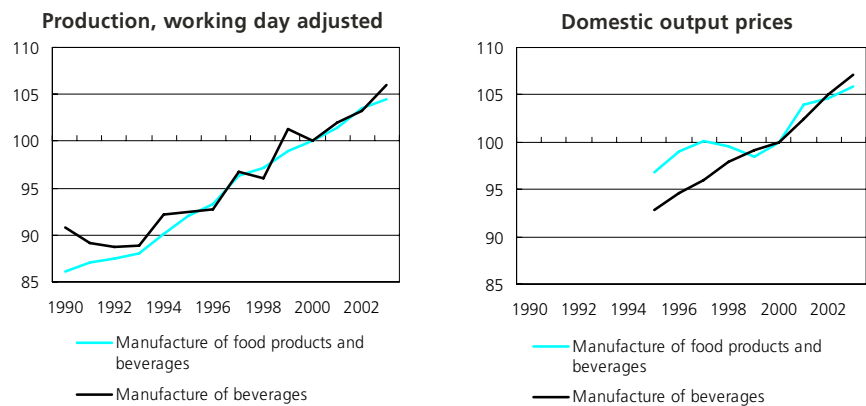
The EU-25's beverages sector generated EUR 31.7 billion of value added in 2001, of which EUR 3.1 billion originated from the 10 new Member States. Within food, beverages and tobacco manufacturing, the beverages sector was the second largest group in terms of value added (17.1 % of the total). It was also important in terms of employment, with 344 100 persons employed in the EU-15 in 2001, or 9.6 % of the food, beverages and tobacco manufacturing total; including the 10 new Member States the total number of persons employed in the EU-25 ⁽²⁴⁾ was 442 400.

The United Kingdom (EUR 6.0 billion), Germany (EUR 5.3 billion) and France (EUR 4.6 billion) jointly represented approximately half of the wealth creation in beverages manufacturing in the EU-25. The relatively low level of value added recorded in Italy (EUR 2.2 billion) should be noted, reflected by the fact that this sector's share in manufacturing value added was half the level it was in the EU-25 on average; only Finland reported a lower manufacturing value added specialisation ratio in beverages ⁽²⁵⁾. In contrast, countries that stood out as being comparatively specialised in the manufacture of beverages were Cyprus, Latvia, Lithuania and Malta.

⁽²⁴⁾ Slovenia, number of employees.

⁽²⁵⁾ Greece, Ireland and the Netherlands, not available.

Figure 3.19
Manufacture of beverages (NACE Group 15.9)
Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/eht).

Table 3.16
Consumption of soft drinks (million litres)

	1995	1996	1997	1998	1999	2000	2001
EU-15							
Carbonates	24 739	24 502	25 478	25 738	26 723	27 375	27 836
Packaged water	29 094	28 863	30 214	31 375	32 907	34 516	36 168
Fruit juices and nectars	7 928	8 012	8 256	8 377	8 547	8 992	9 108
Other soft drinks (1)	8 785	9 773	9 108	9 302	9 859	10 076	10 458
Other European countries (2)							
Carbonates	4 937	4 958	5 352	5 573	5 676	5 918	5 990
Packaged water	2 972	3 495	3 776	4 153	4 160	4 689	4 860
Fruit juices and nectars	1 064	1 226	1 323	1 379	1 409	1 465	1 530
Other soft drinks (1)	2 839	2 934	3 070	3 082	2 690	2 779	2 777

(1) Includes still fruit drinks, fruit squashes / syrups, fruit powder, iced tea and coffee, sports and energy drinks.
(2) The Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Slovakia, Bulgaria, Romania, Norway and Switzerland.

Source: UNESDA - Union of EU Soft Drinks Associations.

According to the Union of EU Soft Drinks Associations (Unesda), all main segments of the soft drinks market benefited from a growth in consumption between 1995 and 2001. The largest product segment in volume terms was packaged water, which also reported the highest increase in consumption over the period considered.

Turning to the beer market, Germany was by far the largest producer of beer in the EU-15, with an output of 108 million hectolitres, which was double that of the United Kingdom (see Table 3.17). In terms of demand, Germany was surpassed by Ireland with average consumption at 139.7 litres per inhabitant per year, against 121.6 litres in Germany.

LABOUR AND PRODUCTIVITY

The apparent labour productivity of the beverages sector was the highest among the various NACE groups that make up food, beverages and tobacco manufacturing, and was above the national manufacturing average in every Member State ⁽²⁶⁾, sometimes two (Lithuania and Poland) or even three times higher (Latvia). However, high apparent labour productivity was matched by high average personnel costs that were, with the exception of Luxembourg, also higher than national manufacturing averages in every Member State. Despite high average personnel costs, wage adjusted labour productivity in this sector was above the manufacturing average in all Member States, with the exception of the Netherlands.

⁽²⁶⁾ Greece, Ireland, the Netherlands and Slovenia, not available.

Table 3.17

Main indicators for beer, 2002			
	Number of active breweries (units)	Total beer production (thousand hl)	Consumption per inhabitant (litres)
BE	118	15 696	95.6
DK	14	8 534	96.6
DE	1 279	108 336	121.6
EL	-	4 550	40.2
ES	19	27 860	76.0
FR	19	18 117	34.6
IE	6	8 113	139.7
IT	16	12 592	28.2
LU	4	386	98.1
NL	16	24 898	79.0
AT	63	8 731	108.9
PT	7	7 129	57.2
FI	6	4 726	79.4
SE	22	4 376	55.9
UK (1)	64	56 672	99.2

(1) Excluding small and micro breweries.
Source: The Brewers of Europe.

Table 3.18

Manufacture of beverages (NACE Group 15.9) Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Manufacture of beverages	83.1	207.6	40.0
Manufacture of distilled potable alcoholic beverages	103.6	247.2	41.9
Production of ethyl alcohol from fermented materials	67.7	218.5	31.0
Manufacture of wines	63.3	216.4	29.3
Manufacture of cider and other fruit wines	110.2	253.1	43.5
Manufacture of other non-distilled fermented beverages	54.1	161.8	33.4
Manufacture of beer	93.8	205.3	45.7
Manufacture of malt	74.6	183.7	40.6
Production of mineral waters and soft drinks	75.3	190.8	39.5

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 3.19

Beverages (CPA Group 15.9)
External trade, EU-25, 2002

	Exports		Imports		Trade balance (EUR million)
	Value (EUR million)	Share of total (%)	Value (EUR million)	Share of total (%)	
Beverages	13 849	100.0	3 573	100.0	10 276
Distilled alcoholic beverages	5 442	39.3	907	25.4	4 535
Ethyl alcohol	52	0.4	30	0.8	22
Wines	4 393	31.7	2 258	63.2	2 136
Cider and other fruit wines	49	0.4	5	0.2	44
Other non-distilled fermented beverages	95	0.7	7	0.2	88
Beer made from malt	1 967	14.2	192	5.4	1 775
Malt	714	5.2	0	0.0	713
Mineral waters and soft drinks	1 137	8.2	173	4.8	964

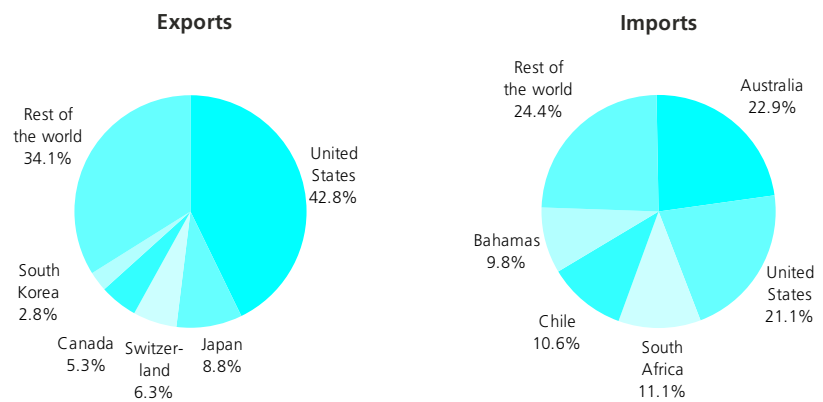
Source: Eurostat, Comext.

EXTERNAL TRADE

Beverages (CPA Group 15.9) are an important contributor to external trade in food products, beverages and tobacco. EU-25 exports of beverages to non-Community countries accounted for as much as 29.0 % of the total for food products, beverages and tobacco in 2002, at EUR 13.8 billion. Imports were somewhat less important, at EUR 3.6 billion, or 9.3 % of the total for food products, beverages and tobacco. As a result, the EU ran a sizeable trade surplus for beverages in 2002 that was valued at EUR 10.3 billion. The most specialised exporters (intra- and extra-EU combined) in beverages compared with their exports of all manufactured goods were France and Cyprus, where the share of this category of goods in total exports of manufactured goods was at least twice as high as the corresponding EU-25 average.

The United States was by far the main export market for EU-25 beverages, with some 42.8 % of EU-25 exports destined for that country in 2002, far ahead of the shares reported by Japan (8.8 %) and Switzerland (6.3 %). Australia surpassed the United States in terms of imports, accounting for a 22.9 % share of EU-25 imports against 21.1 % for the United States. Other major suppliers to the EU-25 included South Africa (11.1 %), Chile (10.6 %) and the Bahamas (9.8 %).

Figure 3.20

Beverages (CPA Group 15.9)
Share in extra-EU trade, 2002


Source: Eurostat, Comext.

3.6: TOBACCO

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

The reduction in tobacco consumption in the EU may be associated with smoking and tobacco advertising bans, health education campaigns, as well as higher indirect taxation on tobacco products.

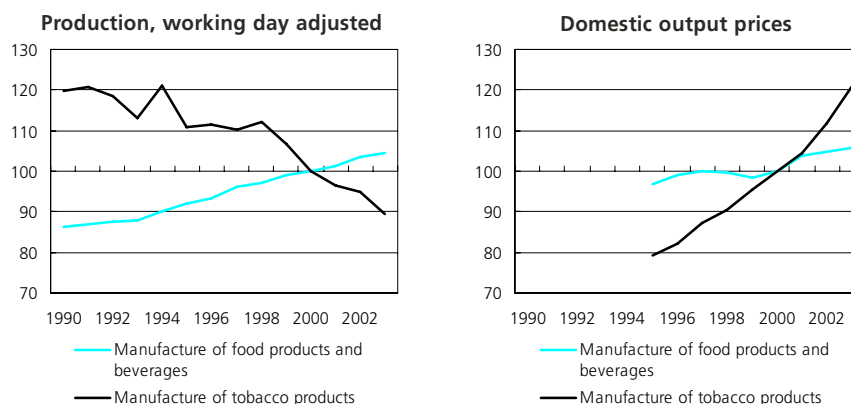
Production of unmanufactured tobacco (regulated by the common agricultural policy) in the EU-15 fell from 430 000 tonnes in 1991 to 327 587 tonnes in 2001. The main EU-15 producers were Italy and Greece with, respectively, 127 418 tonnes and 117 872 tonnes in 2001. Among the 10 new Member States there were four tobacco producers in 2001: Poland (36 968 tonnes, 1998–2000 average), Hungary (12 904 tonnes), Slovakia (1 549) and Cyprus (337 tonnes).

STRUCTURAL PROFILE

The tobacco manufacturing sector generated EUR 9.5 billion of value added in the EU-25 in 2001, contributing 5.1 % to the total for food, beverages and tobacco manufacturing. Note that as much as EUR 1.5 billion of the tobacco manufacturing value added in the EU-25 originated from the 10 new Member States, equivalent to 15.3 %. This represented by far the largest percentage contribution of the 10 new Member States to EU-25 value added in any manufacturing NACE division. In employment terms the tobacco manufacturing sector was the smallest manufacturing NACE division in the EU-15, with 52 900 persons employed in 2001, just 1.5 % of the food, beverages and tobacco manufacturing total. There were 67 500 employees in the EU-25, of which 14 800 were working in the 10 new Member States. Data are only available for approximately half of the EU-25 Member States, but among these Cyprus reported a notably high value added specialisation ratio, as the contribution of tobacco manufacturing to national manufacturing value added was 3.5 times higher than the corresponding EU-25 average.

Figure 3.21

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



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Table 3.20

Production of tobacco products, 2002

	Production of cigarettes (million pieces)	Production of cigars (million pieces)	Production of pipe tobacco (tonnes)	Production of hand rolling tobacco (tonnes)
EU-15	754 602	7 598	7 615	79 687
BE/LU	20 102	726	0	11 622
DK	12 436	339	4 464	0
DE	212 499	1 857	614	21 334
EL	40 049	0	0	12
ES	58 656	837	0	0
FR	39 400	584	659	3 041
IE	6 527	30	0	8 000
IT	37 335	119	36	0
NL	126 292	2 380	350	31 000
AT	36 748	30	0	0
PT	23 875	0	0	0
FI	4 169	:	0	121
SE	3 500	0	300	250
UK	133 014	696	1 193	4 306

Source: CECCM, most recent figures provided by national manufacturers' associations as of December 2003.

Tobacco manufacturing is dominated by large enterprises. In 2001, 82.6 % of the value added in the EU-25 originated from enterprises employing at least 250 persons, 1.5 times the equivalent proportion for manufacturing as a whole. Only 11.5 % of value added came from small enterprises and 5.8 % from medium-sized enterprises, while micro enterprises (0.2 %) had a marginal role in this sector.

The main tobacco product in the EU-15 was cigarettes, with production in 2002 of 754.6 billion units, of which almost two thirds were manufactured in just three countries: Germany (212.5 billion units), the United Kingdom (133.0 billion) and the Netherlands (126.3 billion) - see Table 3.20.

LABOUR AND PRODUCTIVITY

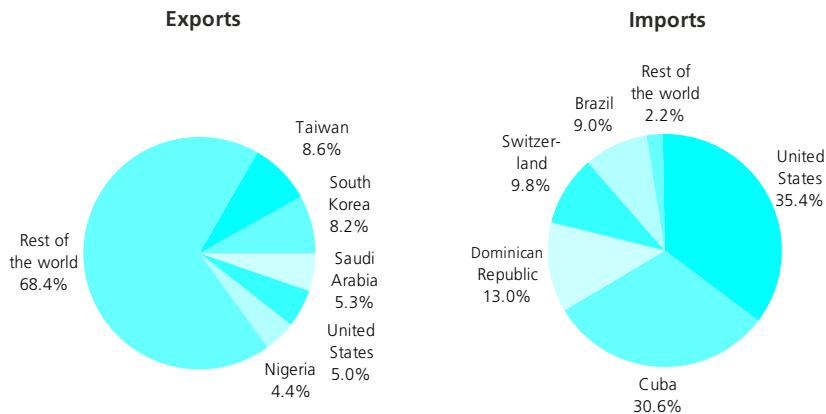
Within food, beverages and tobacco manufacturing, the EU-15 recorded its highest apparent labour productivity in tobacco manufacturing, each person employed generating on average EUR 153 200 of value added in 2001, against EUR 51 200 in manufacturing as a whole. Average personnel costs were also generally high, equal to EUR 43 400 per employee in the EU-25 in 2001 (EUR 51 500 in the EU-15) against EUR 30 900 in manufacturing (EUR 35 700 in the EU-15). The combination of these two ratios reveals that wage adjusted labour productivity in the EU-25 for tobacco manufacturing was approximately twice as high as the manufacturing average.

EXTERNAL TRADE

The EU-25 had a very low level of external trade in manufactured tobacco products (CPA Division 16) in 2002, with exports to non-Community countries being valued at only EUR 1.8 billion and imports at EUR 0.2 billion. The Netherlands was the most specialised exporter (intra- and extra-EU combined) of tobacco products relative to its total exports of manufactured goods.

The main EU-25 export markets for tobacco products were Taiwan (8.6 % of EU-25 exports), South Korea (8.2 %), Saudi Arabia (5.3 %) and the United States (5.0 %). The main EU-25 import partners were the United States (35.4 % of EU-25 imports) and Cuba (30.6 %).

Figure 3.22

**Tobacco products (CPA Division 16)
Share in extra-EU trade, 2002**


Source: Eurostat, Comext.

Table 3.21

Production, processing, preserving of meat, meat products (NACE Group 15.1)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	4 853	1 744	5 822	27 072	117	:	13 905	31 077	3 580	16 233	213	161	207	90
Value added at factor cost (EUR million) (1)	808	219	1 318	6 438	20	:	2 430	5 654	512	2 332	32	40	29	24
Purchases of goods and services (EUR million)	4 506	1 731	0	22 571	106	:	12 396	29 047	3 178	14 832	177	147	192	67
Gross investment in tangible goods (EUR million)	140	51	160	581	6	:	437	849	88	443	7	11	9	:
Number of persons employed (thousands)	16	30	25	211	3	:	73	173	14	57	1	5	9	1
App. labour productivity (EUR thous./pers. emp.) (1)	49.8	7.3	53.8	30.5	8.0	:	33.5	32.7	35.6	41.3	26.3	7.6	3.1	29.4
Average personnel costs (EUR thous./employee) (2)	33.9	5.3	37.0	22.2	4.9	:	20.8	25.3	22.2	28.2	14.7	2.7	2.1	30.1
Wage adjusted labour productivity (%) (2)	147.0	138.0	145.3	137.0	165.0	:	160.5	129.0	159.9	146.2	159.2	286.2	148.4	97.5
Gross operating rate (%) (1)	5.5	3.7	7.0	7.4	6.4	:	6.7	4.1	5.6	5.4	6.7	15.6	4.4	-0.3
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	2 003	33	8 414	2 316	5 773	1 619	404	404	1 940	3 124	18 102	258	1 014	:
Value added at factor cost (EUR million)	347	7	1 241	569	2 467	257	71	24	504	615	4 902	28	11	:
Purchases of goods and services (EUR million)	1 971	26	7 539	1 982	5 795	1 500	340	454	1 843	2 575	14 178	290	1 199	:
Gross investment in tangible goods (EUR million)	89	1	196	63	201	90	22	26	77	110	504	23	56	:
Number of persons employed (thousands)	34	0	27	17	106	15	:	9	11	15	121	16	32	:
App. labour productivity (EUR thous./pers. emp.)	10.1	20.9	45.2	33.2	23.2	16.9	:	2.5	47.8	41.3	40.7	1.8	0.3	:
Average personnel costs (EUR thous./employee)	6.2	11.9	31.2	25.6	5.6	11.2	10.9	4.3	33.8	33.5	26.9	1.3	1.9	:
Wage adjusted labour productivity (%)	162.0	175.1	144.8	129.4	414.6	151.6	:	58.6	141.2	123.1	151.4	141.4	17.8	:
Gross operating rate (%)	5.9	11.6	4.8	6.4	28.5	5.1	1.6	-3.5	6.4	3.8	8.8	5.1	-4.7	:

(1) Ireland, 2000.

(2) Ireland and Cyprus, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 3.22

Processing and preserving of fish and fish products (NACE Group 15.2)
Main indicators, 2001

	BE	CZ (1)	DK	DE	EE	EL	ES	FR (2)	IE	IT	CY	LV	LT	LU
Production (EUR million)	381	40	1 477	2 169	131	:	2 834	2 542	384	1 687	:	167	121	0
Value added at factor cost (EUR million) (3)	74	:	298	501	31	:	591	456	79	258	:	61	24	0
Purchases of goods and services (EUR million)	380	64	0	1 870	103	:	2 612	2 495	321	1 698	:	127	109	0
Gross investment in tangible goods (EUR million)	9	:	46	44	7	:	113	97	11	46	:	12	9	:
Number of persons employed (thousands)	1	1	7	12	5	:	22	14	3	6	:	9	4	0
App. labour productivity (EUR thous./pers. emp.) (3)	50.2	:	42.9	42.0	5.7	:	26.5	31.5	30.8	43.0	:	7.2	5.7	:
Average personnel costs (EUR thous./employee) (3)	32.3	4.8	29.5	29.7	4.1	:	15.9	25.7	18.6	26.2	:	3.1	1.9	:
Wage adjusted labour productivity (%) (3)	155.4	:	145.4	141.4	139.8	:	167.1	122.8	165.8	164.0	:	228.2	302.5	:
Gross operating rate (%) (3)	6.4	5.1	5.9	6.4	6.6	:	7.9	2.9	8.7	6.3	:	20.3	12.5	:
	HU (2)	MT	NL	AT (1)	PL	PT	SI (1)	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	2	:	701	26	575	550	15	30	80	379	2 939	6	15	:
Value added at factor cost (EUR million)	1	:	148	9	242	82	3	6	20	98	705	1	3	:
Purchases of goods and services (EUR million)	2	:	631	23	502	574	12	34	63	319	2 295	6	13	:
Gross investment in tangible goods (EUR million)	1	:	13	1	32	31	0	1	3	16	89	1	3	:
Number of persons employed (thousands)	0	:	4	0	12	5	:	1	1	2	21	1	1	:
App. labour productivity (EUR thous./pers. emp.)	4.3	:	34.7	29.4	19.9	15.2	:	6.2	36.1	42.7	33.7	1.7	2.6	:
Average personnel costs (EUR thous./employee)	2.5	:	26.6	19.0	5.5	10.1	11.9	4.3	23.5	29.6	19.6	1.4	1.9	:
Wage adjusted labour productivity (%)	169.0	:	130.5	154.5	361.2	150.3	:	144.0	154.0	144.6	172.1	122.0	137.3	:
Gross operating rate (%)	8.6	:	6.3	9.2	27.2	4.3	0.9	4.7	10.2	7.9	10.0	3.6	6.1	:

(1) 1999.

(2) 2000.

(3) Ireland, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 3.23

Processing and preserving of fruit and vegetables (NACE Group 15.3)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	1 884	186	569	7 209	15	:	4 569	6 018	213	6 700	54	29	11	:
Value added at factor cost (EUR million) (1)	425	39	139	1 502	4	:	880	1 112	112	1 070	19	8	2	:
Purchases of goods and services (EUR million)	1 570	173	0	6 075	13	:	4 119	5 459	157	5 888	44	25	9	:
Gross investment in tangible goods (EUR million)	184	5	29	300	2	:	255	283	13	591	4	2	1	:
Number of persons employed (thousands)	7	4	3	31	0	:	31	27	2	30	1	1	1	:
App. labour productivity (EUR thous./pers. emp.) (1)	61.1	9.1	51.1	48.9	8.9	:	28.4	41.5	68.7	36.0	25.7	10.1	3.2	:
Average personnel costs (EUR thous./employee) (2)	34.4	5.5	33.4	31.9	5.0	:	18.4	28.2	25.4	24.0	15.2	4.9	2.6	:
Wage adjusted labour productivity (%) (2)	178.0	165.1	152.8	153.5	177.7	:	154.0	147.4	270.7	149.7	187.7	206.3	122.0	:
Gross operating rate (%) (1)	9.6	8.3	7.9	7.1	11.3	:	6.5	5.5	26.3	6.1	12.0	13.4	3.8	:
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	630	60	2 860	883	2 214	415	185	50	373	1 090	6 143	116	86	:
Value added at factor cost (EUR million)	140	22	646	215	1 000	88	44	12	115	340	2 324	20	18	:
Purchases of goods and services (EUR million)	582	37	2 550	746	1 596	348	141	47	354	849	3 989	120	81	:
Gross investment in tangible goods (EUR million)	44	1	123	36	91	36	14	3	15	60	337	17	19	:
Number of persons employed (thousands)	12	1	10	3	35	4	:	2	2	6	35	8	6	:
App. labour productivity (EUR thous./pers. emp.)	11.5	37.9	66.9	64.9	28.5	22.4	:	8.0	55.9	59.7	65.9	2.4	2.9	:
Average personnel costs (EUR thous./employee)	6.1	11.5	39.4	38.6	7.7	15.1	15.2	4.5	32.7	37.7	29.6	1.3	2.0	:
Wage adjusted labour productivity (%)	187.1	330.5	169.9	167.9	368.0	147.8	:	179.7	171.0	158.5	222.8	178.7	142.2	:
Gross operating rate (%)	9.7	25.2	9.0	9.5	31.0	6.7	6.6	9.4	10.5	10.8	20.5	6.9	7.0	:

(1) Ireland, 2000.

(2) Ireland and Cyprus, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 3.24

Manufacture of vegetable and animal oils and fats (NACE Group 15.4)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE (1)	IT	CY	LV	LT	LU
Production (EUR million)	2 298	:	:	4 739	:	:	5 452	2 643	9	4 381	36	:	:	:
Value added at factor cost (EUR million)	138	:	:	519	:	:	633	269	2	535	6	:	:	:
Purchases of goods and services (EUR million)	2 168	:	:	4 801	:	:	5 364	2 981	9	4 196	34	:	:	:
Gross investment in tangible goods (EUR million)	28	:	:	95	:	:	199	45	0	223	1	:	:	:
Number of persons employed (thousands)	2	:	:	7	:	:	14	4	0	13	0	:	:	:
App. labour productivity (EUR thous./pers. emp.)	88.8	:	:	76.7	:	:	44.9	73.3	32.5	41.1	29.7	:	:	:
Average personnel costs (EUR thous./employee) (3)	55.6	:	:	53.0	:	:	23.5	54.4	27.0	33.0	18.0	:	:	:
Wage adjusted labour productivity (%) (3)	159.7	:	:	144.7	:	:	190.8	134.7	120.6	124.5	182.9	:	:	:
Gross operating rate (%)	2.2	:	:	3.0	:	:	5.5	2.2	4.7	6.4	6.3	:	:	:
	HU	MT	NL	AT (1)	PL (2)	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	395	:	2 927	355	505	623	33	106	216	589	2 957	87	301	:
Value added at factor cost (EUR million)	92	:	351	112	83	70	4	14	56	162	694	14	55	:
Purchases of goods and services (EUR million)	413	:	4 945	542	398	597	31	96	180	477	2 443	101	321	:
Gross investment in tangible goods (EUR million) (4)	20	:	59	18	25	28	2	6	4	15	48	4	26	:
Number of persons employed (thousands)	2	:	4	1	:	2	:	1	1	2	4	3	6	:
App. labour productivity (EUR thous./pers. emp.)	41.0	:	99.3	118.5	:	29.0	:	12.6	77.4	90.1	162.9	4.7	8.5	:
Average personnel costs (EUR thous./employee)	19.1	:	44.7	77.4	9.2	15.8	15.6	6.5	49.3	45.4	65.9	2.0	3.3	:
Wage adjusted labour productivity (%)	214.1	:	222.2	153.1	:	183.1	:	194.2	157.1	198.3	247.1	236.0	254.6	:
Gross operating rate (%)	9.9	:	3.8	6.6	7.8	6.0	0.2	6.0	8.8	13.4	13.0	7.5	9.5	:

(1) 2000.

(2) 1999.

(3) Cyprus, 2000.

(4) The Netherlands, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 3.25

Manufacture of dairy products (NACE Group 15.5)
Main indicators, 2001

	BE	CZ	DK (1)	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	3 150	1 183	3 158	20 220	196	:	6 665	23 137	3 731	16 386	133	195	376	:
Value added at factor cost (EUR million) (2)	383	145	571	2 580	26	:	1 280	3 107	757	2 861	38	61	68	:
Purchases of goods and services (EUR million)	2 932	1 171	3 440	19 881	226	:	6 005	21 893	3 930	14 612	100	157	330	:
Gross investment in tangible goods (EUR million)	93	38	141	449	14	:	276	565	101	765	13	12	31	:
Number of persons employed (thousands)	8	14	10	40	3	:	25	65	11	53	1	5	11	:
App. labour productivity (EUR thous./pers. emp.) (2)	50.6	10.5	54.5	65.0	8.7	:	50.2	47.9	82.1	54.3	26.4	11.7	6.4	:
Average personnel costs (EUR thous./employee) (3)	39.6	5.9	34.9	39.9	5.9	:	27.9	32.5	34.3	33.5	17.1	4.2	4.4	:
Wage adjusted labour productivity (%) (3)	128.0	176.3	156.2	162.9	147.4	:	179.9	147.4	239.2	162.0	163.4	276.5	145.9	:
Gross operating rate (%) (2)	3.2	4.9	5.6	4.5	3.4	:	8.5	4.0	10.2	7.6	9.8	19.8	5.7	:
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	860	31	7 404	1 697	3 459	1 347	270	333	1 707	2 323	9 231	122	300	:
Value added at factor cost (EUR million)	146	4	964	221	862	247	30	37	274	450	1 978	22	59	:
Purchases of goods and services (EUR million)	842	26	6 898	1 773	3 049	1 144	251	357	1 716	2 046	8 256	116	314	:
Gross investment in tangible goods (EUR million)	28	1	132	82	132	60	9	21	35	136	364	24	46	:
Number of persons employed (thousands)	9	0	13	5	51	8	:	5	5	9	37	7	18	:
App. labour productivity (EUR thous./pers. emp.)	15.7	16.5	74.3	48.8	16.8	32.7	:	8.0	51.7	50.3	52.8	3.1	3.3	:
Average personnel costs (EUR thous./employee)	7.5	12.6	47.1	38.7	7.4	14.6	15.9	5.0	36.0	38.6	30.2	1.6	2.2	:
Wage adjusted labour productivity (%)	208.8	130.7	157.8	126.3	227.8	224.1	:	160.3	143.6	130.3	174.9	200.4	153.8	:
Gross operating rate (%)	8.3	4.3	5.5	2.4	12.7	10.3	0.5	3.6	4.3	4.3	8.6	9.1	7.2	:

(1) 1999.

(2) Ireland, 2000.

(3) Ireland and Cyprus, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 3.26

Manufacture of other food products (NACE Group 15.8)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE (1)	IT	CY	LV	LT	LU
Production (EUR million)	7 128	1 793	3 768	40 059	125	:	11 997	33 777	5 690	24 446	212	226	333	146
Value added at factor cost (EUR million)	2 107	507	1 354	13 968	38	:	4 110	10 542	1 619	7 203	98	93	92	76
Purchases of goods and services (EUR million)	5 759	1 586	0	29 166	104	:	9 105	26 847	4 213	20 310	158	172	272	83
Gross investment in tangible goods (EUR million)	401	86	267	1 517	10	:	605	1 791	125	1 668	24	18	23	:
Number of persons employed (thousands)	50	60	32	416	6	:	133	281	12	216	5	11	20	2
App. labour productivity (EUR thous./pers. emp.)	42.1	8.4	42.9	33.6	6.3	:	30.9	37.5	137.0	33.3	18.4	8.2	4.7	37.1
Average personnel costs (EUR thous./employee) (2)	29.2	5.4	27.9	23.3	4.3	:	21.3	26.6	29.4	25.4	12.0	3.7	3.3	25.7
Wage adjusted labour productivity (%) (2)	144.2	157.7	153.9	144.1	146.6	:	145.5	141.2	466.3	130.9	154.0	225.7	142.7	144.0
Gross operating rate (%)	11.3	9.9	12.9	10.7	8.5	:	12.3	10.4	22.0	14.0	13.7	21.7	8.6	16.4
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	1 280	60	10 629	3 204	7 059	2 051	389	507	1 845	2 788	28 129	407	1 265	:
Value added at factor cost (EUR million)	373	26	3 317	1 375	2 938	705	128	125	598	1 004	11 498	69	275	:
Purchases of goods and services (EUR million)	1 131	35	8 406	2 200	4 214	1 578	275	503	1 308	1 994	19 046	396	1 448	:
Gross investment in tangible goods (EUR million)	89	2	415	178	270	159	31	36	78	170	1 272	38	167	:
Number of persons employed (thousands)	34	2	68	40	156	47	:	18	15	22	205	34	90	:
App. labour productivity (EUR thous./pers. emp.)	11.0	15.1	48.8	34.5	18.8	14.9	:	7.0	39.7	44.9	56.2	2.0	3.0	:
Average personnel costs (EUR thous./employee)	5.6	9.7	29.5	26.6	6.7	10.1	13.6	4.4	29.7	33.5	29.2	1.5	1.6	:
Wage adjusted labour productivity (%)	195.8	155.4	165.4	129.5	280.8	147.2	:	161.2	133.4	133.7	192.3	130.2	191.3	:
Gross operating rate (%)	12.6	24.8	12.3	10.5	29.2	11.9	5.3	7.7	8.7	9.4	18.3	4.5	9.7	:

(1) 2000.

(2) Cyprus, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 3.27

Manufacture of beverages (NACE Group 15.9)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	3 329	1 547	1 528	19 251	124	13 266	17 871	2 511	12 135	224	208	247	175	
Value added at factor cost (EUR million) (1)	954	416	434	5 298	34	3 931	4 648	1 215	2 201	80	138	95	61	
Purchases of goods and services (EUR million)	2 468	1 288	0	13 339	120	10 250	13 844	1 284	10 126	146	100	155	119	
Gross investment in tangible goods (EUR million)	217	140	84	1 329	11	925	776	130	597	34	32	29		
Number of persons employed (thousands)	11	21	6	80	2	50	47	6	37	2	4	7	1	
App. labour productivity (EUR thous./pers. emp.) (1)	86.1	19.9	71.3	66.6	16.7	78.3	99.9	197.6	60.3	38.9	37.9	14.2	97.0	
Average personnel costs (EUR thous./employee) (2)	50.4	8.2	40.6	42.8	7.5	33.6	44.6	46.2	33.6	19.6	6.7	5.8	42.4	
Wage adjusted labour productivity (%) (2)	170.7	241.2	175.8	155.6	222.9	232.6	224.0	427.4	179.4	220.8	569.4	245.7	228.5	
Gross operating rate (%) (1)	11.4	15.0	11.9	9.3	12.0	17.3	13.8	30.2	9.1	16.5	54.5	22.0	18.9	
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	1 172	82	1 771	4 832	2 159	279	402	904	1 633	19 807	435	1 264		
Value added at factor cost (EUR million)	418	40	589	1 681	580	67	89	311	541	5 967	90	412		
Purchases of goods and services (EUR million)	846	42	1 128	3 535	1 839	210	353	629	1 180	12 035	358	1 032		
Gross investment in tangible goods (EUR million)	72	8	206	117	306	252	28	72	122	1 587	45	349		
Number of persons employed (thousands)	14	1	10	9	36	14	9	4	6	56	17	38		
App. labour productivity (EUR thous./pers. emp.)	29.0	33.8	64.5	46.6	41.3	10.2	80.7	86.1	106.0	5.4	10.8			
Average personnel costs (EUR thous./employee)	10.0	14.7	43.0	11.2	18.1	18.9	5.4	39.1	44.3	44.4	2.4	3.0		
Wage adjusted labour productivity (%)	290.4	230.3	149.8	417.9	228.3	189.0	206.3	194.2	238.6	225.4	355.0			
Gross operating rate (%)	22.3	27.5	10.5	25.8	14.5	5.8	9.9	17.4	15.5	15.6	10.5	22.0		

(1) Ireland, 2000.

(2) Ireland and Cyprus, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 3.28

Manufacture of tobacco products (NACE Division 16)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	1 562	627	1 544	14 440	0	224	1 407	1 359	8 450	129				
Value added at factor cost (EUR million)	237		242	1 942	0	65	519	207	440	20				
Purchases of goods and services (EUR million)	1 327	469	0	6 545	0	1 230		249	2 153	48				
Gross investment in tangible goods (EUR million)	48		17	185	0	64		13	31	9				
Number of persons employed (thousands)	3		1	13	0	1	6	1	8	0				
App. labour productivity (EUR thous./pers. emp.)	78.1		174.9	150.0		48.1	83.4	224.7	51.8	70.3				
Average personnel costs (EUR thous./employee) (2)	38.3		41.9	64.5		43.0		41.9	32.6					
Wage adjusted labour productivity (%) (2)	204.0		417.4	232.6		193.8		536.7	158.6					
Gross operating rate (%) (2)	7.8		11.9	6.3		15.2		11.6	1.7	9.9				
	HU (1)	MT	NL	AT	PL (1)	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	263			2 403	358		100		13 706	408	624			
Value added at factor cost (EUR million)	88			1 777	139		18		1 706	70	303			
Purchases of goods and services (EUR million)	194			805	210		93		1 862	197	361			
Gross investment in tangible goods (EUR million) (3)	11		76	96	25		3		141	10	82			
Number of persons employed (thousands)	2		5		1		0		5	11	5			
App. labour productivity (EUR thous./pers. emp.)	42.3				99.9		45.3		360.5	6.5	59.6			
Average personnel costs (EUR thous./employee)	11.8			13.8	35.0		43.6		85.2	4.2	6.6			
Wage adjusted labour productivity (%)	357.3				285.7		103.9		423.3	154.6	897.5			
Gross operating rate (%)	23.1			64.2	24.9		0.7		9.3	5.7	44.9			

(1) 2000.

(2) Ireland, 2000.

(3) The United Kingdom, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Textiles, clothing, leather and footwear



Textile and clothing manufacturing has been greatly affected by globalisation. This activity is one of the oldest and most traditional within the manufacturing sector and is highly labour intensive, resulting in production moving to lower-cost regions of the world, especially in Asia. Competition by manufacturers in the EU concentrates on fashion and design, by investing in research and development for new materials (for example, man-made fibres in textiles), and by providing higher quality goods to consumers. The trend has been to outsource stages of production that are more labour intensive to lower-cost countries, such as Romania and some Mediterranean countries, especially Turkey, Morocco and Tunisia.

The interaction between enterprises in all parts of the production chain by means of EDI may permit textile and clothing manufacturers to react faster to market fluctuations and to cut distribution and stock management costs. The application of ICT may lead to a more integrated and efficient supply chain, and to further reduce the time taken for products to go from the design stage to retail outlets.

A further challenge for textile and clothing manufacturers is to adapt their activity to the liberalisation of textile and clothes trade. Indeed, in 2005, after almost four decades of World Trade Organisation (WTO) import quotas, the process of trade liberalisation should have been completed. This should involve the removal of quantitative restrictions on large textile producing nations like China, India or Indonesia when exporting, for example, to the EU or the United States.

STRUCTURAL PROFILE

Value added in the EU-25's textile and clothing manufacturing sector (NACE Subsections DB and DC) was EUR 76.7 billion in 2001 (EUR 5.9 billion less in the EU-15) and accounted for 5.0 % of the whole of EU-25 manufacturing. There were 3.2 million persons employed in this sector in the EU-25 ⁽¹⁾ and 2.4 million in the EU-15, 8.3 % of EU-15 manufacturing employment, accounting therefore for a notably higher share of employment than of value added. The 10 new Member States contributed 7.7 % of the EU-25's value added in this sector. Their contribution to employment was particularly high in the manufacture of clothing (NACE Group 17.7 and Division 18), where 28.6 % of the EU-25 workforce were employed in the 10 new Member States ⁽²⁾.

Almost half of the EU-25's textile and clothing manufacturing activity was accounted for by the manufacture of textiles (NACE Groups 17.1 to 17.6, 43.7 % of value added), whilst the manufacture of clothing (NACE Group 17.7 and Division 18) accounted for more than one third (38.6 %) of value added and the manufacture of leather and footwear (NACE Division 19) for the remaining 17.7 %.

⁽¹⁾ Estonia and Slovenia, number of employees, 1999; Latvia, 2002; Lithuania and Hungary, 1999.

⁽²⁾ Slovenia, number of employees.

This chapter covers the manufacture of textiles, clothing, fur and leather goods, as defined by NACE Subsections DB and DC, hereafter referred to as textile and clothing manufacturing. The processing stages of textile manufacture (as covered by NACE Groups 17.1 to 17.6) are dealt with in the first subchapter, while NACE Group 17.7 and Division 18 make up the second subchapter on clothing (which includes articles that are either knitted or crocheted). The final subchapter concentrates on leather and footwear (as covered by NACE Division 19).

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.

Table 4.1

Manufacture of textiles and textile products; manufacture of leather and leather products (NACE Subsections DB and DC)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to manufacturing (EU-25=100) (1)	Largest number of persons employed (thousands) (1)	Main EU-25 trading partners: origin of imports, 2002 (EUR billion)	Main EU-25 trading partners: destination of exports, 2002 (EUR billion)
1	Italy (25.2)	Portugal (369)	Italy (808.3)	China (18.7)	United States (8.4)
2	United Kingdom (9.1)	Italy (249)	Poland (324.0)	Turkey (9.6)	Switzerland (4.7)
3	Germany (9.0)	Malta (225)	Spain (316.0)	India (5.7)	Japan (3.7)
4	France (8.9)	Greece (221)	Portugal (293.7)	Romania (5.5)	Romania (3.6)
5	Spain (6.9)	Luxembourg (141)	France (259.7)	Tunisia (3.6)	Hong Kong (2.6)

(1) Estonia, Latvia, Lithuania, Hungary and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

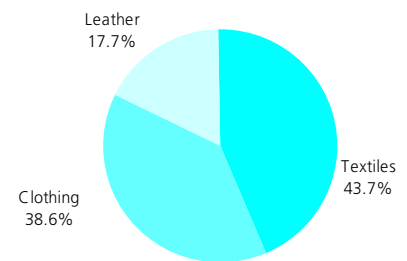
In value added terms, Italy had the largest textile and clothing manufacturing activity (EUR 25.2 billion, almost one third of the EU-25 total)⁽³⁾, and employed 808 300 persons. In fact, Italy generated the largest share of EU-25 value added in each of the three subsectors covered by this chapter (textiles, clothing and leather manufacturing). However, compared with its manufacturing sector as a whole, Portugal was the most specialised Member State in the textile and clothing manufacturing sector, followed by Italy, Malta and Greece. Ireland, Sweden and Finland were the least specialised in this sector compared with their overall level of manufacturing activity.

According to annual short-term statistics, the working day adjusted production index for textile and clothing manufacturing followed a downward evolution in recent years. As with manufacturing in general, 1993 marked the end of a downturn in textile and clothing manufacturing, and in 1994 textile and clothing manufacturing output grew by 2.2 %. However,

⁽³⁾ Estonia, Latvia, Lithuania, Hungary and Slovenia, not available.

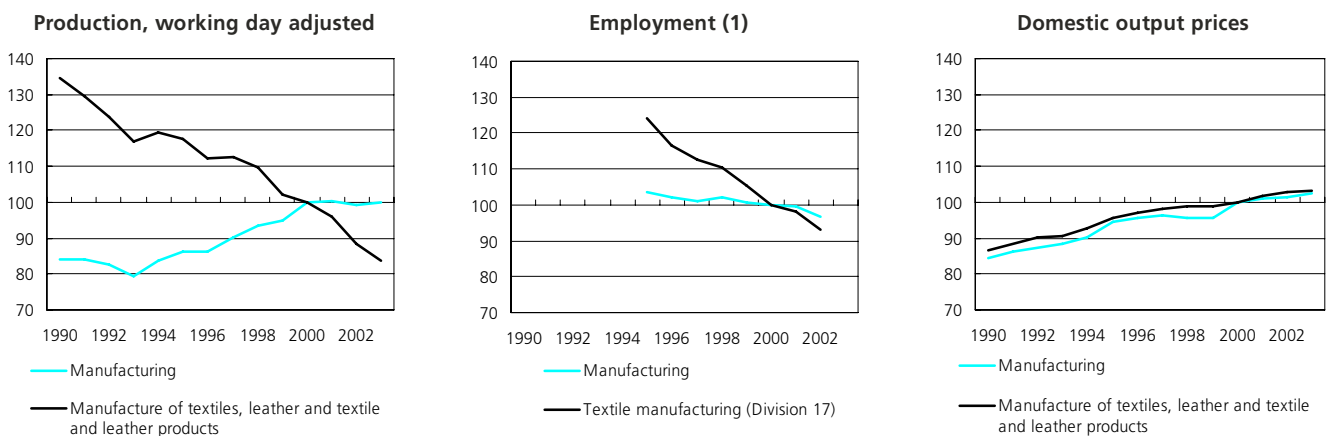
this recovery was very short lived in textile and clothing manufacturing, as 1995 was the start of an almost unbroken decline in EU-25 output that went through to 2003, with the only positive growth rate being registered in 1997 (+0.4 %). Textile and clothing manufacturing production decreased on average by 3.9 % per annum over the nine years to 2003, whereas over the same period manufacturing production increased on average by 2.0 % per annum. The largest decreases in EU-25 production were recorded in 1999 and 2002, when annual output fell by 6.6 % and 8.0 % compared to the year before. All three parts of textile and clothing manufacturing showed a similar evolution between 1994 and 2003, with the decline in production strongest for wearing apparel, dressing and dyeing of fur (NACE Division 18, -5.7 % per annum), followed by leather and leather products manufacturing (NACE Division 19, -3.8 % per annum), and textiles manufacturing (NACE Division 17, -2.1 % per annum). Most of the major textile and clothing manufacturing Member States registered a decline in their levels of production over the period 1994 to 2003.

Figure 4.1

Manufacture of textiles and textile products; manufacture of leather and leather products (NACE Subsections DB and DC)
Share of value added at factor cost, EU-25, 2001 (%)


Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 4.2

Manufacture of textiles and textile products; manufacture of leather and leather products (NACE Subsections DB and DC)
Main indicators, EU-25 (2000=100)


(1) Note that the data is for NACE Division 17 only.

Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Table 4.2

Manufacture of textiles and textile products; manufacture of leather and leather products (NACE Subsections DB and DC)
Value added at factor cost and persons employed, by enterprise size-class, 2001 (% of total)

	Micro enterprises		Small enterprises		Medium-sized enterprises		Large enterprises	
	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed
EU-25	13.7	:	26.5	:	31.5	:	28.3	:
EU-15	14.1	18.0	27.6	33.1	31.4	29.1	26.9	19.8

Source: Eurostat, Structural Business Statistics (theme4/sbs/sizclass).

All three parts of textile and clothing manufacturing registered regular increases in output prices in the EU-25 during the 10-year period from 1993 to 2003, with the only falling prices being registered for textile manufacturing: -0.9 % in 1999 and -0.2 % in 2002. The fastest price increases were for leather manufacturing, averaging 2.2 % per annum during the 10 years to 2003, while price increases for textile manufacturing and clothing manufacturing averaged 1.2 % and 1.3 % respectively over the same period.

SMEs (with less than 250 persons employed) dominated the textile and clothing manufacturing sector in the EU-25. Micro enterprises (with less than 10 persons employed) generated EUR 10.5 billion of value added in 2001, a 13.7 % share of the total (compared with a manufacturing average of 7.3 % for this size-class). Small enterprises (from 10 to 49 persons employed) and medium-sized enterprises (from 50 to 249 persons employed) generated 26.5 % and 31.5 % respectively of total value added, each around 10 percentage points higher than their respective manufacturing averages. Large enterprises registered a 28.3 % share of value added, which was approximately half their average contribution within the manufacturing sector as a whole (54.9 %). All three of the NACE divisions within textile and clothing manufacturing reported a similar enterprise structure that was dominated by SMEs.

LABOUR AND PRODUCTIVITY

According to LFS data, in 2002, the workforce in textile and clothing manufacturing displayed atypical characteristics for a manufacturing sector. Indeed, in the EU-15 the share of women (61.2 %) working in NACE Subsections DB and DC was 32.8 percentage points higher than the average for the whole of manufacturing (28.3 %). The highest proportion of female employment was found in the manufacture of wearing apparel; dressing and dyeing of fur (NACE Division 18), at over 75 % in the EU-15. Across all Member States ⁽⁴⁾, female employment rates were well above national manufacturing averages. In the vast majority of the 10 new

Table 4.3

Manufacture of textiles and textile products; manufacture of leather and leather products (NACE Subsections DB and DC)
Labour force characteristics, 2002

	Share of men		Share of full-time		Share of employees	
	Value (%)	Index (manufacturing=100)	Value (%)	Index (manufacturing=100)	Value (%)	Index (manufacturing=100)
EU-25	:	:	:	:	:	:
EU-15	38.8	54.2	90.3	97.7	86.9	94.6
BE	42.1	56.7	86.3	94.8	93.6	98.7
CZ	25.0	40.6	95.8	98.3	90.2	97.4
DK	36.2	52.9	92.0	99.2	90.3	93.5
DE	40.6	56.6	82.3	91.8	91.6	96.1
EE	:	:	95.4	98.6	95.1	98.5
EL	40.7	57.4	95.7	97.6	71.1	97.0
ES	40.4	54.3	92.8	95.8	85.6	96.8
FR	37.7	53.3	93.1	98.6	94.6	99.7
IE	52.8	76.4	84.6	90.2	83.5	90.8
IT	39.9	57.3	92.2	97.4	83.9	101.4
CY	34.8	55.3	81.9	87.7	75.8	94.7
LV	:	:	95.1	100.4	95.8	100.3
LT	18.7	36.7	93.2	98.2	95.0	98.6
LU	:	:	:	:	:	:
HU	20.0	33.6	94.5	96.8	91.8	98.4
MT	37.0	52.8	94.7	98.0	97.6	104.8
NL	54.5	70.7	69.2	92.1	85.3	88.7
AT	41.8	56.2	:	:	90.9	95.5
PL	:	:	:	:	:	:
PT	25.9	46.2	95.4	98.4	88.5	101.5
SI	24.5	40.6	96.4	99.7	95.6	101.9
SK	14.7	24.8	97.2	98.5	96.4	100.4
FI	31.4	44.7	94.0	98.4	74.5	79.6
SE	52.0	70.3	79.3	86.5	75.5	80.2
UK	46.0	61.5	81.9	88.8	89.0	93.6

Source: Eurostat, Labour Force Survey.

Member States, female employment rates were above 65 %, whereas this threshold was only passed in just two of the EU-15 Member States. In general, self-employment was found more frequently in textile and clothing manufacturing than in the manufacturing sector as a whole. Finland and Sweden registered the largest differences with their self-employment rates in textile and clothing manufacturing more than

18 percentage points above their manufacturing averages. In the EU-15 textile and clothing manufacturing sector some 90.3 % of persons employed worked full-time, compared with a manufacturing average of 92.4 %.

⁽⁴⁾ Luxembourg and Poland, not available.

In 2001, apparent labour productivity in the EU-15 textile and clothing manufacturing sector (EUR 29 900 per person employed) was lower than in any other manufacturing NACE subsection. Average personnel costs were EUR 17 300 per employee in the EU-25 and EUR 21 700 in the EU-15, again below the other manufacturing NACE subsections. Combining these two previous indicators results in a wage adjusted labour productivity ratio of 137.4 % in the EU-15. For the manufacture of textiles and textile products (NACE Subsection DB) this ratio was 135.6 %, while for the manufacture of leather and leather products (NACE Subsection DC) it was 144.9 %, the latter being just above the manufacturing average (143.3 %). Luxembourg registered the highest wage adjusted labour productivity ⁽⁵⁾, as value added generated in its textile and clothing manufacturing sector covered personnel costs almost three times over (285.3 %). High ratios were also registered in Poland (182.9 %) and the United Kingdom (156.6 %). Sweden, Slovakia and Germany all registered ratios below 125 %.

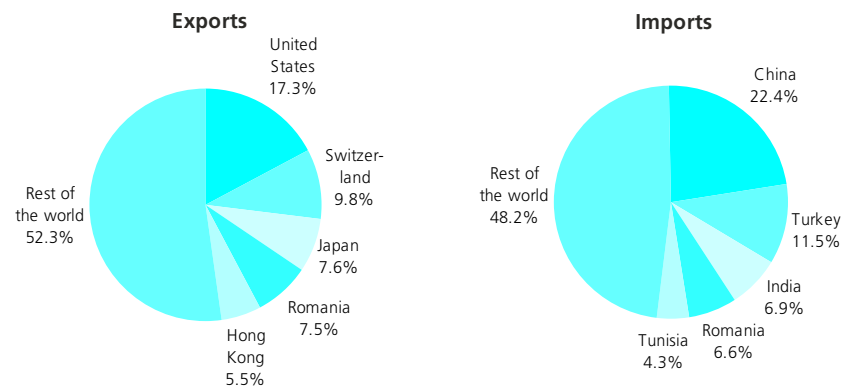
⁽⁵⁾ Estonia, Greece, Ireland, Cyprus, Latvia, Lithuania, Hungary and Slovenia, not available.

EXTERNAL TRADE

In 2002, the EU-25's imports of textile, clothing, leather and footwear products (CPA Subsections DB and DC) with non-Community countries were valued at EUR 83.2 billion (11.4 % of manufacturing imports), equivalent to almost twice the value of exports (EUR 48.2 billion, 5.8 % of manufacturing exports). Textile products (CPA Groups 17.1 to 17.6) accounted for the largest proportion (39.5 %) of textile, clothing, leather and footwear exports, while clothing products (CPA Group 17.7 and Division 18) accounted for the largest proportion of imports (59.1 %). Italian exports (intra- and extra-EU combined) of textile, clothing, leather and footwear products accounted for 26.8 % of the exports made by EU-25 Member States and German imports for 20.3 %. The most specialised exporters of

textile and clothing products (compared with all manufactured exports) were Portugal, Greece, Lithuania, Estonia, Italy and Latvia. Indeed, their export specialisation ratios compared with the EU-25 ranged from 234.9 % (Latvia) to 399.3 % (Portugal). The main trading partners for the EU-25's exports were the United States (17.3 %), Switzerland (9.8 %), Japan and Romania (both around 7.5 %). For the EU-25's imports, the list was rather different, headed by China (22.4 %), Turkey (11.5 %) and India (6.9 %) and Romania (6.6 %), which was followed by seven countries from north Africa or Asia that collectively supplied 24.7 % of the EU-25's imports.

Figure 4.3 Textiles and textile products; leather and leather products (CPA Subsections DB and DC) Share in extra-EU trade, 2002



Source: Eurostat, Comext.

Table 4.4 Textiles and textile products; leather and leather products (CPA Subsections DB and DC) External trade, EU-25, 2002 (EUR million)

	Exports	Imports	Trade balance	Cover ratio (%)
Textiles and textile products; leather and leather products	48 234	83 178	-34 944	58.0
Textiles and textile articles, except apparel; knitted or crocheted fabrics	19 058	16 655	2 403	114.4
Wearing apparel; furs; knitted and crocheted articles	16 574	49 155	-32 580	33.7
Leather and leather products	12 584	17 366	-4 782	72.5

Source: Eurostat, Comext.

4.1: TEXTILES

This subchapter deals with the processing of textiles (hereafter referred to as textile manufacturing) and includes processes such as spinning, weaving and the finishing of products (other than clothes) which are classified within NACE Groups 17.1 to 17.6.

Textile manufacturers have to face new challenges, notably increased environmental and social concerns, enlargement and the cancellation of WTO quotas for certain products. Downstream integration and the creation of own-branded lines are two developments within textile manufacturing.

Table 4.5
Top ten textile groups, EU-15, 2001

	Turnover (EUR million)	
Benetton Gruppo (1)	IT	1 980
Gruppo Marzotto SpA (1)	IT	1 772
Coats Viyella (2)	UK	1 464
Chargeurs Textiles	FR	1 229
Daun & Cie	DE	1 180
Hartmann Gruppe	DE	1 150
Somfy International (Damart) (1)	FR	974
Gamma Holding Text	NL	906
Freudenberg Nonwovens (2)	DE	884
Gruppo Tessile Miroglio (1)	IT	842

(1) Company also active in the clothing / making-up sector.
(2) Only textile activities covered.
Source: Euratex, <http://www.euratex.org>.

STRUCTURAL PROFILE

In 2001, value added (EUR 33.5 billion) generated by the manufacture of textiles (NACE Groups 17.1 to 17.6) contributed 43.7 % to the EU-25's textile and clothing manufacturing sector (NACE Subsections DB and DC). In the EU-15 the level of value added was EUR 31.4 billion, while the corresponding share in textile and clothing manufacturing was 44.4 %. There were 1.1 million persons employed in the EU-25 (6) and 883 900 in the EU-15, equivalent to 37.3 % of the EU-15's textile and clothing manufacturing workforce.

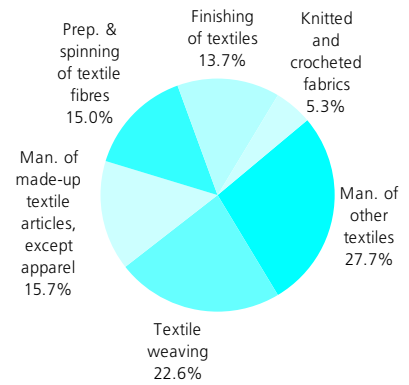
(6) Latvia and Slovenia, number of employees; Poland, 2000, number of employees; Estonia and Malta, not available.

The two largest subsectors, in terms of value added, were textile weaving (NACE Group 17.2, 22.6 % of the EU-25's textile manufacturing sector) and the residual activity of other textiles (NACE Group 17.5, 27.7 %). Italian textile manufacturing accounted for 28.1 % of the EU-25's value added, with EUR 9.4 billion. However, among the Member States for which data are available (7), Luxembourg and Portugal were relatively the most specialised in the manufacture of textiles, followed by Lithuania, Italy and Belgium. In Luxembourg and Belgium the other textiles manufacturing activity (NACE Group 17.5) was the manufacturing NACE Group in which these countries were most specialised, while the manufacture of made-up textile articles, except apparel (NACE Group 17.4) was the manufacturing group which had the highest specialisation ratio in Slovenia.

A breakdown of the EU-25's textile manufacturing sector by enterprise size-class shows that medium-sized enterprises (from 50 to 249 persons employed) generated the largest share of value added (36.3 %) in 2001. Moreover, 35.0 % of the persons employed in the EU-15 were working in this size-class. Micro and small enterprises (less than 50 persons employed) contributed a lower proportion of value added in the EU-25's textile manufacturing sector than for the clothing (NACE Group 17.7 and Division 18) or leather and leather products (NACE Division 19). However, the share (33.1 %) of these two size-classes in total value added was still well above the corresponding averages for the whole of manufacturing. Consequently, large enterprises generated 30.6 % of the textile manufacturing value added, which was well below the manufacturing average (54.9 %).

(7) Denmark, Estonia, Greece, Ireland, Latvia, Malta and Poland, not available.

Figure 4.4
Textile manufacturing (NACE Groups 17.1 to 17.6)
Share of value added at factor cost, EU-25, 2001

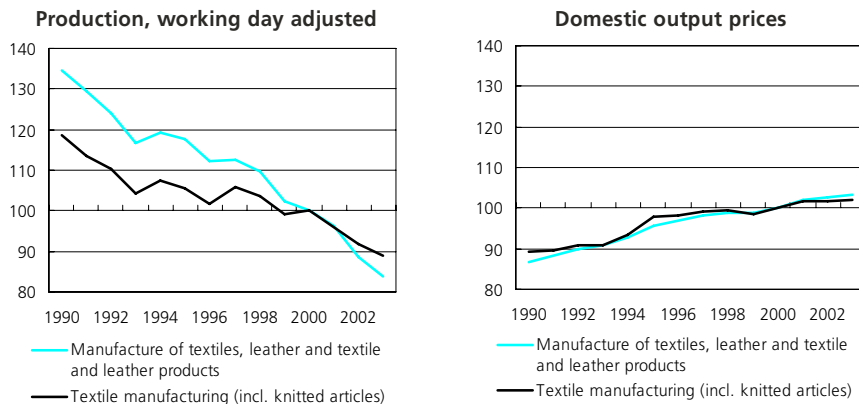


Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Annual short-term statistics provide information on the working day adjusted production index for the EU-25's textile manufacturing activity (defined as NACE Division 17 for the analysis of annualised short-term statistics). The production of textile manufacturing generally followed a downward path, punctuated by one-off increases in output. In 1994 production increased by 3.1 %, followed by two years of falling output (averaging -2.7 % per annum). This was followed by growth of 3.9 % in 1997 and a decline of 3.2 % per annum, on average, during the subsequent two years. In 2000 there was growth of 1.0 %, followed by three consecutive years of contraction, averaging 3.9 % per annum. The overall effect was an average reduction in the level of output that was equal to 2.1 % per annum between 1994 and 2003. Most NACE groups (8) within textile manufacturing registered gains in production during 1994, 1997 and 2000, with the exception of textile weaving (NACE Group 17.2) and the manufacture of knitted and crocheted fabrics (NACE Group 17.6), where output fell in 2000. Annual average growth rates over the period 1994–2003, across NACE Groups 17.1 to 17.6, ranged from -3.5 to -0.5 %. In the last three years (2001 to 2003), the only textile manufacturing activity to register any annual growth in production was the manufacture of made-up textile articles, except apparel (NACE Group 17.4), where growth of 3.1 % was registered in 2003.

(8) Excluding the manufacture of knitted and crocheted articles (NACE Group 17.7) covered in the next subchapter.

Figure 4.5
Textile manufacturing (including knitted articles) (NACE Division 17)
Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

LABOUR AND PRODUCTIVITY

According to LFS data, a breakdown of employment by gender in 2002 for the manufacture of textiles (defined as NACE Division 17 for this analysis) showed that women represented more than half of this sector's labour force in the EU-15, as well as in a majority of the Member States⁽⁹⁾. Generally, full-time employment was slightly less common in textile manufacturing than in manufacturing

⁽⁹⁾ Estonia, Cyprus, Luxembourg and Poland, not available.

as a whole, and this situation was also observed in the majority of the Member States⁽¹⁰⁾, with the most notable exception being Denmark, where the full-time employment rate (98.6 %) in textile manufacturing was 5.9 percentage points above the national manufacturing average. In the EU-15 some 90.2 % of persons working in textile manufacturing were paid employees, 1.7 percentage points below the manufacturing average.

⁽¹⁰⁾ Cyprus, Luxembourg, Austria and Poland, not available.

In 2001, apparent labour productivity was EUR 35 500 per person employed and average personnel costs were EUR 25 800 per employee in the EU-15's textile manufacturing sector (NACE Groups 17.1 to 17.6). These values were higher than the levels registered for these two indicators in the clothing and the leather and leather products manufacturing sectors. For both indicators, the manufacture of other textiles (NACE Group 17.5) registered the highest values within the textile manufacturing NACE groups. The wage adjusted labour productivity ratio indicates that value added was equivalent to 137.9 % of personnel costs (adjusted for the ratio of the number or persons employed to the number of employees) in the EU-15's textile manufacturing sector, less than manufacturing as a whole (143.3 %). Luxembourg registered the highest⁽¹¹⁾ wage adjusted labour productivity ratio (290.7 %), mainly resulting from a particularly high ratio in its manufacture of other textiles sector (305.4 %). Lithuania had the lowest ratio for this indicator (106.3 %), resulting in part from the fact that value added in its textile weaving sector (NACE Group 17.2) did not even cover personnel costs (when adjusted for the ratio of the number of persons employed to the number of employees).

⁽¹¹⁾ Denmark, Estonia, Greece, Ireland, Cyprus, Latvia, Malta, Poland, Slovenia and Cyprus, not available.

Table 4.6
Textile manufacturing (NACE Groups 17.1 to 17.6)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Textiles and textile articles, except apparel; knitted and crocheted fabrics	35.5	137.9	25.8
Preparation and spinning of textile fibres	33.9	137.6	24.6
Textile weaving	38.3	142.1	26.9
Finishing of textiles	36.8	135.7	27.1
Manufacture of made-up textile articles, except apparel	29.0	132.9	21.8
Manufacture of other textiles	40.2	141.2	28.4
Manufacture of knitted and crocheted fabrics	30.1	135.0	22.3

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

EXTERNAL TRADE

In 2002, the EU-25 registered a EUR 2.4 billion trade surplus with non-Community countries for textile products (CPA Groups 17.1 to 17.6). Exports of those goods were EUR 19.1 billion and represented therefore 39.5 % of total EU-25 exports of textile, clothing, leather and footwear products (CPA Subsections DB and DC) and 20.0 % of imports. The EU-25 trade surplus was the result of a positive trade balance registered for the two main groups of textile products, other textiles (CPA Group 17.5, EUR 1.8 billion) and textile fabrics (CPA Group 17.2, EUR 4.0 billion). Knitted or

crocheted fabrics (CPA Group 17.6) also registered a positive trade balance in the EU-25. Made-up textile articles, except apparel (CPA Group 17.4) and textile yarn and thread (CPA Group 17.1) registered trade deficits of EUR 3.0 billion and EUR 0.9 billion respectively. Italy, the largest exporter (intra- and extra-EU trade combined) of textile products, exported EUR 12.2 billion of textile products ahead of Germany with EUR 10.5 billion. Germany was the EU-25's largest importer, with imports valued at EUR 9.1 billion.

EU-25 exports of textile products went mainly to the United States, Romania, Tunisia, Morocco and Turkey (which together accounted for 45.0 % of the EU-25's textile exports to non-Community countries). The three next most important destinations were an Asian trio of China, Hong Kong and Japan, with a collective share of 13.8 %. Some 56.0 % of textile products coming into the EU-25 (from non-Community countries) were from China, while Turkey and India each accounted for more than 10 % of the total, followed by Pakistan, the United States and Switzerland, with between 5 and 10 % each.

Table 4.7**Textiles (CPA Groups 17.1 to 17.6)
External trade, EU-25, 2002**

	Exports		Imports		Trade balance (EUR million)
	Value (EUR million)	Share of total (%)	Value (EUR million)	Share of total (%)	
Textiles and textile articles, except apparel; knitted or crocheted fabrics	19 058	100.0	16 655	100.0	2 403
Textile yarn and thread	1 908	10.0	2 818	16.9	-910
Textile fabrics	9 077	47.6	5 116	30.7	3 961
Made-up textile articles, except apparel	1 747	9.2	4 776	28.7	-3 029
Other textiles	4 960	26.0	3 152	18.9	1 808
Knitted or crocheted fabrics	1 366	7.2	792	4.8	574

Source: Eurostat, Comext.

4.2: CLOTHING, INCLUDING KNITTED ARTICLES

This subchapter contains information on the clothing industry (hereafter referred to as clothing manufacturing), as defined by NACE Group 17.7 (the manufacture of knitted and crocheted articles) and NACE Division 18 (the manufacture of leather clothes, workwear, outerwear, underwear and articles of fur).

ICT plays a varied role in the clothing manufacturing sector, as it allows manufacturers to reduce costs and respond more rapidly to clients needs through improvements in stock controls, production and management efficiency. Furthermore, the introduction of on-line sales is another opportunity (as in many sectors), while ICT also enables manufacturers to meet the taste and size requirements of their customers in a more rapid and reliable manner. The EU's sixth framework programme for research and development, started in 2003, may provide support for the launching of new products and processes. Indeed, according to the European Apparel and Textile Organisation (Euratex) ⁽¹²⁾ this could benefit the development of technology for cutting and sewing systems, as well as raw material (fabric) preparation and handling, linking this to recent developments in three-dimensional simulation and mass customisation.

⁽¹²⁾ Newsletter number 19, year 9, March 2003.

Table 4.8**Top ten clothing groups, EU-15, 2001**

		Turnover (EUR million)
LVMH-Gruppe Clothing	FR	3 610
Zara-Ind.Dis.Text. (1) (2)	ES	3 250
Adidas Salomon AG	DE	2 200
Benetton Clothing (1) (2)	IT	2 098
Marzotto - Abbigliamento (1) (2)	IT	1 410
Armani Giorgio SpA (1)	IT	1 272
Groupe Etam (1)	FR	1 100
Boss Hugo World (1)	DE	1 095
Max Mara Fashion (1)	IT	1 088
Fila Holding (1)	IT	977

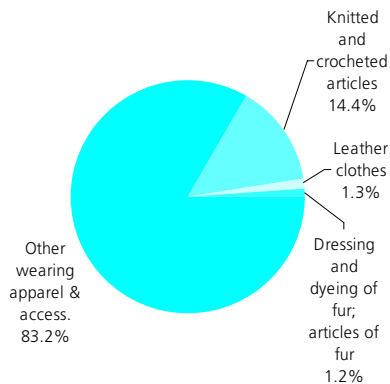
(1) Company also active in the distribution sector.

(2) Company also active in the textile sector, for which the turnover is not given.

Source: Euratex, <http://www.euratex.org>.

Figure 4.6

**Clothing manufacturing
(NACE Group 17.7 and Division 18)
Share of value added at factor cost,
EU-25, 2001**



Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

STRUCTURAL PROFILE

Value added in the EU-25's clothing manufacturing sector (NACE Group 17.7 and Division 18) was EUR 29.6 billion (EUR 26.7 billion in the EU-15) in 2001, which was 38.6 % of the textile and clothing manufacturing total (37.7 % in the EU-15). In the EU-25's ⁽¹³⁾ clothing manufacturing sector there were 1.5 million persons employed (1.0 million in the EU-15, which was 43.6 % of the EU-15's textile and clothing total). The 10 new Member States ⁽¹⁴⁾ contributed 31.8 % of the total number of persons employed in the EU-25's clothing manufacturing sector, far above their average share in manufacturing of 16.9 %.

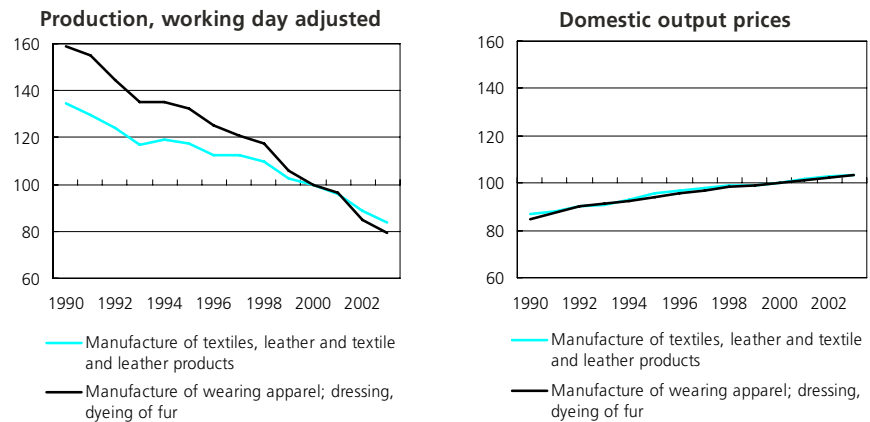
The largest NACE group within the clothing manufacturing sector was the manufacture of other wearing apparel and accessories (NACE Group 18.2) which generated 83.2 % of sectoral value added in the EU-25 in 2001, and the second largest group was the manufacture of knitted and crocheted articles (NACE Group 17.7) that accounted for 14.4 %. The manufacture of leather clothes (NACE Group 18.1) and the dressing and dyeing of fur/manufacture of articles of fur (NACE Group 18.3) were among some of the smallest activities across all manufacturing NACE groups, with each generating value added below EUR 400 million.

⁽¹³⁾ Slovenia, number of employees.

⁽¹⁴⁾ Slovenia, number of employees.

Figure 4.7

**Manufacture of wearing apparel; dressing; dyeing of fur (NACE Division 18)
Main indicators, EU-25 (2000=100)**



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/eht).

Italy had the largest clothing manufacturing sector, registering EUR 9.6 billion of value added in 2001, which represented almost one third (32.5 %) of total activity in the EU-25. In fact Italy had the highest value added for each of the four NACE groups that compose clothing manufacturing.

All 10 of the new Member States were relatively specialised in clothing manufacturing compared with their manufacturing sectors as a whole and, while among all the EU-25 Member States ⁽¹⁵⁾, Lithuania, Portugal, Estonia and Malta were the most specialised in this sector. In Lithuania, the manufacture of knitted and crocheted articles (NACE Group 17.7) registered the highest specialisation ratio of any manufacturing group in this Member State relative to the EU-25 average, while Portugal registered its second highest manufacturing specialisation ratio in the same subsector. Luxembourg and Sweden were the least specialised Member States in clothing manufacturing relative to manufacturing as a whole (note that Luxembourg had one of the highest specialisation ratios with respect to the manufacture of textiles).

⁽¹⁵⁾ Greece and Ireland, not available.

The EU-25's working day adjusted production index for clothing manufacturing has followed a downward path for many years. The last positive year-on-year change that was recorded for the manufacture of wearing apparel, dressing and dyeing of fur (NACE Division 18) was in 1994 (+0.2 %), after which the decline in output averaged 5.7 % per annum through to 2003. A similar picture was observed for the manufacture of knitted and crocheted articles (NACE Group 17.7), except that the pattern of declining output was uninterrupted, averaging -4.9 % per annum between 1994 and 2003. The manufacture of other wearing apparel and accessories (NACE Group 18.2) followed a similar course to that described for NACE Division 18 (which it dominated), with an annual average decline of -5.8 % between 1994 and 2003. The dressing and dyeing of fur and the manufacture of articles of fur (NACE Group 18.3) registered an average contraction of -6.6 % per annum over the same period, but with higher fluctuations and notably growth in 1996 and 2000.

Micro enterprises (with less than 10 persons employed) generated 16.5 % of the value added in the EU-25's clothing manufacturing sector, more than double this size-class' share in manufacturing value added. Small, medium-sized and large enterprises all contributed between 27 and 28 % of the clothing manufacturing sector's value added, which was above the manufacturing average for small and medium-sized enterprises, but only half the manufacturing average for large enterprises.

LABOUR AND PRODUCTIVITY

In 2002, the female employment rate (76.2 %) in the EU-15's clothing manufacturing sector (defined as NACE Division 18 for this analysis) was more than three times higher than in manufacturing as a whole. Indeed, this share was the highest recorded across all of the NACE divisions that make up the business economy (NACE Sections C to K); the next highest was retail trade (16.4 percentage points lower). The EU-15 pattern was followed in every country, as female employment rates for clothing manufacturing were at least 25 percentage points higher than national manufacturing averages ⁽¹⁶⁾. Some 88.4 % of the persons employed worked full-time in the EU-15's clothing manufacturing sector and there were 82.4 % of employees (respectively 4.0 and 9.5 percentage points below the EU-15 manufacturing averages). The low proportion of paid employees in clothing manufacturing (compared with the textiles or leather manufacturing sectors) was balanced by a much higher proportion of self-employed persons (15.8 %), and a slightly higher proportion of family workers (1.8 %). As such, this marked the second highest incidence of self-employment and of family workers among all manufacturing NACE divisions.

⁽¹⁶⁾ Luxembourg and Poland, not available.

Apparent labour productivity was EUR 25 800 per person employed in the EU-15's clothing manufacturing sector (NACE Group 17.7 and Division 18) in 2001. The manufacture of leather clothes (NACE Group 18.1) and the manufacture of knitted and crocheted articles (NACE Group 17.7) had the highest apparent labour productivity, each more than EUR 27 000, while the manufacture of other wearing apparel and accessories (NACE Group 18.2) registered the lowest level among the NACE groups that compose the textile and clothing manufacturing sector (NACE Subsections DB and DC). Average personnel costs were EUR 14 300 per employee in the EU-25's clothing manufacturing sector (EUR 19 200 in the EU-15), the low level being influenced to some extent by the relatively high proportion of part-time employment within this activity. Wage adjusted labour productivity in the EU-15's clothing manufacturing sector showed that value added was the equivalent of 134.7 % of personnel costs, after adjusting the latter for the relatively low proportion of paid employees in the workforce. Within the EU-15's clothing manufacturing sector, wage adjusted labour productivity ratios ranged from 116.5 % for the dressing and dyeing of fur and the manufacture of articles of fur (NACE Group 18.3) to 160.1 % for the manufacture of leather clothes (NACE Group 18.1). The highest wage adjusted labour productivity was found in the United Kingdom (171.1 %), while

Luxembourg (55.6 %) and Sweden (91.9 %) had the lowest ratios and notably ones that indicated that value added in these countries did not even cover their personnel costs (after adjustment for the share of paid employees in the number of persons employed) ⁽¹⁷⁾.

EXTERNAL TRADE

The EU's trade deficit with non-Community countries for clothing products (CPA Group 17.7 and Division 18) was EUR 32.6 billion in 2002. Exports of these products were valued at EUR 16.6 billion, 34.4 % of the total for textile, clothing, leather and footwear products (CPA Subsections DB and DC) and imports were valued at EUR 49.2 billion, 59.1 % of the total. More than four fifths of the EU-25's imports and exports of clothing products were related to other wearing apparel and accessories (CPA Group 18.2). Italy exported (intra- and extra-EU combined) nearly one quarter (24.9 %) of the clothing products exported by the EU-25 Member States and Germany imported a similar proportion (23.1 %). The main trading partners were the United States, Switzerland, Japan and Russia for exports and China and Turkey for imports. It can be noted that the partners for these products are different from those for textile products.

⁽¹⁷⁾ Greece, Ireland, Cyprus and Slovenia, not available.

Table 4.9
Clothing manufacturing (NACE Group 17.7 and Division 18)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Manufacture of knitted and crocheted articles; wearing apparel; fur	25.8	134.7	19.2
Manufacture of knitted and crocheted articles	27.1	133.2	20.4
Manufacture of leather clothes	27.3	160.1	17.1
Manufacture of other wearing apparel and accessories	25.4	133.9	19.0
Dressing and dyeing of fur; manufacture of articles of fur	22.8	116.5	19.6

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 4.10
Wearing apparel; furs; knitted and crocheted articles (CPA Group 17.7 and Division 18)
External trade, EU-25, 2002

	Exports		Imports		Trade balance (EUR million)
	Value (EUR million)	Share of total (%)	Value (EUR million)	Share of total (%)	
Wearing apparel; furs; knitted and crocheted articles	16 574	100.0	49 155	100.0	-32 580
Knitted and crocheted articles	1 963	11.8	7 459	15.2	-5 495
Leather clothes	351	2.1	1 392	2.8	-1 041
Other wearing apparel and accessories	13 670	82.5	39 972	81.3	-26 301
Furs; articles of fur	590	3.6	332	0.7	258

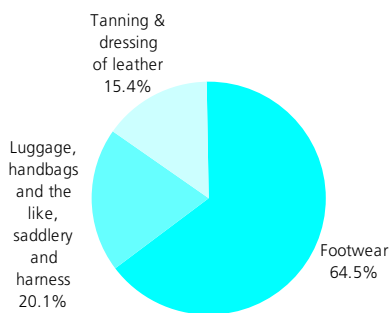
Source: Eurostat, Comext.

4.3: LEATHER AND FOOTWEAR

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

Leather manufacturers transform intermediate goods (raw hides and skins), in most cases producing consumer goods, and hence, they are dependent on the stock of bovine and ovine rearing. According to the Confederation of National Associations of Tanners and Dressers of the European Community (Cotance), footwear represented the most important market for EU-15 tanner's production with a share of 50 % of their output in 2000. The footwear sector is dominated by small enterprises (see below) and shows a strong regional concentration.

Figure 4.8
Tanning, dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear (NACE Division 19)
Share of value added at factor cost, EU-25, 2001



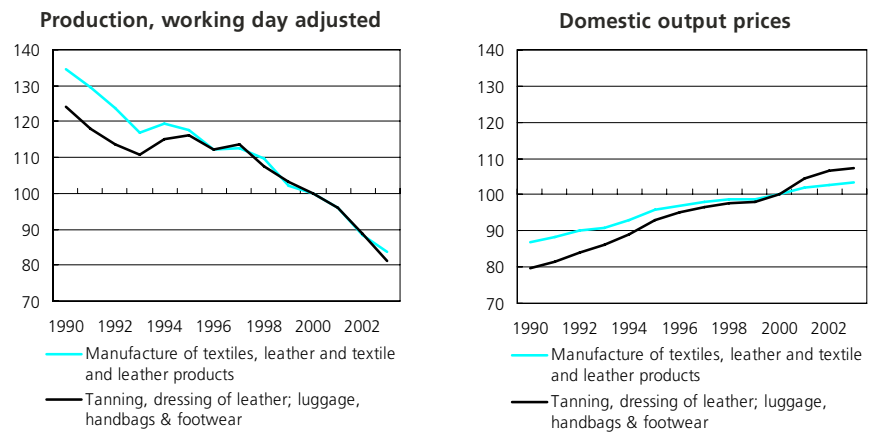
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

STRUCTURAL PROFILE

The EU-25's leather manufacturing sector (NACE Division 19) was the smallest of the three activities covered by textile and clothing manufacturing. Indeed, it generated EUR 13.6 billion of value added in 2001, EUR 12.7 billion in the EU-15, and therefore contributed 17.7 % of the added value in the EU-25's textile and clothing manufacturing (NACE Subsections DB and DC). There were 562 800 persons employed in the EU-25's ⁽¹⁸⁾ leather manufacturing sector and 452 200 in the EU-15, equivalent to 19.1 % of the textile and clothing manufacturing workforce in the EU-15.

⁽¹⁸⁾ Lithuania and Hungary, 2002; Latvia, number of employees; Estonia and Slovenia, not available.

Figure 4.9
Tanning, dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear (NACE Division 19)
Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

The largest leather manufacturing subsector was footwear manufacturing (NACE Group 19.3), accounting for just under two thirds (64.5 %) of the EU-25's leather manufacturing value added.

Italian leather manufacturing accounted for 45.2 % of the value added registered by the EU-25's leather manufacturing sector, and as such clearly had the highest level of activity among the Member States ⁽¹⁹⁾, far ahead of France (11.7 %) and Spain (10.1 %). Compared to national manufacturing totals, Portugal, Italy and Slovakia ⁽²⁰⁾ were the most specialised countries in the leather manufacturing sector. The manufacture of footwear (NACE Group 19.3) was the manufacturing group in which Portugal was most specialised (relative to the EU-25), and also recorded the third highest specialisation ratio across all manufacturing groups in Italy, where the tanning and dressing of leather (NACE Group 19.1) had the highest specialisation ratio. The tanning and dressing of leather was also the manufacturing group with the third highest specialisation ratio in Slovenia.

⁽¹⁹⁾ Estonia, Latvia, Lithuania, Hungary and Slovenia, not available.

⁽²⁰⁾ Estonia, Latvia, Lithuania, Luxembourg, Hungary and Slovenia, not available.

Annual short-term statistics show that the EU-25's working day adjusted production index for leather manufacturing (NACE Division 19) experienced a decline during the 1990's and through to 2003. After 1993, when production was at its lowest following the economic slowdown of the early 1990s, the production index for leather manufacturing grew in both 1994 and 1995, by 3.9 % and 1.0 % respectively. This was followed by a period of decline interrupted by 1.1 % growth in 1997. The average rate of decline in output accelerated after 1997, averaging -5.5 % per annum from 1998 to 2003. The manufacture of footwear (NACE Group 19.3) displayed a very similar evolution to that described for leather manufacturing as a whole. The manufacture of luggage and handbags (NACE Group 19.2) registered an annual average decline of 4.8 % between 1995 and 2003, a period during which it recorded output growth only twice, in 1998 (+7.7 %) and 2001 (+2.0 %). The tanning and dressing of leather (NACE Group 19.3) generally displayed a different evolution from the rest of leather manufacturing. From 1993 the index of production increased in three of the next four years, before falling back in 1998 and 1999. While the other leather manufacturing activities continued their downward trend, the tanning and dressing of leather recovered, as output increased by 9.8 % in 2000, after which there were three consecutive years of contraction, averaging -5.2 % per annum.

Table 4.11

Selected leather products (CPA Division 19), EU-15

	PRODCOM code	Latest year for production	Production value (EUR million)
Chamois leather and combination chamois leather	19.10.10.30	2001	397.4
Handbags of leather, composition leather, patent leather, plastic sheeting, textile materials or other materials (including those without a handle)	19.20.12.20	2001	1 947.8
Articles of leather or of composition leather n.e.c.	19.20.14.50	1999	582.7
Men's and children's town footwear with leather uppers (including boots and shoes; excluding waterproof footwear, footwear with a protective metal toe-cap)	19.30.13.51 and 19.30.13.53	2001	4 868.7
Sports footwear with rubber; plastic or leather outer soles and leather uppers (excluding ski-boots; cross-country ski footwear and snowboard boots)	19.30.23.50	1999	346.4
Footwear with rubber; plastic or leather outer soles and leather uppers; and with a protective metal toe-cap	19.30.31.50	1999	778.2
Footwear (excluding with leather or composition leather uppers, with textile materials uppers)	19.30.32.90	2000	265.5
Rubber or plastic outer soles and heels	19.30.40.70	2001	1 442.7

Source: Eurostat, European production and market statistics (Comext).

The importance of micro and small enterprises (with less than 50 persons employed) was even greater in the EU-25's leather manufacturing sector than in other parts of textile and clothing manufacturing sector. Micro enterprises (with less than 10 persons employed) generated 17.5 % of value added in the leather manufacturing sector, and small enterprises contributed a further 30.3 %. This combined share of 47.8 % was greater than the corresponding proportion of value added accounted for by micro and small enterprises in the whole of textile and clothing manufacturing (40.2 %) or in the whole of manufacturing (23.1 %).

LABOUR AND PRODUCTIVITY

According to LFS data, male and female employment was almost equally balanced in the EU-15's leather manufacturing sector in 2002. Indeed, the female employment rate was 50.7 %, although it exceeded 60 % in several of the Member States, notably among the new Member States ⁽²¹⁾. Some 94.6 % of the persons employed in the EU-15's leather manufacturing sector were in full-time employment in 2001, just above the manufacturing average (92.4 %), while 88.5 % of the persons employed in the EU-15 were paid employees (3.4 percentage points less than the manufacturing average).

⁽²¹⁾ Estonia, Cyprus, Latvia, Lithuania and Poland, not available.

Apparent labour productivity in 2001 was EUR 28 100 per person employed in the EU-15's leather manufacturing sector, compared to EUR 29 900 for the whole of textile and clothing manufacturing. Apparent labour productivity reached EUR 35 900 in the tanning and dressing of leather (NACE Group 19.1) and EUR 30 100 in the manufacture of luggage and handbags (NACE Group 19.2). Average personnel costs were EUR 16 300 per employee in the EU-25's leather manufacturing sector, higher than for clothing manufacturing, but lower than for textile manufacturing. Average personnel costs were particularly low (EUR 14 800 per employee) in the footwear manufacturing subsector, and highest for the tanning and dressing of leather (EUR 22 100 per employee).

Value added in the EU-15's leather manufacturing sector was equivalent to 144.9 % of personnel costs (adjusted for the ratio of the number of persons employed to the number of employees). The wage adjusted labour productivity ratio was slightly higher (146.9 % and 147.0 %) for the tanning and dressing of leather and the manufacture of footwear, and lower (135.9 %) for the manufacture of luggage and handbags.

Table 4.12

Tanning, dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear (NACE Division 19)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Tanning, dressing of leather; luggage, handbags, saddlery, harness and footwear	28.1	144.9	19.4
Tanning and dressing of leather	35.9	146.9	24.5
Manufacture of luggage, handbags and the like, saddlery and harness	30.1	135.9	22.1
Manufacture of footwear	26.1	147.0	17.8

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

EXTERNAL TRADE

In 2002, the EU-25 recorded a trade deficit of EUR 4.8 billion with non-Community countries for leather and leather products (CPA Division 19). Exports of these goods were valued at EUR 12.6 billion and represented 26.1 % of all textile, clothing, leather and footwear products (CPA Subsections DB and DC) exported from the EU-25; imports were valued at EUR 17.4 billion, equivalent to 20.9 % of the textile, clothing, leather and footwear products total. More than half of the EU-25's exports and imports of leather and leather products with non-Community countries were footwear, with a EUR 3.8 billion deficit recorded for these products. Leather (CPA Group 19.1) was the only CPA group among leather and leather products for which the EU-25 recorded a trade surplus in 2002, valued at EUR 317.5 million.

Italy exported (intra- and extra-EU trade combined) 39.2 % of the leather and leather products traded by the EU-25 Member States, while importing 17.2 % of the total in 2002, marginally more than Germany (17.1 %).

The main export market for the EU-25's leather and leather products in 2002 was the United States (EUR 3.0 billion, 23.9 % of the total), followed by Japan, Hong Kong, Switzerland and Romania, all between EUR 1 billion and EUR 1.5 billion. The main sources of the EU-25's imports of leather and leather products were China (EUR 5.3 billion, 30.8 %) and Vietnam (EUR 2.3 billion, 13.2 %).

Table 4.13**Leather and leather products (CPA Division 19)
External trade, EU-25, 2002**

	Exports		Imports		Trade balance (EUR million)
	Value (EUR million)	Share of total (%)	Value (EUR million)	Share of total (%)	
Leather and leather products	12 584	100.0	17 366	100.0	-4 782
Leather	3 202	25.4	2 884	16.6	317
Luggage, handbags and the like; saddlery and harness	3 052	24.3	4 360	25.1	-1 308
Footwear	6 331	50.3	10 122	58.3	-3 791

Source: Eurostat, Comext.

Table 4.14

Preparation and spinning of textile fibres; textile weaving; finishing of textiles; manufacture of made-up textile articles, except apparel; manufacture of other textiles; manufacture of knitted and crocheted fabrics (NACE Groups 17.1 to 17.6)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	7 053	1 658	:	14 540	:	:	8 323	13 527	:	33 871	22	:	221	503
Value added at factor cost (EUR million)	1 922	481	:	4 835	:	:	2 633	3 587	:	9 417	9	:	64	161
Purchases of goods and services (EUR million)	5 413	1 263	:	10 686	:	:	5 976	10 562	:	25 030	16	:	162	347
Gross investment in tangible goods (EUR million)	360	:	:	582	:	:	541	501	:	1 609	1	:	32	:
Number of persons employed (thousands)	42	60	:	123	:	:	99	101	:	248	1	:	15	1
App. labour productivity (EUR thous./pers. emp.)	46.1	8.0	:	39.2	:	:	26.7	35.4	:	37.9	17.3	:	4.3	126.2
Average personnel costs (EUR thous./employee) (2)	31.1	5.2	:	31.7	:	:	19.7	28.9	:	25.5	11.0	:	4.0	43.4
Wage adjusted labour productivity (%) (2)	148.3	154.2	:	123.4	:	:	135.4	122.6	:	149.0	145.8	:	106.3	290.7
Gross operating rate (%)	9.2	10.3	:	6.7	:	:	9.5	4.8	:	11.9	14.0	:	1.8	20.8
	HU	MT	NL	AT	PL (1)	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	514	:	2 847	2 282	1 840	4 056	643	179	609	982	11 313	224	525	:
Value added at factor cost (EUR million)	178	:	897	744	645	1 198	158	58	244	357	4 451	58	178	:
Purchases of goods and services (EUR million)	395	:	2 153	1 744	1 526	2 973	934	135	374	696	7 523	193	411	:
Gross investment in tangible goods (EUR million)	31	:	89	119	101	404	38	11	33	42	398	:	68	:
Number of persons employed (thousands)	27	:	21	17	:	82	:	11	5	9	109	24	67	:
App. labour productivity (EUR thous./pers. emp.)	6.5	:	43.1	42.6	:	14.7	:	5.1	49.3	38.4	40.8	2.4	2.7	:
Average personnel costs (EUR thous./employee)	4.9	:	32.9	33.2	5.6	10.1	10.9	3.8	32.4	32.5	29.0	1.7	1.7	:
Wage adjusted labour productivity (%)	132.3	:	131.2	128.3	:	145.4	:	133.9	152.3	118.3	140.7	143.6	157.2	:
Gross operating rate (%)	7.7	:	9.7	7.5	11.7	9.5	2.3	7.9	15.2	9.1	11.3	8.0	12.7	:

(1) 2000.

(2) Cyprus, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 4.15

Manufacture of knitted and crocheted articles (NACE Group 17.7)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	109	114	190	1 137	11	:	1 072	1 624	94	6 149	13	12	77	0
Value added at factor cost (EUR million) (1)	43	43	48	439	4	:	393	562	42	1 530	6	8	34	0
Purchases of goods and services (EUR million)	69	78	0	754	8	:	771	1 118	67	4 742	9	7	43	0
Gross investment in tangible goods (EUR million)	7	5	5	23	1	:	43	59	10	218	1	3	6	:
Number of persons employed (thousands)	2	9	1	13	1	:	17	17	2	50	0	1	6	0
App. labour productivity (EUR thous./pers. emp.) (1)	23.9	4.9	47.1	33.7	3.9	:	23.6	32.5	15.3	30.8	16.5	6.6	5.3	:
Average personnel costs (EUR thous./employee) (2)	19.8	4.5	35.9	25.5	3.2	:	16.5	26.6	11.8	21.3	10.7	2.6	3.4	:
Wage adjusted labour productivity (%) (2)	120.7	109.4	131.4	132.2	120.8	:	143.0	121.9	129.0	145.0	119.2	257.0	152.7	:
Gross operating rate (%) (1)	8.4	6.3	6.7	9.9	6.8	:	11.8	6.3	8.7	10.6	12.9	42.1	15.7	:
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	29	3	81	173	352	619	70	65	68	39	1 082	50	234	:
Value added at factor cost (EUR million)	13	1	26	90	163	193	24	30	27	14	460	20	111	:
Purchases of goods and services (EUR million)	18	2	68	105	181	456	43	38	42	28	674	32	140	:
Gross investment in tangible goods (EUR million)	3	0	1	16	16	56	2	12	5	1	24	5	41	:
Number of persons employed (thousands)	3	0	1	2	19	18	:	8	1	1	18	9	40	:
App. labour productivity (EUR thous./pers. emp.)	4.2	5.2	38.0	37.4	8.5	10.7	:	3.7	27.4	26.5	25.9	2.3	2.8	:
Average personnel costs (EUR thous./employee)	3.7	8.4	25.7	34.5	4.9	8.6	9.6	3.3	26.3	25.2	22.3	1.7	1.7	:
Wage adjusted labour productivity (%)	114.6	61.9	147.8	108.3	172.6	124.6	:	111.7	104.2	105.1	116.0	139.6	161.8	:
Gross operating rate (%)	5.7	-13.4	8.7	4.1	24.1	6.8	2.6	4.7	3.9	4.2	6.1	11.8	18.6	:

(1) Ireland, 2000.

(2) Ireland and Cyprus, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 4.16

Manufacture of leather clothes (NACE Group 18.1)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV (1)	LT	LU
Production (EUR million)	9	10	2	121	:	:	91	121	:	721	3	1	3	0
Value added at factor cost (EUR million)	2	5	1	39	:	:	23	34	:	190	1	0	1	0
Purchases of goods and services (EUR million)	7	9	0	88	:	:	83	96	:	546	2	1	2	0
Gross investment in tangible goods (EUR million)	0	0	0	1	:	:	2	0	:	13	0	0	0	:
Number of persons employed (thousands)	0	1	0	1	:	:	1	1	:	7	0	0	0	0
App. labour productivity (EUR thous./pers. emp.)	23.9	5.0	15.6	33.9	:	:	20.6	35.8	:	29.2	17.6	2.2	2.2	:
Average personnel costs (EUR thous./employee) (2)	20.7	4.3	15.9	21.5	:	:	15.5	28.9	:	16.9	13.0	1.1	1.0	:
Wage adjusted labour productivity (%) (2)	115.1	116.6	98.2	158.0	:	:	132.8	124.0	:	172.4	142.1	206.7	229.7	:
Gross operating rate (%)	8.4	11.8	15.4	12.4	:	:	6.1	6.3	:	16.0	13.9	12.9	17.4	:
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	13	:	7	:	36	23	5	7	14	12	113	5	20	:
Value added at factor cost (EUR million)	6	:	3	:	18	7	2	3	5	3	29	1	9	:
Purchases of goods and services (EUR million)	9	:	5	:	14	17	4	5	9	9	98	4	12	:
Gross investment in tangible goods (EUR million)	1	:	0	:	1	1	0	0	1	0	3	0	1	:
Number of persons employed (thousands)	1	:	0	:	3	1	:	1	0	0	1	1	3	:
App. labour productivity (EUR thous./pers. emp.)	4.6	:	19.9	:	5.1	9.9	:	5.0	28.0	16.1	24.8	1.6	2.7	:
Average personnel costs (EUR thous./employee)	3.9	:	17.7	:	4.2	7.6	:	8.2	3.4	24.7	23.8	9.5	1.2	1.6
Wage adjusted labour productivity (%)	118.5	:	112.1	:	122.3	128.9	:	147.0	113.4	67.7	261.4	131.1	166.1	:
Gross operating rate (%)	7.2	:	3.9	:	23.4	8.3	:	7.0	11.1	13.1	9.4	14.8	7.8	19.0

(1) 2000.

(2) Cyprus, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 4.17

Manufacture of other wearing apparel and accessories (NACE Group 18.2)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	1 976	575	678	10 143	154	:	6 989	11 654	:	28 749	87	117	248	:
Value added at factor cost (EUR million)	453	236	182	2 610	65	:	2 381	3 141	:	7 792	37	68	131	:
Purchases of goods and services (EUR million)	1 575	369	0	8 398	112	:	4 959	9 655	:	22 062	66	67	129	:
Gross investment in tangible goods (EUR million)	31	22	13	163	8	:	159	199	:	778	5	11	21	:
Number of persons employed (thousands)	11	54	4	72	13	:	130	94	:	294	3	15	38	:
App. labour productivity (EUR thous./pers. emp.)	41.7	4.4	42.5	36.3	4.9	:	18.3	33.3	:	26.5	13.8	4.6	3.4	:
Average personnel costs (EUR thous./employee) (2)	25.9	4.1	33.4	29.3	3.8	:	14.6	26.5	:	19.5	11.0	2.8	2.6	:
Wage adjusted labour productivity (%) (2)	160.7	107.1	127.3	123.7	128.8	:	125.0	125.4	:	135.5	133.7	162.7	134.3	:
Gross operating rate (%)	10.2	8.4	8.4	5.3	8.6	:	9.2	5.6	:	11.2	10.2	22.8	13.6	:
	HU	MT (1)	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	817	144	657	834	2 169	3 440	296	216	519	269	7 254	403	1 265	:
Value added at factor cost (EUR million)	317	57	196	298	1 368	1 163	145	106	185	83	3 129	188	693	:
Purchases of goods and services (EUR million)	575	78	534	697	772	2 412	162	121	415	232	4 887	238	688	:
Gross investment in tangible goods (EUR million)	43	3	16	22	76	176	8	14	13	6	161	51	143	:
Number of persons employed (thousands)	65	3	8	10	184	125	:	29	6	3	82	125	308	:
App. labour productivity (EUR thous./pers. emp.)	4.9	19.1	24.3	28.8	7.4	9.3	:	3.6	29.9	26.3	38.2	1.5	2.3	:
Average personnel costs (EUR thous./employee)	3.9	11.7	23.3	25.1	4.5	7.7	:	9.1	3.2	25.3	28.6	20.8	1.2	1.5
Wage adjusted labour productivity (%)	124.4	163.9	104.6	114.8	165.1	121.1	:	112.9	118.4	91.8	183.5	121.2	148.7	:
Gross operating rate (%)	7.2	16.4	8.0	6.0	30.0	6.9	:	2.4	5.4	6.5	8.8	19.2	10.4	18.1

(1) 2000.

(2) Cyprus, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 4.18

Dressing and dyeing of fur; manufacture of articles of fur (NACE Group 18.3)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV (1)	LT	LU
Production (EUR million)	38	11	23	81	:	:	299	111	4	373	0	0	6	:
Value added at factor cost (EUR million)	6	4	7	35	:	:	68	35	:	125	0	0	0	:
Purchases of goods and services (EUR million)	31	7	0	64	:	:	236	94	3	258	0	0	6	:
Gross investment in tangible goods (EUR million)	1	0	0	2	:	:	7	0	1	11	0	0	1	:
Number of persons employed (thousands)	0	1	0	2	:	:	3	1	0	6	0	0	1	:
App. labour productivity (EUR thous./pers. emp.)	35.4	4.4	22.2	22.8	:	:	21.4	38.9	:	20.7	:	1.2	-0.5	:
Average personnel costs (EUR thous./employee)	18.6	4.4	18.0	17.9	:	:	18.4	34.1	:	20.0	:	3.6	3.6	:
Wage adjusted labour productivity (%)	189.7	98.2	123.1	127.8	:	:	116.3	114.2	:	103.4	:	33.0	-14.8	:
Gross operating rate (%)	9.3	9.8	12.4	15.8	:	:	5.6	7.1	:	16.3	:	-58.2	-28.8	:
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	3	:	2	:	31	21	1	3	22	9	23	7	15	:
Value added at factor cost (EUR million)	1	:	1	:	16	6	0	0	8	2	9	2	6	:
Purchases of goods and services (EUR million)	2	:	1	:	18	15	1	3	14	6	13	6	12	:
Gross investment in tangible goods (EUR million)	0	:	0	:	0	1	0	0	0	0	1	0	1	:
Number of persons employed (thousands)	0	:	0	:	3	0	:	0	0	0	0	1	2	:
App. labour productivity (EUR thous./pers. emp.)	5.9	:	36.8	:	5.0	13.9	:	1.7	28.9	17.2	47.9	2.3	2.9	:
Average personnel costs (EUR thous./employee)	4.0	:	19.1	:	4.5	9.9	8.4	3.3	25.5	23.4	27.8	1.3	1.7	:
Wage adjusted labour productivity (%)	148.5	:	192.9	:	111.9	139.7	:	50.3	113.3	73.3	172.3	177.1	172.6	:
Gross operating rate (%)	8.9	:	18.8	:	25.4	9.2	8.3	-10.1	9.2	9.9	28.1	13.5	18.6	:

(1) 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 4.19

Tanning, dressing of leather; manufacture of luggage (NACE Division 19)
Main indicators, 2001

	BE	CZ	DK	DE	EE (1)	EL	ES	FR	IE	IT	CY	LV	LT (1)	LU
Production (EUR million)	276	266	459	3 814	39	209	5 732	4 320	83	25 244	26	:	41	0
Value added at factor cost (EUR million)	87	85	83	1 006	13	78	1 372	1 589	22	6 140	12	:	10	0
Purchases of goods and services (EUR million)	258	190	0	3 153	26	:	4 671	3 286	60	19 954	25	:	31	0
Gross investment in tangible goods (EUR million)	7	8	13	66	1	:	136	125	9	685	2	:	1	:
Number of persons employed (thousands)	2	19	2	28	:	4	66	45	1	204	1	:	4	0
App. labour productivity (EUR thous./pers. emp.)	35.6	4.5	53.3	36.0	:	22.0	20.7	35.4	28.3	30.1	20.2	:	2.8	:
Average personnel costs (EUR thous./employee) (2)	28.5	4.5	37.0	28.4	3.6	:	15.7	25.7	19.4	20.4	13.3	:	2.6	:
Wage adjusted labour productivity (%) (2)	124.9	99.7	144.2	126.9	:	:	131.4	137.6	145.5	147.8	136.7	:	106.6	:
Gross operating rate (%) (3)	6.6	2.2	6.0	5.9	8.5	:	6.6	9.3	8.0	10.9	12.6	:	2.4	:
	HU (1)	MT	NL	AT	PL	PT	SI (1)	SK	FI	SE	UK	BG	RO	TR
Production (EUR million) (4)	223	42	377	903	916	2 483	225	214	239	180	2 360	83	528	:
Value added at factor cost (EUR million) (4)	98	13	114	273	444	733	86	78	91	47	1 065	29	233	:
Purchases of goods and services (EUR million) (4)	148	28	311	699	572	1 854	166	148	156	134	1 769	63	333	:
Gross investment in tangible goods (EUR million)	11	1	5	26	33	124	11	15	5	5	44	9	55	:
Number of persons employed (thousands) (4)	24	1	3	6	46	68	:	17	3	2	20	19	112	:
App. labour productivity (EUR thous./pers. emp.) (4)	4.0	14.5	39.7	42.1	9.7	10.8	:	4.6	34.5	30.3	54.2	1.5	2.1	:
Average personnel costs (EUR thous./employee) (2)	3.3	11.3	28.3	25.3	5.0	8.3	10.0	3.5	24.7	30.0	27.5	1.2	1.5	:
Wage adjusted labour productivity (%) (2)	123.1	128.6	140.6	166.3	192.5	129.4	:	133.0	139.7	100.7	197.6	123.8	136.9	:
Gross operating rate (%) (3)	9.4	7.2	9.9	11.9	27.2	7.1	2.0	9.1	12.1	5.0	19.2	8.5	12.8	:

(1) 1999.

(2) Ireland, Cyprus and Bulgaria, 2000.

(3) Ireland and Bulgaria, 2000.

(4) Bulgaria, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Wood and paper



Wood is a sustainable raw material and hence its products and related processes make significant contributions to overall sustainable development. The EU's total forest area accounts for just over one third of its total surface area; this is modest in comparison to most other regions of the world. As a result, security of supply is an important issue in this sector, particularly regarding first processing stages of the production chain, where the highest proportion of costs is accounted for by raw material inputs.

Processed wood is primarily used as a building material and in the manufacture of furniture, while fibres that are derived from pulp processing are subsequently used to manufacture paper and board. Forest-based industries can be energy intensive, although they tend to contribute to their own energy needs through biomass, which supplies heat and power for own production.

While the wood and wood products sector is characterised by small enterprises producing for local or national markets, the pulp, paper and paper products sector displays much higher levels of industrial concentration and is dominated by multinational corporations (in particular from the Nordic countries and North America) - see Table 5.1 for a ranking of the 10 largest enterprises in the EU's forest-based industries.

This chapter covers some 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 (NACE Division 21). The former includes all stages of wood processing that follow on from the activity of forestry, while the latter is a downstream activity that uses by-products from the initial processing of wood. Combined these activities are hereafter referred to as the wood and paper sector.

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 5.1
Top ten enterprises/groups in the forest and paper sector in the EU, 2002 (EUR million)

		World ranking	Sales	Net income	Return on capital employed (%)
Stora Enso	FI	5	11 522	-201	4.5
UPM-Kymmene	FI	7	9 442	496	5.2
Svenska Cellulosa	SE	10	8 664	560	7.1
Metsaliitto	FI	11	7 993	112	4.0
Anglo American (Mondi)	UK	15	4 579	329	12.3
Jefferson Smurfit	IE	16	4 246	89	8.9
Worms	FR	17	3 989	172	4.0
Kappa Packaging	NL	28	2 636	-9	4.2
David S. Smith (1)	UK	30	2 080	25	3.5
Ahlstrom	FI	39	1 603	50	4.9

(1) Year ending 30 April 2002.

Source: PricewaterhouseCoopers 2003 Global Forest and Paper Survey, available at <http://www.pwcglobal.com/forestry>.

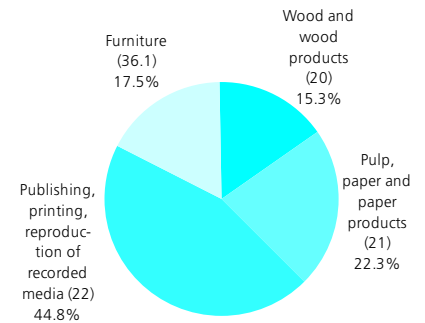
STRUCTURAL PROFILE

In a broad sense wood-based industries (often referred to as the forest-based cluster) constitute one of Europe's largest manufacturing sectors accounting for almost 14 % of manufacturing value added and employment in the EU-25 in 2001. However, this overall figure includes publishing and printing industries (see Chapter 24) and the manufacture of furniture (see Chapter 13) - see Figure 5.1. More specifically, the two NACE divisions that make up this chapter contributed 5.2 % to EU-25 manufacturing value added in 2001. This was composed of a 3.1 % share for the pulp, paper and paper products sector (NACE Division 21) and a 2.1 % share for the wood and wood products sector (NACE Division 20).

Germany generated the highest proportion of value added in the wood and paper sector in the EU-25 in 2001 (20.6 %). France, Italy and the United Kingdom all reported shares of between 11 and 13 %, while the next largest contributors were Finland (7.8 %) and Sweden (7.7 %). The adhesion of Austria, Finland and Sweden to the EU brought significant changes to the structure of the wood and paper sector. Indeed, these three countries accounted for 43.6 % of the EU-15's value added in the pulp, paper and paperboard sector (NACE Group 21.1) in 2001. In a similar way, the addition of the 10 new Member States also led to significant changes, in particular within the wood and wood products sector (NACE Division 20), where the 10 new Member States contributed 9.3 % of EU-25 value added in 2001 (compared with a manufacturing average of 5.6 %).

The evolution of the production index for the EU-25's manufacturing sector recorded an average increase of 1.3 % per annum between 1998 and 2003, a similar pace to that observed for wood and wood products (1.2 %) and pulp, paper and paper products (1.7 %).

Figure 5.1
Breakdown of value added in the forest-based products sector, EU-25, 2001 (share of total value added in the forest-based sector)



Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms).

Table 5.2

Manufacture of wood and wood products; pulp, paper and paper products (NACE Divisions 20 and 21)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to manufacturing (EU-25=100) (1)	Largest number of persons employed (thousands) (2)	Main EU-25 trading partners: origin of imports, 2002 (EUR billion)	Main EU-25 trading partners: destination of exports, 2002 (EUR billion)
1	Germany (16.4)	Latvia (418)	Germany (329.7)	United States (3.6)	United States (4.1)
2	Italy (9.6)	Finland (385)	Italy (264.2)	Canada (2.1)	Switzerland (2.6)
3	United Kingdom (9.6)	Sweden (285)	France (186.3)	Switzerland (1.9)	Norway (1.5)
4	France (8.8)	Estonia (273)	United Kingdom (180.5)	Norway (1.5)	Russian Federation (1.4)
5	Finland (6.2)	Austria (183)	Spain (167.3)	Brazil (1.5)	Japan (1.4)

(1) Luxembourg, Malta and Poland, not available.

(2) Luxembourg, Malta, Poland and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 5.2

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



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Table 5.3

Manufacture of wood and wood products; pulp, paper and paper products (NACE Divisions 20 and 21)
Value added at factor cost and persons employed, by enterprise size-class, 2001 (% of total)

	Micro enterprises		Small enterprises		Medium-sized enterprises		Large enterprises	
	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed
EU-25	10.5	:	18.4	:	24.7	:	46.4	:
EU-15	10.7	20.0	18.6	25.5	24.5	25.1	46.2	29.4

Source: Eurostat, Structural Business Statistics (theme4/sbs/sizclass).

Enterprises operating in the wood and wood products sector are often located in rural areas, contributing to economic activity and employment in remote regions. There were a high number of micro, small and medium-sized enterprises in the EU-25's wood and wood products sector, as SMEs (with less than 250 persons employed) accounted for 78.8 % of the value added generated in 2001 (compared with a manufacturing average of 45.1 %). On the other hand, the high level of concentration in the pulp, paper and paper products sector was evident from the 63.7 % share of value added that was accounted for by large enterprises with 250 or more persons employed (compared with a manufacturing average of 54.9 %).

LABOUR AND PRODUCTIVITY

There were approximately 1.9 million persons employed in the wood and paper sector in the EU-25 ⁽¹⁾ in 2001. Almost two thirds (63.1 %) of these were active in the wood and wood products sector. This share was quite different to that recorded for value added, where wood and wood products accounted for 40.8 % of output in the whole of the wood and paper sector.

Combining the data for value added and employment, the resulting ratio of apparent labour productivity was more than twice as high in the EU-15's pulp, paper and paper products sector (EUR 68 600 of value added per person employed) as it was in the wood and wood products sector (EUR 33 600). Average personnel costs per employee in the EU-25 were also considerably higher in the pulp, paper and paper products sector (EUR 34 800) in 2001, almost EUR 4 000 above the manufacturing average, whereas in the wood and wood products sector they averaged EUR 20 300 per employee.

⁽¹⁾ Malta, NACE Division 20, not available; Poland, NACE Division 21, not available; Slovenia, number of employees.

Table 5.4

Manufacture of wood and wood products; pulp, paper and paper products (NACE Divisions 20 and 21)

Labour force characteristics, 2002

	Share of men		Share of full-time		Share of employees	
	Value (%)	Index (manufacturing=100)	Value (%)	Index (manufacturing=100)	Value (%)	Index (manufacturing=100)
EU-25	:	:	:	:	:	:
EU-15	80.6	112.5	93.6	101.3	87.0	94.7
BE	78.3	105.3	93.0	102.1	88.3	93.1
CZ	75.3	122.2	96.6	99.0	82.4	89.0
DK	76.1	111.3	94.0	101.4	97.7	101.2
DE	78.8	109.8	90.1	100.5	92.3	96.8
EE	72.0	138.0	95.9	99.1	96.0	99.4
EL	90.3	127.4	96.7	98.6	59.0	80.5
ES	86.0	115.9	98.2	101.4	79.8	90.3
FR	79.6	112.5	95.9	101.5	95.7	100.8
IE	83.7	121.0	93.1	99.3	87.0	94.5
IT	80.9	116.2	94.4	99.7	73.0	88.2
CY	82.5	131.1	98.4	105.4	65.5	81.9
LV	81.4	131.9	90.9	96.0	96.6	101.1
LT	85.5	167.4	95.0	100.2	94.9	98.5
LU	:	:	:	:	:	:
HU	77.9	130.5	96.6	99.0	88.7	95.1
MT	100.0	142.8	77.4	80.1	100.0	107.4
NL	87.3	113.2	78.2	104.2	94.6	98.4
AT	79.9	107.5	:	:	91.8	96.4
PL	:	:	:	:	:	:
PT	79.7	142.1	98.0	101.1	78.6	90.2
SI	71.6	118.6	96.6	99.9	90.0	95.9
SK	75.5	127.5	98.9	100.2	88.8	92.4
FI	76.5	108.8	95.5	100.0	95.1	101.7
SE	80.5	108.9	92.3	100.6	92.7	98.6
UK	80.0	106.9	93.8	101.7	93.7	98.5

Source: Eurostat, Labour Force Survey.

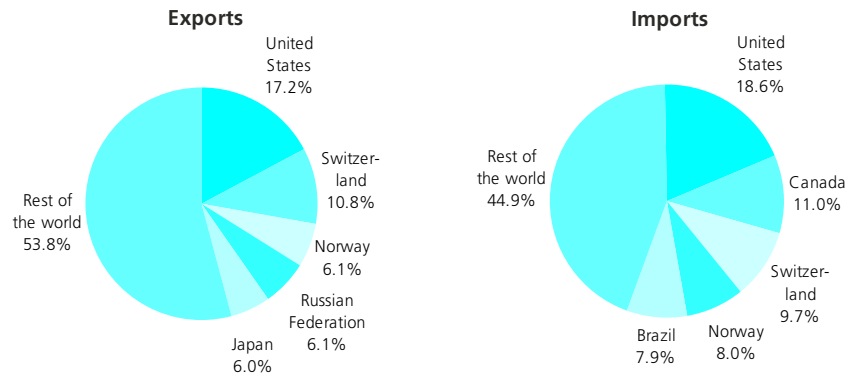
EXTERNAL TRADE

The EUR 23.8 billion of exports of wood and paper products (CPA Divisions 20 and 21) made by the EU-25 in 2002 represented 2.9 % of total manufactured exports. In the same year, the EU imported EUR 19.2 billion of wood and paper products, which represented 2.6 % of total manufactured imports. The external trade performance of the EU-25 was split between a trade deficit of EUR 1.1 billion for wood and wood products (CPA Division 20) and a surplus of EUR 5.7 billion for pulp, paper and paper products (CPA Division 21).

The United States was the most important trading partner in terms of exports and imports for both wood and wood products and pulp, paper and paper products. The United States accounted for 17.2 % of the EU's exports of wood and paper products, while it was the origin of 18.6 % of the EU's imports.

Figure 5.3

Wood and wood products; pulp, paper and paper products (CPA Divisions 20 and 21) Share in extra-EU trade, 2002



Source: Eurostat, Comext.

5.1: 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 wood (NACE Group 20.1), through semi-processed wood products, such as boards and panels (NACE Group 20.2) and builders' carpentry and joinery (NACE Group 20.3), towards end uses such as wooden containers (NACE Group 20.4) and other wood products, including household goods made from wood (NACE Group 20.5).

Wood is one of the oldest and most important building materials. It is biodegradable and increasing quantities of wood are recovered for secondary use. The recycling of wood is encouraged by initiatives such as the directive on packaging⁽²⁾, whereby enterprises and government agencies will be required to recover 15 % (by weight) of the wood they use in packaging by the end of 2008.

STRUCTURAL PROFILE

EU-25 value added in the wood and wood products sector was EUR 32.4 billion in 2001, equivalent to 2.1 % of the manufacturing total. There were approximately 1.2 million persons employed in the EU-25⁽³⁾ in 2001, which represented 3.5 % of the manufacturing total.

⁽²⁾ Directive 2004/12/EC of the European Parliament and of the Council of 11 February 2004 amending Directive 94/62/EC on packaging and packaging waste.

⁽³⁾ Malta, excluding NACE Group 20.4; Slovenia, number of employees.

The manufacture of builders' carpentry and joinery, which makes building elements such as roof beams, windows, doors and flooring systems, was the largest single contributor to output. Increasingly, production in this subsector takes the form of pre-fabricated units. Builders' carpentry and joinery generated 42.5 % of the EU's value added in the wood and wood products sector in 2001. This was twice as high as the next most important subsector (in terms of value added), namely sawmilling and planing of wood (21.2 %). The manufacture of boards and panels and other wood products were similar in size, accounting for 14.8 % and 13.8 % of total value added, while the smallest contribution came from the wooden containers sector (7.7 %).

More detailed information is available for the wooden boards and panels sector, where particleboard was by far the most important product, accounting for 66.2 % of total production (measured in square metres). However, the fastest growing board sectors were medium density fibreboard (MDF), which almost accounted for 20 % of board production in 2002, and oriented strand board (OSB), which represented slightly less than 4 % of total board output (see Table 5.5).

Table 5.5

Wood processing output in Europe, 2002 (million m³)

Sawnwood	108.1
Wood based panels (1)	
Particleboard	35.9
MDF	10.5
Plywood	3.4
Hard-/Softboard	2.3
OSB	2.1
Parquet (2)	62.5

(1) Surface area in million square metres; EU-15 (excluding Greece, Ireland, Luxembourg, Portugal and the United Kingdom), Switzerland and Norway.
(2) All Western and Eastern European countries, except for the CIS.

Source: EPF (European Panel Federation); FAO (Food and Agriculture Organization of the United Nations); FEP (European Federation of the Parquet Industry).

Germany had the largest wood and wood products sector in the EU-25 in 2001, accounting for 20.4 % of total value added. Italy (15.2 %) followed, while the United Kingdom and France were the only other Member States to report double-digit shares of EU-25 value added. Poland generated EUR 1.8 billion of value added, equivalent to 5.4 % of the EU-25 total, while the next highest contribution from any of the 10 new Member States was made by Latvia (1.0 %). Although this does not appear to be a very high share, it was 10 times higher than the Latvian share of EU-25 manufacturing value added (0.1 %).

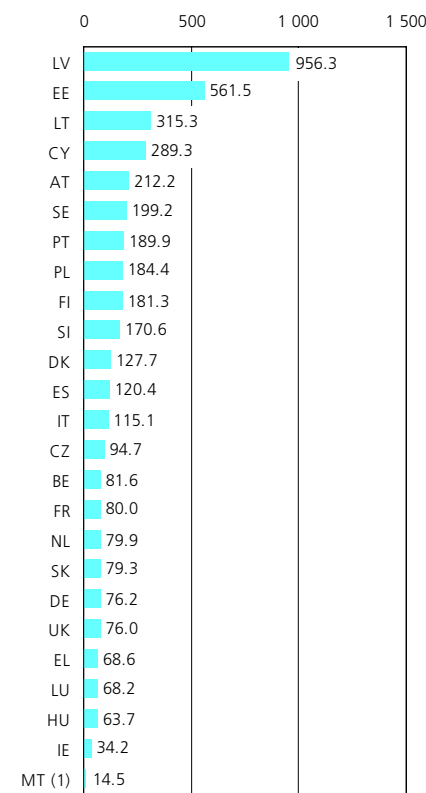
In Denmark, Cyprus, the Netherlands and the United Kingdom the builders' carpentry and joinery subsector accounted for more than half of the value added generated in the wood and wood products sector. The three Baltic States, Sweden and Finland were relatively specialised in sawmilling activities, while Portugal was relatively specialised in the manufacture of cork.

The evolution of EU-25's wood and wood products sector is closely linked to activity in the construction sector, not just the number of housing starts, but also the level of renovation and repair. During the period 1993 to 2003 the production index for the wood and wood products sector rose at an average annual rate of 1.6 %, while the corresponding rate for manufacturing was 2.3 % per annum. The fastest expansion was registered for the manufacture of boards and panels (NACE Group 20.2), with average growth of 4.3 % per annum between 1993 and 2003. The manufacture of wooden containers (NACE Group 20.4) and other wood products (NACE Group 20.5) recorded three consecutive annual reductions in output from 2001 to 2003.

The wood and wood products sector is characterised by a high number of family-run businesses that supply local markets. Micro and small enterprises (employing less than 50 persons) predominate and these accounted for a majority (53.4 %) of the EU-25's value added in the wood and wood products sector in 2001. Their share of total employment in the EU-15 was even higher at 64.8 %. Micro and small enterprises accounted for more than 65 % of the total number of persons employed in the wood and wood products sector in the Czech Republic, Spain, Italy, Cyprus and Portugal ⁽⁴⁾.

⁽⁴⁾ Belgium, Estonia, Greece, Ireland, Hungary, Poland, Slovenia and Slovakia, not available.

Figure 5.4
Manufacture of wood and wood products (NACE Division 20)
Value added specialisation ratio relative to total manufacturing, 2001 (EU-25=100)



(1) 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

LABOUR AND PRODUCTIVITY

Apparent labour productivity in the wood and wood products sector (EUR 33 600 of value added per person employed) was considerably below the EU-15 manufacturing average (EUR 51 200). This was the case for each of the five groups that make up the wood and wood products sector, with the highest productivity being recorded for boards and panels (EUR 46 500).

Some 71.7 % of the EU-15's manufacturing workforce was composed of men in 2002, while the equivalent proportion for the wood and wood products sector was 84.7 %. Denmark was the only country to report that its share of men working in the wood and wood products sector (66.7 %) was below its national manufacturing average (68.4 %) ⁽⁵⁾.

There was a relatively high proportion of self-employed persons in the EU-15's wood and wood products sector in 2002 (17.6 % compared with a manufacturing average of 7.2 %). The wood and wood products sector recorded a similar part-time employment rate (6.6 %) to that registered for the whole of the manufacturing sector (7.6 %) in the EU-15 in 2002.

⁽⁵⁾ Luxembourg and Poland, not available.

Table 5.6
Manufacture of wood and wood products (NACE Division 20)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Wood & wood products, except furniture; articles of straw & plaiting materials	33.6	129.2	26.0
Sawmilling and planing of wood, impregnation of wood	36.7	137.7	26.7
Veneer sheets; boards and panels	46.5	148.5	31.3
Builders' carpentry and joinery	31.1	119.6	26.0
Wooden containers	34.5	137.1	25.2
Other products of wood; articles of cork, straw and plaiting materials	29.4	134.1	21.9

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 5.7

Wood and products of wood and cork (except furniture); articles of straw and plaiting materials (CPA Division 20)
External trade, EU-25, 2002

	Exports		Imports		Trade balance (EUR million)
	Value (EUR million)	Share of total (%)	Value (EUR million)	Share of total (%)	
Wood & wood products (except furniture); straw & plaiting materials	7 389	100.0	8 478	100.0	-1 089
Wood, sawn, planed or impregnated	2 655	35.9	4 006	47.3	-1 351
Veneer sheets; boards and panels	2 187	29.6	1 926	22.7	260
Builders' joinery and carpentry, of wood	1 288	17.4	878	10.4	410
Wooden containers	341	4.6	114	1.3	227
Other products of wood; articles of cork, straw and plaiting materials	918	12.4	1 554	18.3	-636

Source: Eurostat, Comext.

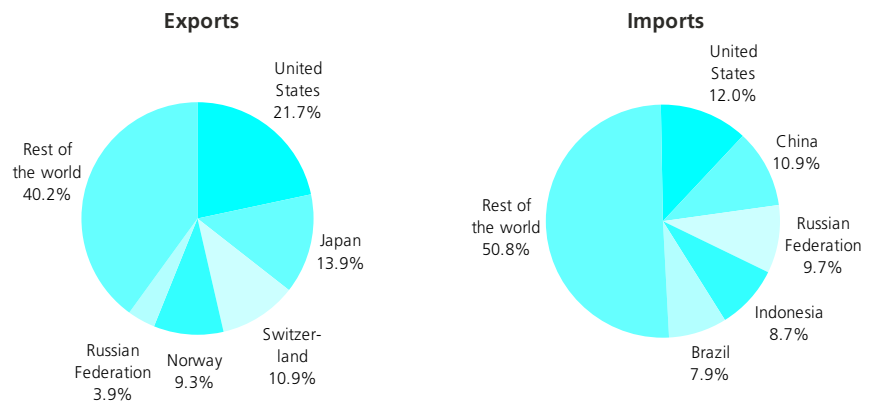
EXTERNAL TRADE

The EU-25 had a trade deficit of EUR -1.1 billion in 2002 for wood and wood products (CPA Division 20), with exports valued at EUR 7.4 billion, compared with imports of EUR 8.5 billion. The deficit was unevenly spread across product groups, as the EU ran a trade deficit for sawn, planed or impregnated wood (CPA Group 20.1) that was equal to EUR 1.4 billion and a deficit of EUR 636 million for other products of wood (CPA Group 20.5). On the other hand, the EU-25 registered a trade surplus for the three remaining CPA groups.

The EU-25's main trading partners for wood and wood products in 2002 included the United States, Switzerland, Japan, China, the Russian Federation and Norway. The EU-25's largest trade surplus was with Japan (EUR 1.0 billion), followed by the United States, Switzerland and Norway. The largest deficit was registered with Indonesia (EUR -722 million), while deficits of EUR 400 million or more were also recorded with China, Brazil, the Russian Federation and Malaysia. Of the EUR 920 million of EU-25 imports of wood and wood products from China in 2002, some 81.5 % were accounted for by other products of wood (including household goods made from wood).

Figure 5.5

Wood and products of wood and cork (except furniture); articles of straw and plaiting materials (CPA Division 20)
Share in extra-EU trade, 2002



Source: Eurostat, Comext.

5.2: 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. Printing and publishing activities (NACE Division 22) are covered in the final chapter of this publication (see Chapter 24).

Pulp, paper and paper products are destined for a wide variety of uses such as packaging (corrugated boxes), printed matter (newspapers, magazines and books), office stationery, household products (kitchen rolls, coffee filters, paper bags), medical and sanitary products. As such, paper and paper products find their way into practically every sector of the economy.

Technological improvements have led to innovations such as the use of paper together with other materials, such as plastics and aluminium, to allow a single package to benefit from the properties of different materials (for example, cartons for beverages).

The use of recycled fibre has grown steadily in recent years and stood at around 50 % in 2002. Table 5.8 provides some main indicators relating to paper recycling in the EU in 2002. Packaging is the biggest user of recovered paper, as almost two thirds of recovered paper is used to produce case materials, cartons, wrappings and other packaging. Recovered paper utilisation rates are also high in the newsprint sector, where the utilisation rate of recovered paper was 73.2 % in 2002, according to the Confederation of European Paper Industries (CEPI). The recycling of paper and board is further encouraged by initiatives such as the directive on packaging ⁽⁶⁾, whereby enterprises in each Member State will be required to recover at least 60 % (by weight) of the paper and board they use in packaging by the end of 2008.

⁽⁶⁾ Directive 2004/12/EC of the European Parliament and of the Council of 11 February 2004 amending Directive 94/62/EC on packaging and packaging waste.

Table 5.8
Main indicators for paper recycling, 2002

	Recovered paper utilisation (thousand tonnes)	Collection rate (%)	Utilisation rate (%)
EU-15 (1)	40 499	55.9	47.9
BE	602	48.1	35.3
DK	377	55.7	102.7
DE	12 038	72.2	65.0
EL	380	34.1	77.1
ES	4 370	52.1	81.5
FR	5 705	49.7	58.2
IE	47	33.8	109.3
IT	5 194	44.9	56.0
LU	:	:	:
NL	2 372	64.8	71.1
AT	1 900	61.4	43.0
PT	341	45.3	22.4
FI	702	71.7	5.5
SE	1 861	68.8	17.4
UK	4 610	47.6	74.2

(1) Excluding Luxembourg.

Source: CEPI (Confederation of European Paper Industries), Annual statistics 2002. For more information see: <http://www.cepi.org>.

STRUCTURAL PROFILE

Value added in the pulp, paper and paper products sector was EUR 47.1 billion in 2001 in the EU-25, which equated to 3.1 % of total manufacturing value added. There were 706 300 persons employed in the pulp, paper and paper products sector in the EU-25 in 2001 ⁽⁷⁾, approximately 2.2 % of those employed in the whole of the manufacturing sector.

The relative importance of the two NACE groups that make up the pulp, paper and paper products sector was almost identical in terms of their contribution to value added in 2001. The manufacture of pulp, paper and paperboard (NACE Group 21.1) contributed 49.8 % of sectoral value added compared with 50.2 % for the manufacture of articles of paper and paperboard (NACE Group 21.2). When expressed in terms of employment, the manufacture of articles of paper and paperboard employed approximately two thirds of the total sectoral workforce. Table 5.9 provides a more detailed breakdown (in volume terms) of output within the EU-15's pulp, paper and paper products sector.

⁽⁷⁾ Poland, not available; Slovenia, number of employees.

Table 5.9
Breakdown of pulp and paper production, EU-15, 2002 (thousand tonnes) (1)

Total pulp	34 887
Woodpulp for papermaking	34 389
Mechanical & semi-chemical pulp	11 480
Chemical pulp	22 909
Other pulp	498
Total graphic paper	40 909
Newsprint	8 801
Uncoated mechanical	5 412
Coated	8 487
Uncoated woodfree	9 311
Coated woodfree	8 898
Household & sanitary	5 336
Total packaging	34 618
Case materials	19 669
Carton boards	11 729
Wrappings	3 220
Others	3 701

(1) Excluding Luxembourg.

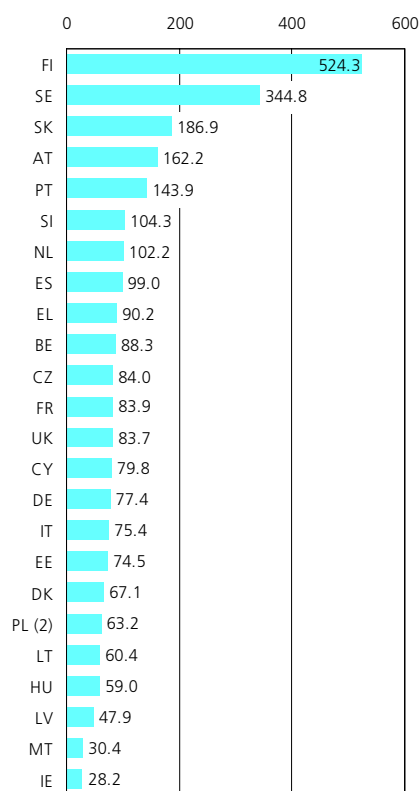
Source: CEPI (Confederation of European Paper Industries), Annual statistics 2002. For more information see: <http://www.cepi.org>.

A majority of Member States reported that the pulp, paper and paper products sector accounted for between 1.5 and 3.5 % of manufacturing value added in 2001 ⁽⁸⁾. Ireland and Malta were below this level, as output in this sector equated to 0.9 % of manufacturing value added. The highest relative contributions of the pulp, paper and paper products sector to total manufacturing value added were recorded in Finland (16.1 %) and Sweden (10.6 %), while Slovakia, Austria and Portugal also reported relatively high degrees of specialisation.

The evolution of the pulp, paper and paper products sector during the period 1993 to 2003 showed that output was generally rising at a slightly slower pace (1.8 % per annum) than for manufacturing as a whole (2.3 %). The manufacture of pulp, paper and paperboard recorded average growth of 2.8 % per annum compared with 0.6 % per annum for the manufacture of articles of paper and paperboard.

⁽⁸⁾ Luxembourg and Poland, not available.

Figure 5.6
Manufacture of pulp, paper and paper products (NACE Division 21)
Value added specialisation ratio relative to total manufacturing, 2001 (EU-25=100) (1)

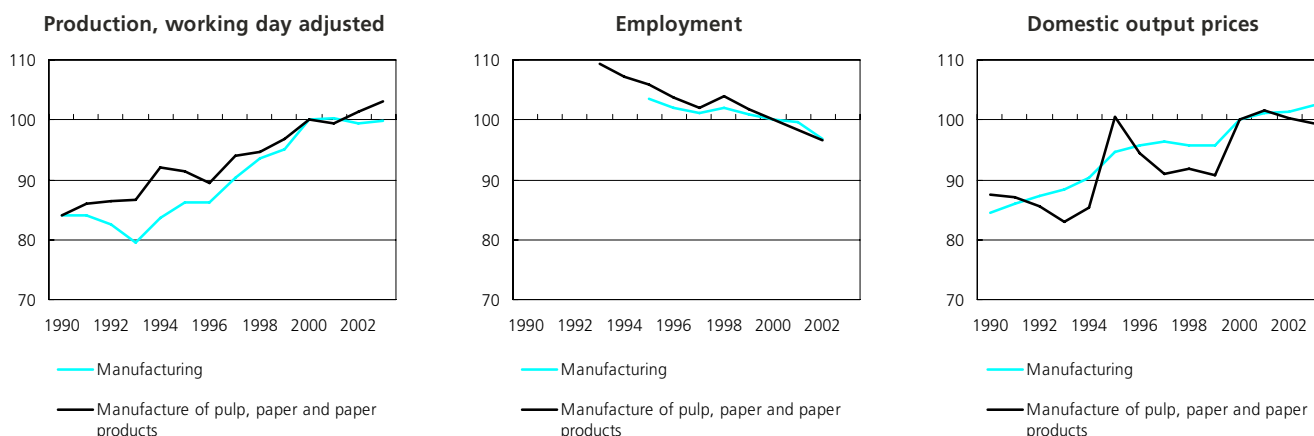


(1) Luxembourg, not available.
 (2) 2000.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Output prices for pulp, paper and paper products rose, on average, by 1.8 % per annum between 1993 and 2003 in the EU-25, slightly faster than the manufacturing average of 1.5 % per annum. The evolution of prices has historically been marked by erratic fluctuations, particularly in the price of pulp. Output prices for the manufacture of pulp (NACE Class 21.11) in the EU-15 often rose or fell by more than +/-10 % on the basis of a year-on-year comparison. A shortage of pulp in 2000 drove output prices up by 50.2 %, followed by corrections in the three years that followed.

Whereas SMEs predominate in the wood and wood products sector, the opposite is true in the pulp, paper and paper products sector. Large enterprises (with 250 or more persons employed) generated 63.7 % of total value added in the EU-25's pulp, paper and paper products sector in 2001 (compared with a manufacturing average of 54.9 %); this same group of enterprises employed exactly half of the total workforce in the pulp, paper and paper products sector in the EU-15 in 2002.

Figure 5.8
Manufacture of pulp, paper and paper products (NACE Division 21)
Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Table 5.10

Manufacture of pulp, paper and paper products (NACE Division 21)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Manufacture of pulp, paper and paper products	68.6	178.7	38.4
Manufacture of pulp, paper and paperboard	99.6	224.5	44.4
Manufacture of articles of paper and paperboard	52.4	149.0	35.2

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

LABOUR AND PRODUCTIVITY

Apparent labour productivity was EUR 68 600 per person employed in the EU-15's pulp, paper and paper products sector in 2001. There was a wide range of productivity across the different subsectors, as each person employed in the manufacture of pulp (NACE Class 21.11) generated an average of EUR 145 100 of value added, while for the manufacture of paper and paperboard (NACE Class 21.12) each person generated an average of EUR 95 900 of value added. The apparent labour productivity of EU-15 enterprises in the articles of paper and paperboard sector (NACE Group 21.2) was, at EUR 52 400 per person employed, similar to that recorded for the whole of manufacturing (EUR 51 200 per person employed).

Paid employees accounted for 96.3 % of those employed in the EU-15's pulp, paper and paper products sector in 2002; this could be compared with a manufacturing average of 91.9 %. Belgium was the only country to report that a lower proportion of paid employees worked in the pulp, paper and paper products sector (90.6 %) than in the manufacturing sector as a whole (94.8 %) ⁽⁹⁾. Belgium, the Czech Republic, Hungary and Slovakia were the only countries where the proportion of men working in the pulp, paper and paper products sector was lower than the manufacturing average in 2002 ⁽¹⁰⁾. On the other hand, the proportion of men working in the pulp, paper and paper products sector was more than 10 percentage points above the manufacturing average in Malta (30.0 percentage points), Portugal (20.1) and Denmark (17.4). Full-time employment rates were generally slightly above the manufacturing average in the pulp, paper and paper products sector, reaching 94.0 % in 2002 in the EU-15 (compared with a manufacturing average of 92.4 %).

⁽⁹⁾ Estonia, Cyprus, Latvia, Lithuania, Luxembourg and Poland, not available.

⁽¹⁰⁾ Estonia, Cyprus, Latvia, Lithuania, Luxembourg and Poland, not available.

EXTERNAL TRADE

The EU-25 ran a trade surplus of EUR 5.7 billion in 2002 for pulp, paper and paper products (CPA Division 21), made up of EUR 16.4 billion of exports and EUR 10.7 billion of imports. Of the seven CPA classes that compose CPA Division 21, six reported a trade surplus, the highest of which was EUR 6.9 billion for paper and paperboard (CPA Class 21.12). Pulp (CPA Class 21.11) was the only Class where the EU-25 recorded a trade deficit (EUR 3.7 billion).

The EU's main trading partners for pulp, paper and paper products were the United States, Switzerland, Canada, Norway and the Russian Federation. Almost 90 % of the EU-25's imports came from its 10 largest import partners, while export markets were less concentrated, as the top 10 destinations accounted for 55.7 % of total exports in 2002. The EU ran its largest trade surpluses for pulp, paper and paper products with the Russian Federation (EUR 597 million), Turkey (EUR 570 million), and China (EUR 450 million) in 2002, while the biggest deficits were registered with Canada (EUR 1.3 billion), Brazil (EUR 642 million) and Norway (EUR 453 million).

Table 5.11

Pulp, paper and paper products (CPA Division 21)
External trade, EU-25, 2002

	Exports		Imports		Trade balance (EUR million)
	Value (EUR million)	Share of total (%)	Value (EUR million)	Share of total (%)	
Pulp, paper and paper products	16 424	100.0	10 701	100.0	5 723
Pulp, paper and paperboard	12 206	74.3	9 029	84.4	3 177
Articles of paper and paperboard	4 114	25.0	1 672	15.6	2 442

Source: Eurostat, Comext.

Table 5.12

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

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	2 917	1 796	1 807	18 925	505	368	9 033	11 689	866	15 889	136	697	355	123
Value added at factor cost (EUR million)	761	298	691	6 626	117	129	2 643	3 495	244	4 922	57	330	91	33
Purchases of goods and services (EUR million)	2 249	1 378	0	13 057	413	:	6 849	8 937	662	11 289	84	541	281	90
Gross investment in tangible goods (EUR million)	235	122	113	949	51	:	483	716	59	965	9	88	32	:
Number of persons employed (thousands)	15	76	16	176	15	5	111	94	6	182	3	30	26	1
App. labour productivity (EUR thous./pers. emp.)	50.9	3.9	44.0	37.6	7.7	27.9	23.8	37.4	39.3	27.0	19.1	10.9	3.5	64.0
Average personnel costs (EUR thous./employee) (2)	33.5	5.3	33.9	31.3	4.3	:	18.0	27.9	24.4	21.5	15.9	3.4	2.1	38.6
Wage adjusted labour productivity (%) (2)	151.9	73.9	129.9	120.4	177.5	:	132.2	134.0	161.3	125.3	116.8	324.3	165.5	165.8
Gross operating rate (%) (3)	10.6	1.9	9.5	8.8	10.1	:	9.5	8.0	10.5	15.8	12.4	30.1	10.3	10.8
	HU	MT (1)	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	542	6	2 654	4 904	4 172	3 182	516	292	5 186	7 062	9 764	152	890	:
Value added at factor cost (EUR million)	155	3	912	1 602	1 758	717	145	66	1 189	1 752	3 671	24	233	:
Purchases of goods and services (EUR million)	468	3	1 871	3 656	2 563	2 605	382	248	4 181	5 583	6 829	148	803	:
Gross investment in tangible goods (EUR million)	63	1	120	442	248	234	32	28	316	384	420	20	302	:
Number of persons employed (thousands)	22	0	23	36	136	49	:	14	29	43	89	17	89	:
App. labour productivity (EUR thous./pers. emp.)	6.9	10.3	40.5	44.0	13.0	14.7	:	4.8	40.9	41.0	41.4	1.5	2.6	:
Average personnel costs (EUR thous./employee) (2)	4.5	8.2	31.9	31.4	5.6	10.6	10.8	3.7	31.2	33.2	27.1	1.4	1.4	:
Wage adjusted labour productivity (%) (2)	153.9	124.6	127.0	140.3	232.8	138.3	:	128.0	131.3	123.7	152.7	102.9	186.3	:
Gross operating rate (%)	9.1	25.5	10.6	10.6	28.0	7.9	2.9	4.7	5.7	6.4	13.8	3.3	12.7	:

(1) 2000.

(2) Ireland, Cyprus and Bulgaria, 2000.

(3) Ireland, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 5.13

**Manufacture of pulp, paper and paperboard (NACE Group 21.1)
Main indicators, 2001**

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	2 045	773	249	14 048	:	:	3 875	7 592	32	5 222	0	:	24	:
Value added at factor cost (EUR million) (1)	571	216	80	4 313	:	:	1 219	2 045	15	1 434	0	:	7	:
Purchases of goods and services (EUR million)	1 538	565	0	10 061	:	:	2 862	5 648	18	4 237	0	:	17	:
Gross investment in tangible goods (EUR million)	252	40	7	847	:	:	279	384	1	743	0	:	3	:
Number of persons employed (thousands)	6	8	1	47	:	:	14	27	0	19	0	:	1	:
App. labour productivity (EUR thous./pers. emp.) (1)	99.4	26.3	85.1	91.5	:	:	84.4	75.7	77.0	76.6	:	:	6.0	:
Average personnel costs (EUR thous./employee) (1)	52.6	7.7	44.4	47.5	:	:	36.5	42.1	34.4	36.8	:	:	4.7	:
Wage adjusted labour productivity (%) (1)	188.9	343.1	191.7	192.8	:	:	231.2	179.8	223.6	208.3	:	:	127.2	:
Gross operating rate (%) (1)	12.6	19.7	15.4	14.2	:	:	17.3	11.4	22.7	13.6	:	:	6.4	:
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	205	0	1 974	3 317	1 630	1 645	380	523	14 042	10 200	5 043	42	173	:
Value added at factor cost (EUR million)	45	0	609	1 173	687	612	72	171	4 784	3 740	1 560	8	33	:
Purchases of goods and services (EUR million)	169	0	1 346	2 695	914	1 049	280	367	10 198	6 755	3 513	35	161	:
Gross investment in tangible goods (EUR million)	11	0	91	262	253	116	29	37	1 759	813	233	4	29	:
Number of persons employed (thousands)	1	0	7	9	10	6	:	6	36	31	19	3	9	:
App. labour productivity (EUR thous./pers. emp.)	34.8	:	90.2	137.1	65.6	108.2	:	27.9	132.0	121.3	82.4	2.3	3.6	:
Average personnel costs (EUR thous./employee)	9.0	:	46.2	50.9	12.1	30.4	17.5	6.2	49.8	44.3	44.3	2.7	2.5	:
Wage adjusted labour productivity (%)	387.0	:	195.3	269.6	541.7	355.6	:	451.7	264.8	273.7	185.8	84.9	147.8	:
Gross operating rate (%)	15.4	:	15.5	19.1	40.1	27.3	7.2	24.5	20.3	23.0	14.1	-2.6	5.8	:

(1) Ireland, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 5.14

Manufacture of articles of paper and paperboard (NACE Group 21.2)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	2 089	644	1 233	16 412	:	:	6 851	11 761	693	13 185	64	:	63	:
Value added at factor cost (EUR million) (2)	628	168	448	5 469	:	:	1 941	3 287	278	3 257	23	:	18	:
Purchases of goods and services (EUR million)	1 936	500	0	12 288	:	:	5 096	9 443	408	10 029	45	:	46	:
Gross investment in tangible goods (EUR million)	83	46	62	850	:	:	378	559	48	506	4	:	5	:
Number of persons employed (thousands)	10	12	8	107	:	:	42	66	4	63	1	:	2	:
App. labour productivity (EUR thous./pers. emp.) (2)	62.8	14.3	58.1	51.3	:	:	46.6	50.0	60.1	51.6	26.6	:	11.1	:
Average personnel costs (EUR thous./employee) (3)	40.3	6.8	41.6	39.3	:	:	26.0	35.5	33.3	29.4	14.5	:	4.9	:
Wage adjusted labour productivity (%) (3)	155.7	208.4	139.9	130.8	:	:	179.0	140.7	180.3	175.4	170.0	:	226.0	:
Gross operating rate (%) (2)	9.0	13.5	10.4	7.3	:	:	12.4	7.3	16.3	12.2	14.6	:	17.2	:
	HU	MT	NL	AT	PL (1)	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	631	20	3 473	1 577	1 230	631	223	253	602	2 051	12 162	87	224	:
Value added at factor cost (EUR million)	164	7	1 088	608	326	178	57	55	213	667	4 321	17	66	:
Purchases of goods and services (EUR million)	526	12	2 794	1 152	1 047	465	164	226	412	1 540	8 614	76	192	:
Gross investment in tangible goods (EUR million)	79	5	179	98	102	66	17	18	24	106	475	7	21	:
Number of persons employed (thousands)	9	0	19	9	:	8	:	4	4	11	73	7	10	:
App. labour productivity (EUR thous./pers. emp.)	19.1	18.6	56.9	68.1	:	22.0	:	12.9	50.4	59.4	59.3	2.4	6.5	:
Average personnel costs (EUR thous./employee)	9.4	13.1	39.0	41.7	6.6	14.1	13.0	5.5	37.4	39.9	38.4	1.7	2.3	:
Wage adjusted labour productivity (%)	202.9	141.6	145.6	163.3	:	156.2	:	233.4	134.8	148.8	154.5	143.7	283.8	:
Gross operating rate (%)	12.2	14.6	8.9	13.3	12.1	10.1	5.7	11.1	9.1	11.0	12.0	5.8	17.8	:

(1) 2000.

(2) Ireland, 2000.

(3) Ireland and Cyprus, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Chemicals, rubber and plastics



Many chemical, rubber and plastics products are strongly regulated, from the supply of raw materials, through processing to their use and finally the treatment of waste.

On 29 October 2003 the European Commission adopted a proposal for a new EU regulatory framework within the domain of the chemicals sector ⁽¹⁾. This proposal followed on from a White Paper ⁽²⁾ released by the European Commission in February 2001. The proposal is based on the objective to improve the protection of human health and the environment. The new system called REACH ('Registration, evaluation, and authorisation of chemicals') will require the registration of all manufactured or imported chemical substances each year within a central database (when these amount to more than one tonne). Another element of REACH is evaluation, which may involve an evaluation of the substances by a competent authority. The third aspect of REACH is the need for authorisation for the use of substances which are of very high concern, for example substances identified as having serious and irreversible effects on humans and/or the environment.

STRUCTURAL PROFILE

In 2001 the chemicals, rubber and plastics sector generated added value of EUR 233.7 billion in the EU-25, equivalent to 15.2 % of manufacturing value added. Of this, EUR 222.4 billion was generated in the EU-15 Member States, a 95.1 % share of the EU-25 total, which was slightly higher than the corresponding share of the EU-15 in manufacturing value added (94.4 %). There were 3.6 million persons employed ⁽³⁾ in the EU-25's chemicals, rubber and plastics sector and 3.1 million in the EU-15, which equated to 11.0 % of the manufacturing workforce in the EU-15.

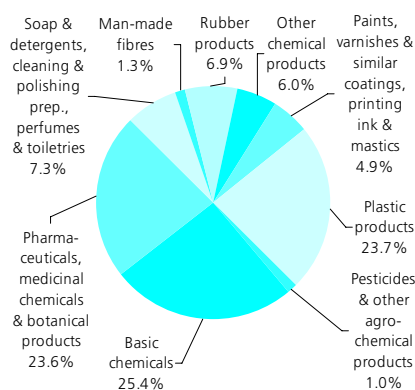
The manufacture of chemicals (NACE Division 24) was the dominant activity, generating 69.4 % of the chemicals, rubber and plastics sector's value added in 2001 (EUR 162.2 billion). Plastics manufacturing (NACE Group 25.2) generated 23.7 % of sectoral value added and rubber products manufacturing (NACE Group 25.1) the remaining 6.9 %. Within the chemical manufacturing subsector, the largest activities were the manufacture of basic chemicals (NACE Group 24.1) and the manufacture of pharmaceuticals, medicinal chemicals and botanical products (NACE Group 24.4), each accounting for around one quarter of the value added of the whole of the chemicals, rubber and plastics sector.

The manufacture of chemicals, rubber and plastics are covered by NACE Divisions 24 and 25. The former of these 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.

Figure 6.1
Manufacture of chemicals and chemical products; rubber and plastic products (NACE Subsections DG and DH)
Share of value added at factor cost, EU-25, 2001



Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

⁽¹⁾ COM(2003) 644.

⁽²⁾ COM(2001) 88.

⁽³⁾ Poland and Slovenia, number of employees; Poland, 2000.

Table 6.1

Manufacture of chemicals and chemical products; rubber and plastic products (NACE Subsections DG and DH)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to manufacturing (EU-25=100) (1)	Largest number of persons employed (thousands) (2)	Main EU-25 trading partners: origin of imports, 2002 (EUR billion)	Main EU-25 trading partners: destination of exports, 2002 (EUR billion)
1	Germany (59.7)	Ireland (249)	Germany (881.6)	United States (34.7)	United States (48.7)
2	United Kingdom (35.5)	Belgium (163)	France (534.5)	Switzerland (19.7)	Switzerland (15.2)
3	France (35.4)	Luxembourg (132)	United Kingdom (483.8)	Japan (8.9)	Japan (8.6)
4	Italy (24.8)	France (112)	Italy (417.9)	China (6.4)	Russian Federation (5.4)
5	Spain (14.7)	Slovenia (110)	Spain (262.3)	Norway (2.5)	Turkey (5.3)

(1) Poland, not available.

(2) Poland and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

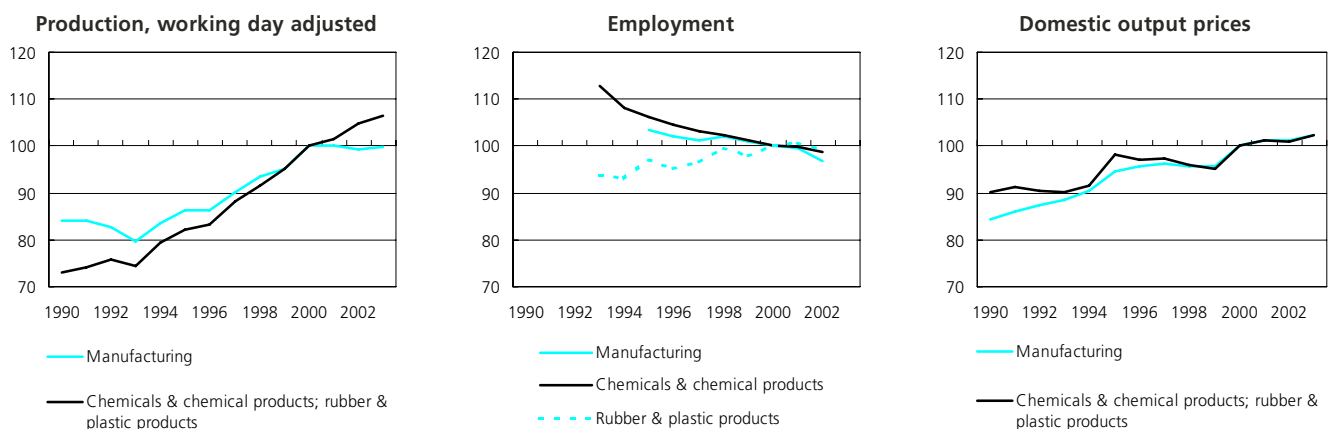
Germany generated EUR 59.7 billion of value added in the chemicals, rubber and plastics sector, which was equivalent to one quarter (25.5 %) of the EU-25's total in 2001. The United Kingdom, France and Italy were the next largest Member States, contributing together 40.9 % of the EU-25's value added; none of the remaining Member States registered a share that was higher than 7 %. Ireland and Belgium were the most specialised countries manufacturing chemicals, rubber and plastics, resulting mainly from a predominance of chemicals manufacturing in both of these countries, as chemicals manufacturing accounted for 36.5 % of Irish manufacturing value added and 20.4 % of Belgian manufacturing value added. The Baltic Member States registered the lowest specialisation in the chemicals, rubber and plastics sector, while the 10 new Member States generally recorded lower value added specialisation ratios than the EU-15 Member States.

The working day adjusted production index for rubber and plastic products manufacturing followed a similar development to the index for manufacturing in recent years. Since its low in 1993 there were annual increases until 2000, with the exception of 1996, as output grew on average by 4.0 % per annum between 1993 and 2000. After 2000 the production index for rubber and plastic products manufacturing was relatively stable, as was the case for manufacturing as a whole. For chemicals manufacturing, there was uninterrupted growth between 1993 and 2000, with output expanding on average by 4.5 % per annum. However, after 2000 the index of production for chemicals manufacturing continued to grow, averaging gains of 3.2 % per annum between 2000 and 2003.

Employment indices for rubber and plastic products developed in a similar manner to the production index through to 2000, namely, with increases being observed in most years. However, in 2001 there was almost no growth in the number of persons employed (0.7 %) and in 2002 employment fell by 1.4 %. Between 1993 (first year available) and 2002 employment in chemicals manufacturing fell on average by 1.4 % per annum, with not one year of growth.

Domestic output price indices in 1995 grew by around 7 % for chemical manufacturing as well as for rubber and plastic products manufacturing. In the following years through to 1999 the output price index fell on average by -0.8 % per annum. In 2000 there were again quite high price increases observed (6.4 %) for chemical manufacturing, once more followed by a period of relative stability between 2001 and 2002 and an increase of 1.9 % in 2003.

Figure 6.2

Manufacture of chemicals and chemical products; rubber and plastic products (NACE Subsections DG and DH)
Main indicators, EU-25 (2000=100)


Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Table 6.2

Manufacture of chemicals and chemical products; rubber and plastic products (NACE Subsections DG and DH)
Value added at factor cost and persons employed, by enterprise size-class, 2001 (% of total)

	Micro enterprises		Small enterprises		Medium-sized enterprises		Large enterprises	
	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed
EU-25	2.5	:	9.5	:	21.5	:	66.5	:
EU-15	2.4	4.5	9.5	14.7	21.3	25.8	66.8	55.0

Source: Eurostat, Structural Business Statistics (theme4/sbs/sizclass).

LABOUR AND PRODUCTIVITY

According to the results of the labour force survey, 69.3 % of the persons employed in the EU-15's chemicals, rubber and plastics manufacturing sector were men in 2002, which was 2.4 percentage points below the manufacturing average. The proportion of the workforce in the EU-15's chemicals, rubber and plastics manufacturing sector that worked full-time (93.6 %) was also close to the manufacturing average (92.4 %) in 2002. However, the EU-15's workforce in the chemicals, rubber and plastics manufacturing sector diverged from the manufacturing average with respect to working status. Some 97.0 % of the workforce were paid employees, compared with a manufacturing average of 91.9 %. Within chemicals manufacturing this proportion reached 98.0 %, the second highest figure across all manufacturing subsections, only marginally lower than in the manufacture of transport equipment (NACE Subsection DM, 98.1 %).

On average each person employed in the chemicals, rubber and plastics manufacturing sector generated EUR 71 400 of value added in the EU-15 in 2001, which was significantly higher (by EUR 20 200) than the manufacturing average. Chemicals manufacturing recorded apparent labour productivity of EUR 91 400 per person employed, compared with EUR 47 500 for rubber and plastic products manufacturing. As such, according to this measure, chemical manufacturing was one of the most productive manufacturing subsections in the EU.

Personnel costs averaged EUR 38 400 per employee in the EU-25's chemicals, rubber and plastics manufacturing sector in 2001, compared with a manufacturing average of EUR 30 900. In the chemicals manufacturing subsector, personnel costs averaged EUR 45 600 per employee, while the level was much lower in the rubber and plastic products manufacturing subsector at EUR 29 800 per employee.

The wage adjusted labour productivity ratio in the chemicals, rubber and plastics manufacturing was 167.2 % in the EU-15 in 2001. Once again, the chemicals manufacturing subsector recorded a higher ratio (182.2 %) than the rubber and plastic products manufacturing subsector (141.6 %), the latter recording wage adjusted labour productivity that was just below the manufacturing average (143.5 %).

Table 6.3

Manufacture of chemicals and chemical products; rubber and plastic products (NACE Subsections DG and DH)
Labour force characteristics, 2002

	Share of men		Share of full-time		Share of employees	
	Value (%)	Index (manufacturing=100)	Value (%)	Index (manufacturing=100)	Value (%)	Index (manufacturing=100)
EU-25	:	:	:	:	:	:
EU-15	69.3	96.7	93.6	101.3	97.0	105.6
BE	70.2	94.4	89.8	98.6	98.0	103.4
CZ	58.6	95.1	97.8	100.3	95.6	103.2
DK	62.7	91.6	95.2	102.7	99.1	102.7
DE	69.6	97.0	91.5	102.0	98.6	103.4
EE	:	:	:	:	:	:
EL	66.1	93.2	99.2	101.2	88.5	120.7
ES	71.2	95.9	99.3	102.5	96.7	109.4
FR	63.9	90.3	95.3	100.9	98.8	104.1
IE	63.2	91.3	94.5	100.7	96.0	104.4
IT	71.5	102.8	96.2	101.6	90.5	109.4
CY	52.0	82.6	95.1	101.9	90.5	113.1
LV	:	:	:	:	:	:
LT	66.4	129.9	93.7	98.8	86.3	89.6
LU	91.0	112.2	99.1	103.7	100.0	101.7
HU	60.9	102.0	98.1	100.5	96.3	103.2
MT	73.1	104.4	95.4	98.7	97.6	104.8
NL	78.6	101.9	77.7	103.5	98.3	102.3
AT	65.4	87.9	:	:	99.1	104.1
PL	:	:	:	:	:	:
PT	59.7	106.4	97.9	101.0	97.9	112.3
SI	63.0	104.3	96.3	99.6	94.9	101.2
SK	72.7	122.8	98.5	99.8	99.2	103.3
FI	63.8	90.7	96.8	101.5	96.1	102.8
SE	62.6	84.7	93.7	102.2	97.4	103.6
UK	72.6	97.1	93.6	101.5	97.5	102.5

Source: Eurostat, Labour Force Survey.

Table 6.4

Manufacture of chemicals and chemical products; rubber and plastic products (NACE Subsections DG and DH)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Chemicals & chemical products; rubber & plastic products	71.4	167.2	42.7
Manufacture of basic chemicals	104.6	191.8	54.5
Manufacture of pesticides and other agro-chemical products	91.6	161.0	56.9
Paints, varnishes & similar coatings, printing ink and mastics	67.0	162.9	41.2
Manufacture of pharmaceuticals, medicinal chemicals and botanical products	106.4	200.1	53.2
Soap & detergents, cleaning & polishing preparations, perfumes & toiletries	67.8	158.3	42.8
Manufacture of other chemical products	71.4	153.3	46.6
Manufacture of man-made fibres	59.9	138.5	43.2
Manufacture of rubber products	50.3	132.6	37.9
Manufacture of plastic products	46.7	144.4	32.3

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

EXTERNAL TRADE

Some EUR 155.3 billion worth of chemical, rubber and plastic products (CPA Divisions 24 and 25) were exported from the EU-25 in 2002, which was equal to 18.6 % of all exported manufactured goods. In the opposite direction, the EU-25 imported EUR 98.3 billion worth of chemicals, rubber and plastic products, resulting in a trade surplus of EUR 57.0 billion for these goods.

With the exception of man-made fibres (CPA Group 24.7) the EU-25 registered a trade surplus in all product groups within chemicals, plastics and rubber products in 2002. The largest surpluses were recorded for pharmaceuticals, medicinal chemicals and botanical products (CPA Group 24.4) and for basic chemicals (CPA Group 24.1), valued at EUR 22.8 billion and EUR 13.1 billion respectively.

The United States and Switzerland were by far the most common destinations for EU-25 exports of chemical, rubber and plastic products and also the main origin of the EU-25's imports, followed at some distance by Japan. Ireland had by far the largest trade surplus (intra- and extra-EU combined) in these products, valued at EUR 31.9 billion in 2002, followed by Germany (EUR 19.7 billion) and Belgium (EUR 12.0 billion). In contrast the highest trade deficits were recorded in Spain, Poland and Italy, ranging between EUR 5.0 billion and EUR 8.0 billion.

Table 6.5

Chemicals, chemical products and man-made fibres; rubber and plastic products (CPA Subsections DG and DH)
External trade, EU-25, 2002 (EUR million)

	Exports	Imports	Trade balance	Cover ratio (%)
Chemicals, chemical products & man-made fibres; rubber & plastics	155 324	98 319	57 005	158.0
Basic chemicals	46 490	33 385	13 105	139.3
Pesticides and other agro-chemical products	2 286	893	1 393	256.0
Paints, varnishes and similar coatings, printing ink and mastics	4 246	1 181	3 065	359.6
Pharmaceuticals, medicinal chemicals and botanical products	53 535	30 733	22 802	174.2
Glycerol; soap, detergents, cleaning prep.; perfumes & toiletries	10 637	2 929	7 709	363.2
Other chemical products	16 660	11 078	5 582	150.4
Man-made fibres	946	2 025	-1 079	46.7
Rubber products	5 540	5 410	131	102.4
Plastic products	13 335	10 328	3 007	129.1

Source: Eurostat, Comext.

6.1: BASIC INDUSTRIAL CHEMICALS (INCLUDING PETROCHEMICALS), PESTICIDES AND AGROCHEMICALS

The manufacture of basic chemicals (NACE Group 24.1) covers the manufacture of industrial gases, dyes and pigments, basic chemicals and fertilisers, as well as the manufacture of the primary forms of plastics and synthetic rubber. NACE Group 24.2 is also taken into account in this subchapter, and it comprises the manufacture of plant growth regulators, disinfectants and products to fight pests and diseases, such as insecticides, fungicides, herbicides and rodenticides. In this subchapter these two NACE groups are collectively referred to as basic and agro-chemical products.

There are a number of issues in relation to the use of fertilisers and pesticides, including the effects that they may have on humans, animals or the environment in the long term. In October 2003, a regulation (4) relating to fertilisers was passed that brought together, in a harmonised manner, 18 different Council and Commission directives that were published between 1976 and 1998 in relation to the production and use of fertilisers. The purpose of this was to create a single text to improve the ease with which legislation could be consulted. In 2003, the European Commission also undertook work on proposals to eliminate cadmium from phosphate fertilisers. Cadmium is a toxic metal that usually exists in low levels of concentration within the environment. Producers of phosphates will be given time to adapt to the new rules and may continue to supply EU farmers with these products, although the goal of the proposal is to ultimately reduce cadmium levels within the soil and to eventually stop using cadmium in fertilisers altogether.

STRUCTURAL PROFILE

The manufacture of basic industrial chemicals, pesticides and agro-chemicals (NACE Groups 24.1 and 24.2) generated added value of EUR 61.7 billion in the EU-25, equivalent to 38.0 % of chemicals manufacturing in 2001. The basic and agro-chemical products sector in the EU-25 employed 658 200 employees in 2001, collectively accounting for 34.5 % of the total number of employees in chemical manufacturing.

The manufacture of basic chemicals (NACE Group 24.1) dominated this sector, contributing 96.1 % of sectoral value added and 95.6 % of the total number of persons employed in the EU-15 in 2001. The manufacture of organic basic chemicals (NACE Class 24.14) generated 44.0 % of the value added generated within

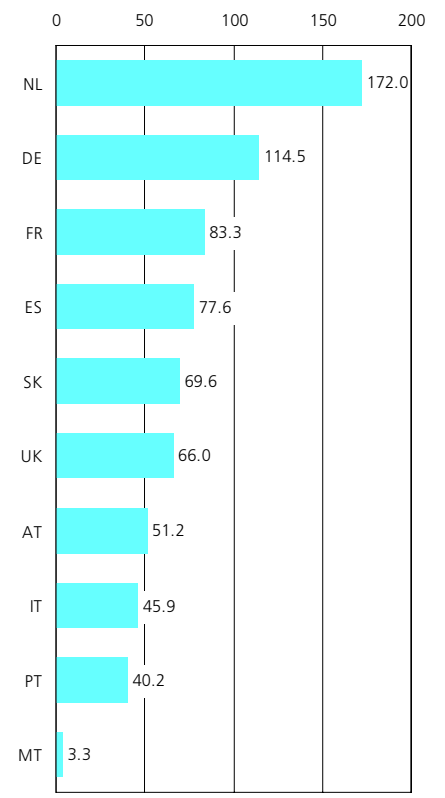
(4) Regulation (EC) No 2003/2003 of the European Parliament and of the Council of 13 October 2003 concerning fertilisers.

the whole of the EU-15's basic and agro-chemical products sector and accounted for 32.5 % of those employed. The second largest class was the manufacture of plastics in primary forms (NACE Class 24.16), registering 25.8 % of sectoral value added and 31.5 % of those employed. Among the remaining classes making up the basic and agro-chemical products sector, the manufacture of rubber in primary forms (NACE Class 24.17) was the smallest activity, accounting for just over 1 % of value added and those employed.

Germany was the largest producer of basic and agro-chemical products in the EU-25, accounting for 30.7 % of value added. France and the United Kingdom were the next largest producers with around 10 % of the EU-25 total. Looking just at the manufacture of basic chemicals, by far the most specialised country (5) in value added terms was Ireland (2000 data), where this subsector contributed 26.8 % of Irish manufacturing value added. Belgium and the Netherlands were the next most specialised, generating 7.8 % and 6.8 % of their manufacturing value added in this subsector respectively, in 2001. In contrast, four new Member States, namely Malta, Cyprus, Estonia and Latvia, were the least specialised, generating less than 1 % of their manufacturing value added in basic chemicals activities. Turning to the smaller subsector of agro-chemical products, France and the United Kingdom were the two largest producers in the EU-25 in value added terms, with 32.6 % and 21.2 % of the EU-25 total respectively. Germany's 14.8 % share of value added was the smallest share recorded by this country in any of the chemical manufacturing groups.

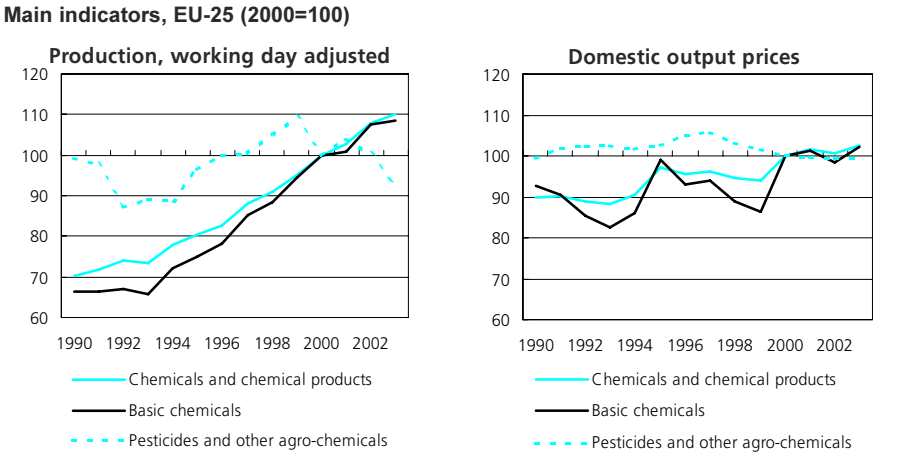
(5) Greece and Luxembourg, not available.

Figure 6.3
Manufacture of basic chemicals; pesticides and other agro-chemical products (NACE Groups 24.1 and 24.2)
Value added specialisation ratio relative to total manufacturing, 2001 (EU-25=100) (1)



(1) Belgium, the Czech Republic, Denmark, Estonia, Greece, Ireland, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Poland, Slovenia, Finland and Sweden, not available.
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 6.4
Manufacture of basic chemicals; pesticides and other agro-chemical products (NACE Groups 24.1 and 24.2)
Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/eht).

The development of the working day adjusted production indices for the manufacture of basic chemicals and for the manufacture of pesticides and other agro-chemical products was upwards between 1993 and 1999. However, average growth was almost twice as fast for the manufacture of basic chemicals, at 6.2 % per annum, compared with a growth rate of 3.4 % per annum for the manufacture of pesticides and other agro-chemical products. After 1999, the index for the manufacture of pesticides and other agro-chemical products fell in 2000 (-8.4 %), recovered strongly, but briefly, in 2001 (+4.0 %), and then fell again in both 2002 (-3.7 %) and 2003 (-7.8 %) to reach a level below that registered in 1995. In contrast, the upward trend in the manufacture of basic chemicals was uninterrupted, despite more modest growth in 2001 and 2003, and averaged 3.5 % per annum between 1999 and 2003.

Between 1995 and 1999 domestic output prices for basic chemicals fell by an average of 3.4 % per annum. In 2000 a strong increase of 16.0 % was recorded, which was followed by three years of alternating increases and decreases, which resulted in average price increase of 0.7 % per annum. Output prices for pesticides and other agro-chemical products followed a much smoother progression, increasing for three consecutive years, from a low in 1994, at a rate of 1.3 % per annum. Between 1997 and 2000 prices fell, averaging -1.8 % per annum, a trend which continued (albeit it at a slower pace) between 2000 and 2003, when price reductions were, on average, equal to -0.2 % per annum.

LABOUR AND PRODUCTIVITY

In 2001 apparent labour productivity was EUR 103 700 per person employed in the basic and agro-chemical products sector of the EU-15, higher than the average for chemicals manufacturing (EUR 91 400). In the EU-25, personnel costs averaged EUR 48 700 per employee in the basic and agro-chemical product sector, approximately 10 % lower than the EU-15 average of EUR 54 800.

The wage adjusted labour productivity ratio for the EU-15's basic and agro-chemical products sector was 189.2 %, which could be broken down into its constituent parts, with the adjusted productivity ratio for the manufacture of basic chemicals at 191.8 % and that for the manufacture of pesticides and other agro-chemical products at 161.0 %.

EXTERNAL TRADE

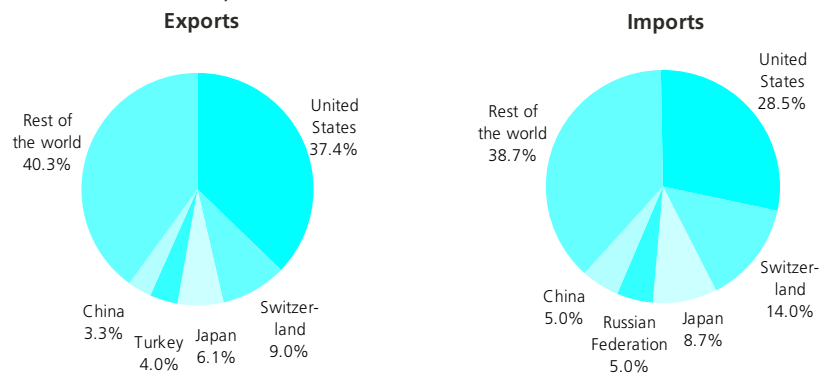
The EU-25 exported EUR 48.8 billion worth of basic and agro-chemical products (CPA Groups 24.1 and 24.2) in 2002, while imports were valued at EUR 34.3 billion, resulting in an external trade surplus, with non-Community countries, that was valued at EUR 14.5 billion. Other basic organic chemicals (CPA Class 24.14) generated the largest surplus among the basic and agro-chemical products classes, valued at EUR 10.6 billion. The EU-25 also recorded a trade surplus with respect to plastics in primary forms (CPA Class 24.16), pesticides and other agro-chemical products (CPA Group 24.2), and dyes and pigments (CPA Class 24.12). The largest deficit amounted to EUR 1.2 billion, which was recorded for fertilisers and nitrogen compounds (CPA Class 24.15), while smaller deficits were also registered for other basic inorganic chemicals (CPA Class 24.13), synthetic rubber in primary forms (CPA Class 24.17), and industrial gases (CPA Class 24.11).

The main destinations for the EU-25's exports of basic and agro-chemical products were the United States (37.4 % of EU-25 exports) in 2002, Switzerland (9.0 %) and Japan (6.1 %). These three countries were also important sources of EU-25 imports of basic and agro-chemicals products.

Ireland (EUR 12.1 billion), Belgium (EUR 7.5 billion), the Netherlands (EUR 5.4 billion) and Germany (EUR 3.0 billion) recorded the largest trade surpluses (intra- and extra-EU combined) for basic and agro-chemical products, while Italy (EUR -8.7 billion) and Spain (EUR -3.7 billion) reported the highest deficits. Ireland and Belgium recorded the highest export specialisation ratios for basic and agro-chemical products ⁽⁶⁾, as exports of these goods accounted for 16.7 % and 12.5 % respectively of their total manufactured exports in 2002; in both cases this was due to a relatively important share of basic chemical exports. France was the most specialised country in terms of exporting agro-chemical products.

⁽⁶⁾ Austria, not available.

Figure 6.5
Basic chemicals; pesticides and other agro-chemical products
(CPA Groups 24.1 and 24.2)
Share in extra-EU trade, 2002



Source: Eurostat, Comext.

6.2: PHARMACEUTICALS

The manufacture of pharmaceuticals is broken down into two classes: the manufacture of basic pharmaceutical products (NACE Class 24.41) and pharmaceutical preparations (NACE Class 24.42) such as medicaments, vaccines, homeopathic preparations, chemical and hormonal contraceptives, dental fillings, medical impregnated bandages and dressings. This subsector covers prescription and non-prescription (self-medication) pharmaceuticals, including homeopathic preparations, whether they are for human or veterinary use.

The pharmaceuticals sector faces more changes than most in relation to its regulatory framework. The year 2003 was no exception, with a large amount of new legislation being introduced, in particular focusing on consumer issues. June 2003 saw two new Commission regulations (7) adopted concerning changes to the authorisation of medicinal products for human and veterinary use; both came into force on 1 October 2003. Also in June 2003 two Commissions directives (8) were introduced, which also touch the field of authorisation of medicinal products.

(7) Regulation (EC) No 1084/2003 of the Commission of 3 June 2003 concerning the examination of variations to the terms of a marketing authorisation for medicinal products for human use and veterinary medicinal products granted by a competent authority of a Member State and Regulation (EC) No 1085/2003 of the Commission of 3 June 2003 concerning the examination of variations to the terms of a marketing authorisation for medicinal products for human use and veterinary medicinal products falling within the scope of Council Regulation (EEC) No 2309/93 of 22 July 1993 concerning laying down Community procedures for the authorization and supervision of medicinal products for human and veterinary use and establishing a European Agency for the Evaluation of Medicinal Products.

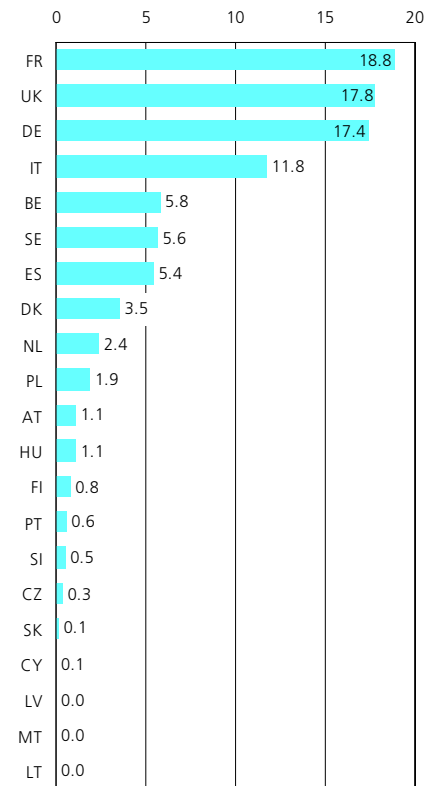
(8) Directive (EC) No 2003/63 of 25 June 2003 amending Directive 2001/83/EC of the European Parliament and of the Council on the Community code relating to medicinal products for human use and Directive (EC) No 2003/94 of 8 October 2003 concerning laying down the principles and guidelines of good manufacturing practice in respect of medicinal products for human use and investigational medicinal products for human use.

The Commission adopted 14 recommendations from the 2002 report of the High-Level Group on Innovation and Provision of Medicines – G10 Medicines (9). The recommendations included access to innovative medicines; speeding up negotiations on reimbursement and pricing; encouraging greater competition for medicines that are neither purchased nor reimbursed by the State; and developing competitive generic and non-prescription markets. The Commission also sought to strengthen and encourage the EU's science base, including the creation of a European Centre for Disease Prevention and Control. As regards market access, the recommendations also covered enlargement, and intellectual property protection. A final recommendation was to establish a benchmarking exercise to monitor the competitiveness of the pharmaceuticals industry.

Another milestone in the legislative area is the planned reform of the EU's pharmaceuticals legislation, which reached its second reading within the European Parliament in December 2003. Such reforms have been designed to invigorate the pharmaceuticals market in the EU, improve its competitiveness and help it to meet the challenges of globalisation. The core objective is stronger health protection for European citizens, which is encouraged through the introduction of clearer rules for the authorisation of new pharmaceuticals, hopefully speeding up the time it takes for new and innovative pharmaceutical products to reach the market.

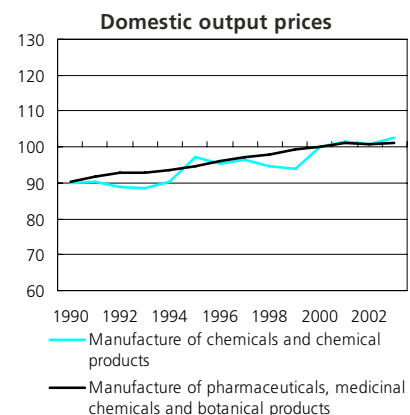
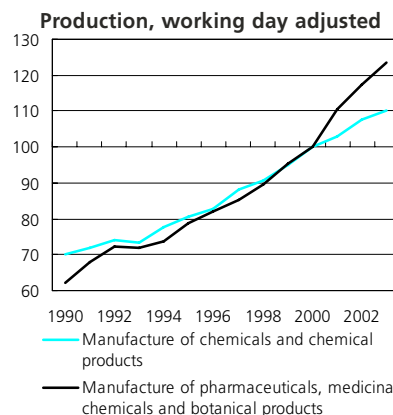
(9) G10 Medicines is an initiative of the European Commission to create a high-level group of European decision-makers on medicines, composed of national government, industry, patient and mutuals representatives.

Figure 6.6
Manufacture of pharmaceuticals, medicinal chemicals and botanical products (NACE Group 24.4)
Share of EU-25 value added, 2001 (%) (1)



(1) Estonia, Greece, Ireland and Luxembourg, not available.
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 6.7
Manufacture of pharmaceuticals, medicinal chemicals and botanical products (NACE Group 24.4)
Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

STRUCTURAL PROFILE

Pharmaceutical manufacturing generated added value of EUR 55.1 billion in 2001 in the EU-25, which was equal to 34.0 % of the chemicals total. As such, this was the second largest group within chemical manufacturing, slightly smaller than the manufacture of basic chemicals. Some 552 500 persons were employed in the pharmaceuticals sector in the EU-25 ⁽¹⁰⁾ in 2001, of which 493 800 were working in the EU-15; this latter figure represented 29.1 % of the EU-15's chemical manufacturing workforce.

About 90 % of the value added and employment of the pharmaceuticals sector in the EU-15 was accounted for by the manufacture of pharmaceutical preparations (NACE Class 24.42), while the manufacture of basic pharmaceuticals (NACE Class 24.41) accounted for the remaining 10 %.

France, Germany and the United Kingdom contributed the highest shares of value added in the EU-25's pharmaceutical manufacturing sector in 2001, with between 19 and 17 %. In terms of value added specialisation in relation to manufacturing, Denmark, Sweden and Belgium were the most highly specialised countries ⁽¹¹⁾ manufacturing pharmaceuticals, while Lithuania, Latvia and Finland recorded the lowest specialisation rates.

The working day adjusted production index for pharmaceutical manufacturing showed uninterrupted growth in the EU-25 between 1993 and 2003, averaging gains of 5.6 % per annum. This was somewhat stronger than the average for chemicals manufacturing (4.1 %). This more rapid pace of growth in pharmaceutical manufacturing was mainly caused by a 10.5 % increase in the output of pharmaceutical manufacturing in 2001, followed by higher than average growth in 2002 and 2003.

The EU-25's domestic output price index for pharmaceuticals manufacturing had relatively stable growth between 1993 and 2003, with prices rising on average by 0.9 % per annum. It should be noted that the index did, however, fall in 2002 (-0.3 %), and growth in 2003 (0.3 %) was also lower than the long-term average.

According to information provided by the Association of European Self-Medication (AESGP) in 2002 there were EUR 13.5 billion worth of self-medication pharmaceuticals sold in the EU-15, 2.5 % higher than in 2000 ⁽¹²⁾.

⁽¹⁰⁾ Estonia, not available; Slovenia, number of employees.

⁽¹¹⁾ Estonia, Greece, Ireland and Luxembourg, not available.

⁽¹²⁾ Self-medication market: sales of all self-medication products bought without a medical prescription at public price level, including value added tax (VAT).

LABOUR AND PRODUCTIVITY

Apparent labour productivity was EUR 106 400 per person employed for pharmaceuticals manufacturing in the EU-25, more than double the corresponding figure for manufacturing as a whole (EUR 51 200), and the highest value of any chemical manufacturing NACE group in 2001.

Average personnel costs in 2001 were EUR 49 100 per employee in the EU-25's pharmaceuticals sector, EUR 3 500 below the EU-15 average within the same sector.

The wage adjusted labour productivity ratio for pharmaceuticals manufacturing was 200.1 % in the EU-15 in 2001, some 17.9 percentage points above the chemical manufacturing average. All Member States ⁽¹³⁾ with the exception of Lithuania (95.9 %) registered values for this ratio that were above 100 %, with Ireland (2000 data) and Poland recording the highest values.

⁽¹³⁾ Ireland and Cyprus, 2000; Estonia, Greece, Luxembourg and Slovenia, not available.

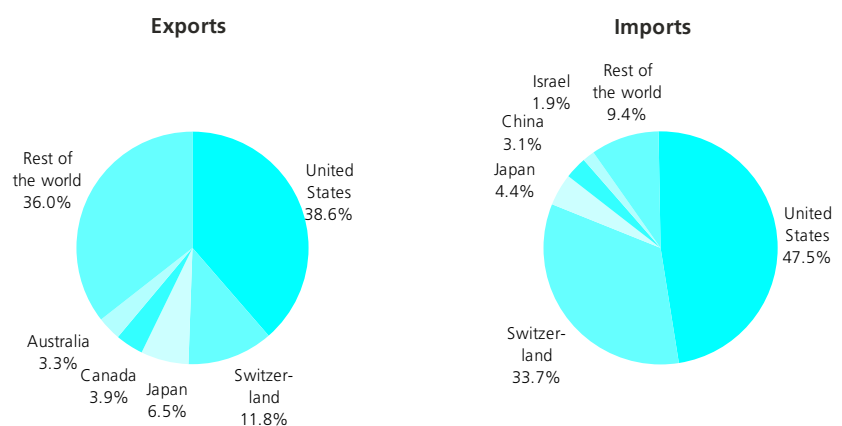
EXTERNAL TRADE

The EU-25 exported EUR 53.5 billion worth of pharmaceuticals (CPA Group 24.4) in 2002 and imported EUR 30.7 billion of these products. The EU-25 had a trade deficit for basic pharmaceutical products (CPA Class 24.41) of EUR 2.0 billion in 2002, while, in contrast, for pharmaceutical preparations (CPA Class 24.42) the EU-25 registered a trade surplus of EUR 24.7 billion.

The three most important destinations for EU-25 exports of pharmaceuticals were also the three most important sources of imports, namely the United States, Switzerland and Japan. Together these three countries accounted for 56.9 % of the EU-25's exports and 85.6 % of the EU-25's imports in 2002. The United States accounted for almost half (47.5 %) of the pharmaceuticals that were imported into the EU-25 in 2002, which was higher than for any of the other chemical and chemical products' CPA groups.

In 2002 Ireland recorded by far the highest trade surplus (intra- and extra-EU combined) for pharmaceutical products, valued at EUR 16.3 billion. In contrast, Spain and Poland recorded the highest trade deficits, valued at EUR 3.1 billion and EUR 2.1 billion respectively. Ireland and Cyprus were the most specialised in the export of pharmaceuticals, with exports of these products accounting for 21.8 % and 20.1 % respectively of all exports of manufactured goods.

Figure 6.8 Pharmaceuticals, medicinal chemicals and botanical products (CPA Group 24.4)
Share in extra-EU trade, 2002



Source: Eurostat, Comext.

6.3: MISCELLANEOUS CHEMICAL PRODUCTS

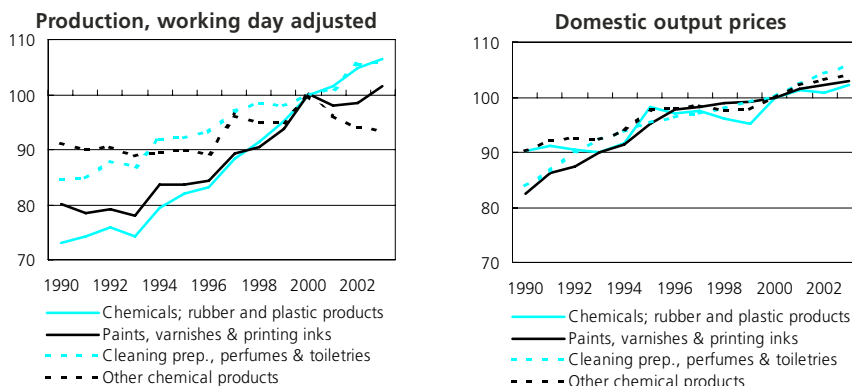
This subchapter covers three NACE groups that are presented separately. The manufacture of paints, varnishes, enamels, lacquers, solvents, thinners, varnish removers, as well as printing inks (NACE Group 24.3) is the first group, hereafter referred to as the manufacture of paints and printing inks. The manufacture of washing and cleaning products, as well as perfumes, toiletries, cosmetics and related products (NACE Group 24.5) form the next group, referred to hereafter as the manufacture of soaps, detergents and toiletries. NACE Group 24.6 covers the manufacture of other chemical products. It is a residual group covering a miscellaneous selection of products, ranging from photographic materials to explosives, glues, gelatines and essential oils, as well as a number of products that are mainly used as intermediate inputs in other manufacturing processes.

Figure 6.9
Manufacture of miscellaneous chemical products (NACE Group 24.3, 24.5 and 24.6)
 Share of value added at factor cost, EU-25, 2001



Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 6.10
Manufacture of miscellaneous chemical products (NACE Group 24.3, 24.5 and 24.6)
 Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Table 6.6
Manufacture of miscellaneous chemical products (NACE Groups 24.3, 24.5 and 24.6)
 Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Manufacture of miscellaneous chemical products	68.7	157.3	43.7
Paints, varnishes & printing inks	67.0	162.9	41.2
Soap & detergents, cleaning & polishing prep., perfumes & toiletries	67.8	158.3	42.8
Manufacture of other chemical products	71.4	153.3	46.6

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 6.7
Miscellaneous chemical products (CPA Groups 24.3, 24.5 and 24.6)
 External trade, EU-25, 2002

	Exports		Imports		Trade balance (EUR million)
	Value (EUR million)	Share of total (%)	Value (EUR million)	Share of total (%)	
Paints, varnishes and similar coatings, printing ink and mastics	4 246	13.5	1 181	7.8	3 065
Glycerol; soap, detergents, cleaning prep.; perfumes & toiletries	10 637	33.7	2 929	19.3	7 709
Other chemical products	16 660	52.8	11 078	72.9	5 582

Source: Eurostat, Comext.

MANUFACTURE OF PAINTS AND PRINTING INKS

In 2001 added value of EUR 11.5 billion was generated in the EU-25's paints and printing inks sector (NACE Group 24.3), equivalent to 7.1 % of the value added for the whole of chemical manufacturing. There were 180 300 persons employed in this sector in the EU-25⁽¹⁴⁾, of which 164 800 persons were employed in the EU-15. Those employed in the paints and printing inks sector in the EU-15 represented 9.7 % of the total chemical manufacturing workforce.

As shown in Figure 6.11, some 46.7 % of sales made by European⁽¹⁵⁾ paint manufacturers in 2001 were for decorative purposes⁽¹⁶⁾.

The German paints and printing inks manufacturing sector generated EUR 4.1 billion of value added in 2001, the largest contribution among the Member States, with a 35.9 % share of EU-25 value added. Indeed, this was the highest share of EU-25 value added recorded by Germany for any of the chemical manufacturing groups in 2001. The United Kingdom had the second largest share of the EU-25's value added, with a 16.2 % share. In relation to manufacturing, Germany, the Netherlands, Slovenia and Portugal were the most specialised countries in the paints and printing inks manufacturing sector⁽¹⁷⁾, while Slovakia, the Czech Republic and Hungary had the lowest specialisation ratios.

The working day adjusted production index for paints and printing ink manufacturing in the EU-25 registered average growth of 3.6 % per annum between 1993 and 2000, which was below the manufacturing average (4.5 %), although slightly above the average for chemical manufacturing as a whole (3.3 %). From 2001 to 2003 there was a period of stability that was fairly typical for a manufacturing activity. An analysis of the domestic output price index for paints and printing ink manufacturing shows that prices in the EU-25 grew relatively quickly between 1990 and 1996 (on average by 2.9 % per annum), and more moderately (on average by 0.7 % per annum) between 1996 and 2003.

⁽¹⁴⁾ Estonia and Lithuania, 2002; Poland and Slovenia, number of employees; Poland, 1999.

⁽¹⁵⁾ EU-15 plus Norway and Switzerland.

⁽¹⁶⁾ European Council of the Paint, Printing Ink and Artists' Colours Industry (CEPE: Conseil Européen de l'Industrie des Peintures, des Encres d'Imprimerie et des Couleurs d'Art).

⁽¹⁷⁾ Poland, 1999; Ireland and Luxembourg, 2000; Estonia, Greece and Lithuania, not available.

Figure 6.11
Sales value of paint, by sector, Europe, 2001 (1)

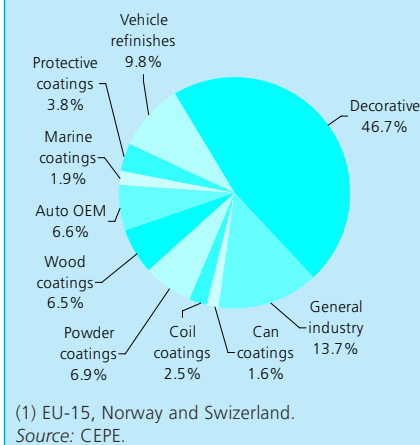
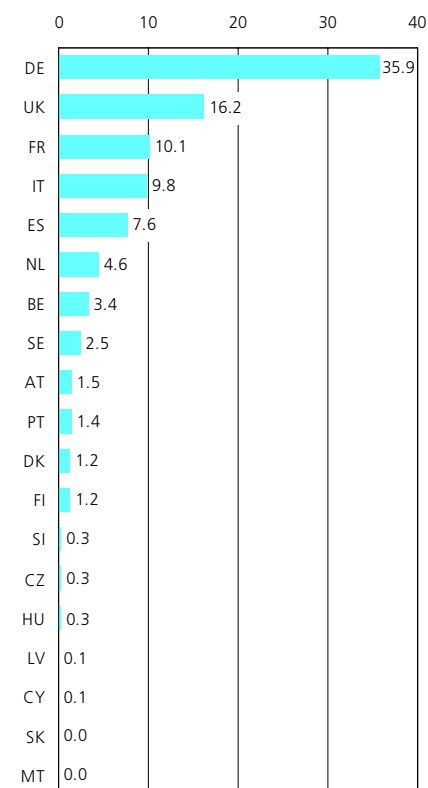


Figure 6.12
Manufacture of paints, varnishes and similar coatings, printing ink and mastics (NACE Group 24.3)
Share of EU-25 value added, 2001 (%) (1)



(1) Estonia, Greece, Ireland, Lithuania, Luxembourg and Poland, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Apparent labour productivity for paints and printing ink manufacturing was EUR 67 000 per person employed in the EU-15 in 2001, which was EUR 24 400 lower than the corresponding figure for the whole of chemical manufacturing, but nevertheless above the manufacturing average. In the EU-15, personnel costs averaged EUR 41 200 per employee within the paints and printing ink sector, compared with an average of EUR 50 100 per employee for the whole of chemicals. In 2001 the wage adjusted labour productivity ratio for the paints and printing ink sector was 162.9 % in the EU-15, lower than the chemical manufacturing average (182.2 %).

EU-25 exports of paints and printing inks (CPA Group 24.3) were valued at EUR 4.2 billion in 2002 and imports at EUR 1.2 billion, resulting in a EUR 3.1 billion trade surplus. The main destinations for EU-25 exports were Russia, the United States and Switzerland. Indeed, this was the only chemical and chemical products' CPA group in which Russia was the main export destination and the only one in which the United States was not the most important export partner. The main sources of imports were Switzerland, the United States and Japan, which together provided more than three quarters of the EU-25's imports. A majority of EU-15 Member States reported external trade surpluses for these products in 2002 (intra- and extra-EU trade), while most of the 10 new Member States recorded trade deficits, the exceptions being Slovenia and Estonia.

MANUFACTURE OF SOAPS, DETERGENTS AND TOILETRIES

Figure 6.13 provides a breakdown of the soaps, detergents and toiletries market. In 2002, the value of sales in this market was estimated to be worth EUR 29.7 billion in Europe (18), with household laundry products accounting for around 41 % of the total, while industrial and institutional products and household hard surface cleaners had shares of approximately 18 % and 11 % respectively.

The EU-25's soap, detergents and toiletries sector (NACE Group 24.5) generated EUR 17.0 billion of value added in 2001, equivalent to 10.5 % of the chemical manufacturing total. The 10 new Member States generated 9.5 % of the EU-25's value added in this sector, their highest proportion among any of the chemical manufacturing groups, and more than double their average contribution to value added within chemical manufacturing. There were 261 300 persons employed in the EU-25 (19) in 2001 in the soap, detergents and toiletries sector, of which 225 900 were working in the EU-15, equivalent to 13.3 % of the EU-15's chemical manufacturing workforce.

The manufacture of perfumes and toilet preparations (NACE Class 24.52) generated 57.6 % of sectoral value added in the EU-15 in 2001 and employed 56.6 % of the EU-15's workforce, while the remainder of this activity was accounted for by the manufacture of soap and detergents, cleaning and polishing preparations (NACE Class 24.51).

Poland, France and Cyprus were the most highly specialised in the manufacture of soap, detergents and toiletries (20) relative to manufacturing as a whole.

The working day adjusted production index of soap, detergents and toiletries manufacturing showed an overall increase of 21.4 % between 1993 and 2003, although in many of the intervening years the index was relatively stable. Domestic output prices increased steadily through to 2003, in contrast to the more erratic movement of chemical manufacturing as a whole.

(18) EU-15 plus Switzerland, Norway.
 (19) Latvia, 2000; Slovenia, number of employees.
 (20) Greece, and Luxembourg, not available; Ireland and Latvia, 2000.

Figure 6.13
Sales value of soaps, detergents and cleaning products, Europe, 2002 (1)

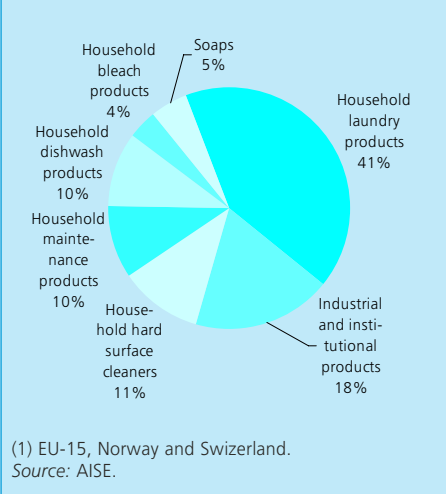
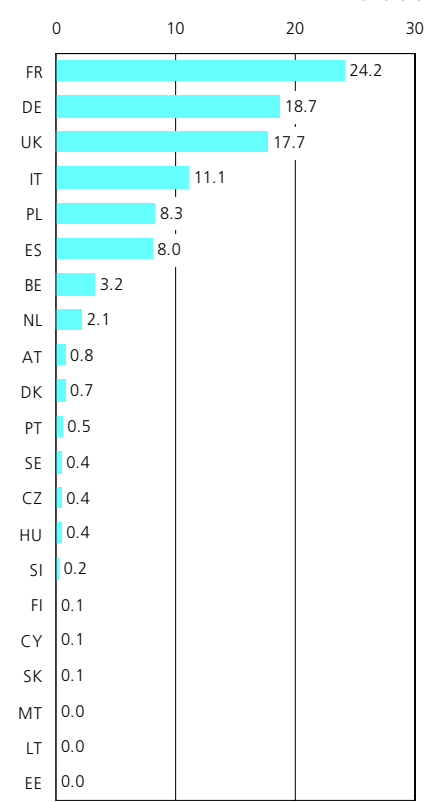


Figure 6.14
Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations (NACE Group 24.5)
Share of EU-25 value added, 2001 (%) (1)



(1) Greece, Ireland, Latvia and Luxembourg, not available.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Apparent labour productivity for the manufacture of soap, detergents and toiletries was EUR 67 800 in the EU-15 in 2001, which was below the chemical manufacturing average. Average personnel costs were EUR 42 800 per employee, again lower than the chemical manufacturing average. The resulting wage adjusted labour productivity ratio was 158.3 %.

The EU-25 ran a EUR 7.7 billion external trade surplus for soaps, detergents and toiletries (CPA Group 24.5) in 2002. The most important destinations for exports of these products were the United States, Russia and Switzerland, while the United States and Switzerland were the main sources of imports. France and Germany had the largest external trade surpluses for these products, while Greece, Portugal and Austria had the highest deficits.

MANUFACTURE OF OTHER CHEMICAL PRODUCTS

The other chemical products sector (NACE Group 24.6) generated EUR 13.9 billion of value added in 2001 in the EU-25, equivalent to 8.6 % of chemical manufacturing value added. Just 2.3 % of the total was generated in the 10 new Member States, which was their lowest contribution to value added in any chemical manufacturing group. The other chemical products sector had a workforce of 202 100 persons in the EU-25 (21), while there were 191 600 persons working in the EU-15 (which was equivalent to 11.3 % of the EU-15's chemical manufacturing workforce). The highest value added specialisation ratios relative to manufacturing were recorded in the Netherlands and Luxembourg (22), while the lowest specialisation rates were registered in Malta, Latvia and Lithuania.

(21) Estonia and Poland, not available; Latvia, 2002; Slovenia, number of employees.
 (22) Latvia, 1999; Belgium, Estonia, Greece, Ireland and Poland, not available.

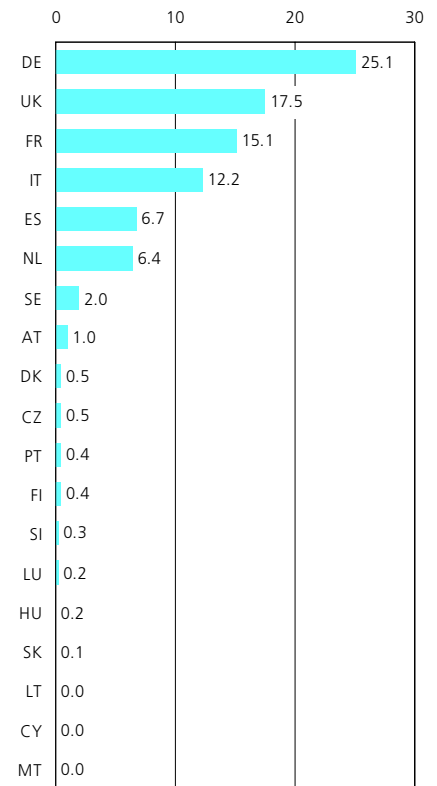
Throughout the first half of the 1990s the working day adjusted production index for the manufacture of other chemical products was stable, rarely growing or falling by more than 1 %. In 1997 growth of 7.6 % was recorded, followed by two more years of relative stability, before a further spurt of 5.2 % was registered in 2000. This trend contrasted with almost continuous growth for chemical manufacturing as a whole over the same period. The atypical development for the manufacture of other chemical products continued after 2000, as three consecutive years of falling output were registered, while there was continuous growth for chemical manufacturing as a whole.

The development of the domestic output price index for the manufacture of other chemical products in the EU-25 between 1995 and 2003 followed closely that of chemical manufacturing as a whole.

Apparent labour productivity in the other chemical products manufacturing sector was EUR 71 400 per person employed in the EU-15 in 2001. Average personnel costs per employee amounted to EUR 46 600 in the EU-15, which was EUR 2 900 higher than the corresponding EU-25 figure. The wage adjusted labour productivity ratio in 2001 was 153.3 % in the EU-15.

The EU-25 exported EUR 16.7 billion worth of other chemical products (CPA Group 24.6) and imported EUR 11.1 billion of these products in 2002. Germany and Ireland reported the highest trade surpluses (intra- and extra-EU combined), while Italy and Spain had the largest deficits.

Figure 6.15
Manufacture of other chemical products (NACE Group 24.6)
Share of EU-25 value added, 2001 (%) (1)



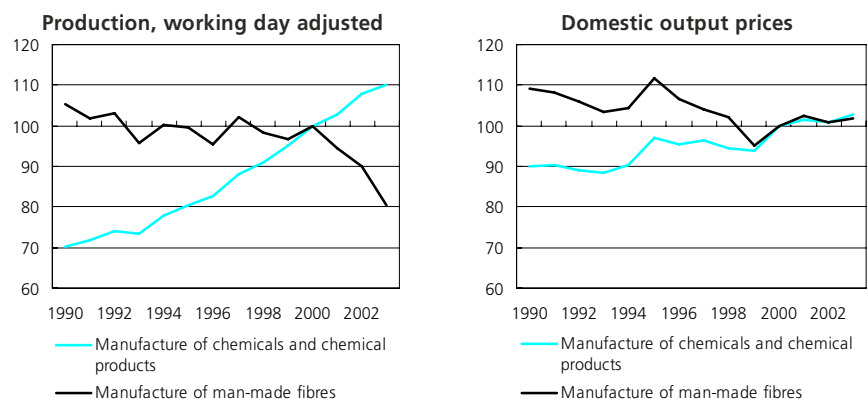
(1) Belgium, Estonia, Greece, Ireland, Latvia and Poland, not available.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

6.4: 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). Man-made fibres derived from minerals (carbon, ceramic, glass or metal) are also not covered by this activity.

Organic fibres referred to in the NACE classification as man-made fibres can be classified into two groups. The first consists of fibres which are manufactured by transformation of natural polymers, a common example being viscose. Fibres from synthetic polymers that are based on petrochemicals form the second group, of which polyester and polyamide (also known as nylon) are examples. Like most chemical products, man-made fibres are intermediate products, which are processed further before reaching consumers, for example as clothing.

Figure 6.16
Manufacture of man-made fibres (NACE Group 24.7)
Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

STRUCTURAL PROFILE

In 2001 the value added generated by the EU-25's man-made fibres manufacturing sector amounted to EUR 3.1 billion, equivalent to 1.9 % of chemical manufacturing value added. As such, this was the second smallest group within chemical manufacturing. There were 62 500 employees in this sector in the EU-25, which was equivalent to 3.3 % of all chemical manufacturing employees. More than one third of the EU-25's value added in this sector was accounted for by Germany (34.7 %), where added value reached EUR 1.1 billion. In terms of value added specialisation, Slovakia stood out as it generated 17.4 % of its chemical manufacturing value added in this subsector, more than nine times as much as the EU-25 average; this was one of the manufacturing groups in which Slovakia was most specialised.

During the 1990s the development of the working day adjusted production index for man-made fibres manufacturing in the EU-25 was characterised by alternating years of expansion and contraction between 1991 and 2000, leaving production in 2000 at a similar level to that in 1991. Since 2000 production fell, on average, by 7.0 % per annum in the three years to 2003.

Output prices for man-made fibres peaked in 1995 after which they fell by an average of 3.9 % per annum until 1999. Prices increased in 2000 (5.1 %) and 2001 (2.3 %), and then recorded more modest changes in 2002 (-1.3 %) and 2003 (0.7 %).

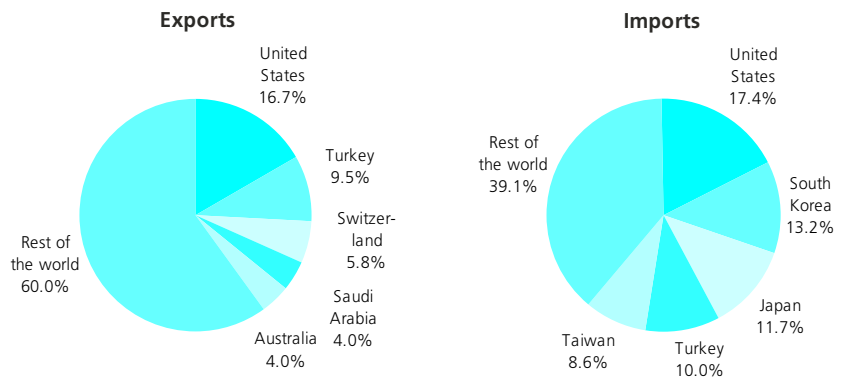
LABOUR AND PRODUCTIVITY

In the EU-15's man-made fibres manufacturing sector apparent labour productivity amounted to EUR 59 900 per person employed in 2001, while average personnel costs were EUR 43 200 per employee (EUR 35 500 in the EU-25). Both of these figures were below the averages recorded for the whole of the chemical manufacturing sector, as was the resulting wage adjusted labour productivity ratio of 138.5 %.

EXTERNAL TRADE

In 2002, man-made fibres (CPA Group 24.7) were the only group among chemicals, chemical products and man-made fibres that registered a trade deficit in the EU-25, valued at EUR -1.1 billion. Exports were EUR 945.8 million, while the EU-25 imported man-made fibres to the value of EUR 2.0 billion. The main origins of EU-25 imports of man-made fibres were the United States, South Korea and Japan. Although the United States was the largest single source of EU-25 imports of man-made fibres, its 17.4 % share was its smallest among the chemical and chemical products' CPA Groups.

Figure 6.17
Man-made fibres (CPA Group 24.7)
Share in extra-EU trade, 2002



Source: Eurostat, Comext.

6.5: RUBBER

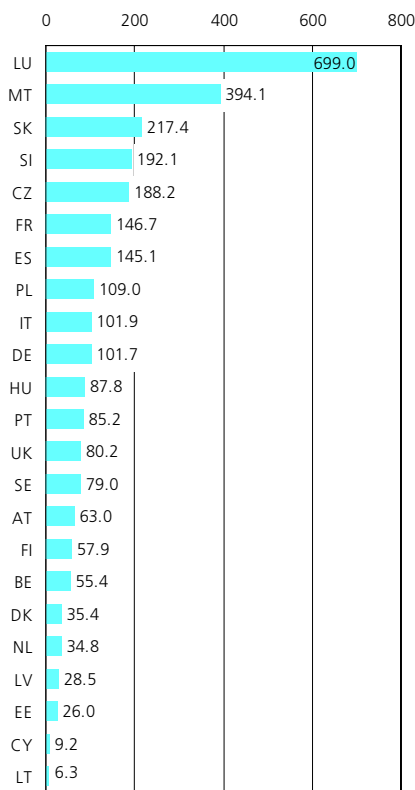
The rubber sector (NACE Group 25.1) has three distinct parts: the manufacture of rubber tyres and tubes; the retreading and rebuilding of rubber tyres; and the manufacture of other rubber products.

The most important downstream sector for the rubber industry is transport equipment manufacturing. This sector is the main source of demand for rubber tyres, but also other accessories such as wiper blades, rubber belts, weather stripping and window or door seals. The tyre market is dominated by three global manufacturers Bridgestone (Japan), Michelin (France) and Goodyear (United States)

Figure 6.18

Manufacture of rubber products (NACE Group 25.1)

Value added specialisation ratio relative to total manufacturing, 2001 (EU-25=100) (1)

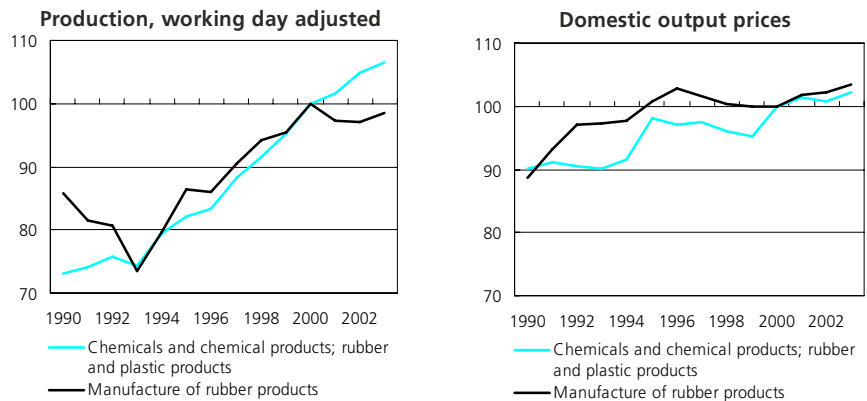


(1) Greece and Ireland, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 6.19

Manufacture of rubber products (NACE Group 25.1)
Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

STRUCTURAL PROFILE

In 2001 the rubber manufacturing sector of the EU-25 generated EUR 16.2 billion of value added, equivalent to 1.1 % of manufacturing value added. The 10 new Member States contributed 7.0 % of this total, more than their contribution to manufacturing value added, which was 5.6 %. The rubber sector employed 359 500 persons in the EU-25 (23); of which 299 700 were working in the EU-15. As such, those working in the rubber manufacturing sector contributed 1.1 % to the EU-15's manufacturing workforce.

The manufacture of other rubber products (NACE Class 25.13) accounted for over half (52.4 %) of the value added generated in the EU-15's rubber manufacturing sector in 2001. The manufacture of rubber tyres and tubes (NACE Class 25.11) made up 45.4 % of the total, while the retreading and rebuilding of rubber tyres (NACE Class 25.12) played a minor role, with a 2.2 % share of sectoral value added.

Germany contributed close to one quarter (27.3 %) of the EU-25's value added in the rubber manufacturing sector, while France, Italy and the United Kingdom collectively contributed a further 45.2 %. Luxembourg had the highest specialisation in this activity, as rubber manufacturing accounted for 7.4 % of manufacturing value added in this country, and as such this was one of the manufacturing groups in which Luxembourg was most specialised. In Malta, this sector accounted for 4.1 % of manufacturing value added, while the Czech Republic, Slovenia and Slovakia were also relatively specialised in rubber manufacturing, generating around 2 % of their manufacturing value added in this sector.

(23) Slovenia, number of employees.

A breakdown by size-class shows that in 2001 nearly three quarters (73.1 %) of the value added generated in the EU-25's rubber manufacturing sector was accounted for by large enterprises (with 250 or more persons employed); this figure was well above the manufacturing average of 54.9 %. As a result, the three other size-classes all contributed a smaller proportion of value added within the EU-25's rubber manufacturing sector, with the contribution of medium-sized enterprises (between 50 and 249 persons employed) approximately half the manufacturing average.

The working day adjusted production index for rubber manufacturing followed a similar development to that displayed for the manufacturing production index between 1993 and 2000, as output grew on average by 4.5 % per annum, compared with 3.3 % for manufacturing. While the manufacturing production index remained relatively stable after 2000, rubber manufacturing faced a period of contraction, as output fell by 2.7 % in 2001 and a further 0.2 % in 2002. In 2003 production expanded again by 1.3 %. Output prices for rubber manufacturing grew in the first half of the 1990s, peaking in 1996. Between 1996 and 2000 they fell by 0.7 % per annum on average, but increased thereafter by an average of 1.1 % per annum in the three years to 2003.

Table 6.8

Selected rubber products (CPA Group 25.1), EU-15

	Prodcom code	Latest year for production	Production value (EUR million)
New pneumatic rubber tyres for motor cars (including for racing cars)	25.11.11.00	2000	7 311.9
New pneumatic rubber tyres for motorcycles and scooters with rims > 33cm in diameter	25.11.12.35	2000	250.5
New pneumatic rubber tyres for buses or lorries	25.11.13.55 and 25.11.13.57	2000	4 013.1
New pneumatic rubber tyres for agricultural or forestry vehicles	25.11.14.04	2000	521.0
New pneumatic rubber tyres for civil engineering vehicles	25.11.14.05	2000	312.0
Rubber inner tubes (excluding for motor cars; buses and lorries)	25.11.15.75 to 25.11.15.79	2000	38.7
Camel-back strips for retreading rubber tyres	25.11.16.00	2001	77.1
Retreaded tyres of rubber of a kind used on motor cars	25.12.10.30	2001	167.0
Retreaded tyres of rubber of a kind used on buses and lorries	25.12.10.50	2001	649.3
Retreaded tyres of rubber (including of a kind used on aircraft; excluding of a kind used on motor cars; buses or lorries)	25.12.10.90	2001	87.4
Rubber compounded with carbon black or silica; unvulcanized	25.13.20.13	2001	748.6
Compounded rubber unvulcanised (excluding with carbon black or silica and rubber solutions, dispersions)	25.13.20.19	2001	1 046.3
Forms and articles of unvulcanised rubber (including rods; tubes; profile shapes; discs and rings) (excluding camel-back; strips for retreading tyres)	25.13.20.30	2001	463.0
Plates, sheets and strip of vulcanized rubber or solid vulcanised rubber for floor covering	25.13.20.70 and 25.13.20.85	2001 (1)	850.4
Extruded solid rubber rods and profiles	25.13.20.87	1999	1 017.2
Rubber hose reinforced or combined with other materials and rubber hose assemblies	25.13.30.55 to 25.13.30.70	2001 (1)	1 754.0
Rubber conveyor belts	25.13.40.50	2000	505.9
Vulcanised rubber gloves	25.13.60.30 to 25.13.60.59	2000 (2)	89.7
Moulded rubber articles for tractors and motor vehicles	25.13.73.47	1999	1 563.3
Rubber-to-metal bonded articles for other uses than for tractors and motor vehicles	25.13.73.49	2000	902.8
Articles of vulcanized solid rubber (including rubber bands, tobacco-pouches, characters for date stamps and the like, stoppers and rings for bottles; excluding hard rubber)	25.13.73.60	2001	1 776.3

(1) 2000 for one heading in the aggregate.

(2) 1999 for one heading in the aggregate.

Source: Eurostat, European production and market statistics (Comext).

LABOUR AND PRODUCTIVITY

Apparent labour productivity in the EU-15's rubber manufacturing sector was EUR 50 300 per person employed in 2001, which was slightly lower than the corresponding figure for the whole of manufacturing (EUR 51 200). Average personnel costs were EUR 37 900 per employee, some EUR 2 200 higher than the manufacturing average. Consequently, the wage adjusted labour productivity ratio for rubber manufacturing in the EU-15 (132.6 %) was 10.9 percentage points lower than the manufacturing average.

Table 6.9

Manufacture of rubber products (NACE Group 25.1)

Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Manufacture of rubber products	50.3	132.6	37.9
Manufacture of rubber tyres and tubes	61.3	136.8	44.8
Retreading and rebuilding of rubber tyres	33.7	124.2	27.2
Manufacture of other rubber products	44.3	130.1	34.0

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 6.10

Rubber products (CPA Group 25.1)
External trade, EU-25, 2002

	Exports		Imports		Trade balance (EUR million)
	Value (EUR million)	Share of total (%)	Value (EUR million)	Share of total (%)	
Rubber products	5 540	100.0	5 410	100.0	131
New and used rubber tyres and tubes	2 566	46.3	2 769	51.2	-203
Retreaded pneumatic tyres, of rubber	37	0.7	2	0.0	35
Other rubber products	2 938	53.0	2 639	48.8	300

Source: Eurostat, Comext.

EXTERNAL TRADE

The EU-25's exports of rubber (CPA Group 25.1) were valued at EUR 5.5 billion in 2002, which was EUR 130.9 million higher than the corresponding level of imports of these products. Among the three classes making up rubber products, new and used rubber tyres and tubes (CPA Class 25.11) was the only class to register a trade deficit (EUR -203.1 million).

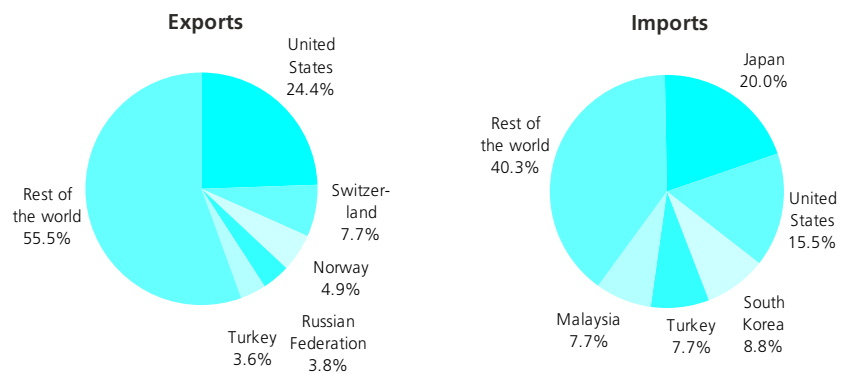
Almost one quarter of the EU-25's exports in 2002 were destined for the United States (24.4%), while the second largest export market was Switzerland (7.7%). Japan provided 20.0% of the rubber imports made by the EU-25 in 2002, making this the only chemicals, plastics and rubber products CPA group for which Japan was the most important source of imports.

France (EUR 1.1 billion) and Germany (EUR 884.3 million) generated the highest external trade surplus (intra- and extra-EU trade combined) for rubber in 2002, while the United Kingdom (EUR 843.3 million), Austria (EUR 524.2 million) and Belgium (EUR 427.4 million) recorded the largest deficits.

Slovenia had the largest proportion of rubber exports in its total exports of manufactured goods in 2002, amounting to 2.8%. Luxembourg (2.7%), the Czech Republic and Slovakia (both 2.6%) also reported high proportions. The new Member States tended to have a higher proportion of rubber exports, in relation to total exports of manufactured goods, than the EU-15 Member States.

In terms of import specialisation, 6 of the 10 Member States with the highest share of rubber products in their total imports of manufactured goods were new Member States, with the Czech Republic and Slovakia recording the highest shares, 1.6%.

Figure 6.20

Rubber products (CPA Group 25.1)
Share in extra-EU trade, 2002


Source: Eurostat, Comext.

6.6: PLASTICS

This subchapter covers the manufacture of plastic products (NACE Group 25.2) which is subdivided in the NACE classification into four manufacturing classes: 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). The manufacture of plastic games, toys, footwear, furniture and linoleum are not considered as part of the plastics manufacturing sector.

As seen in Figure 6.21, packaging accounted for 38.1 % of the total consumption of plastics in 2002, equivalent to 18.1 million tonnes. As packaging is an important use of plastics, the amendment to the packaging directive (24) adopted at the beginning of 2004 is an important development within this sector (see Subchapter 13.3 on recycling and waste treatment for more details).

STRUCTURAL PROFILE

The EU-25's plastics manufacturing sector generated EUR 55.3 billion of value added in 2001, equivalent to 3.6 % of manufacturing value added. There were 1.3 million persons employed in this activity in the EU-25 (25), of which 1.1 million were working in the EU-15. Employment in the plastics manufacturing sector constituted 3.9 % of the EU-15's manufacturing workforce.

The manufacture of other plastic products (NACE Class 25.24) was the largest plastics manufacturing subsector, with a 42.3 % share of sectoral value added in the EU-15. The manufacture of plastic plates, sheets, tubes and profiles (NACE Class 25.21) accounted for 24.4 % of value added, while the manufacture of plastic packing goods (NACE Class 25.22) had a 18.4 % share. The smallest activity was the manufacture of builders' ware of plastic (NACE Class 25.23), which accounted for 14.8 % of sectoral value added in the EU-15. A similar distribution among the activities could be also observed in terms of employment.

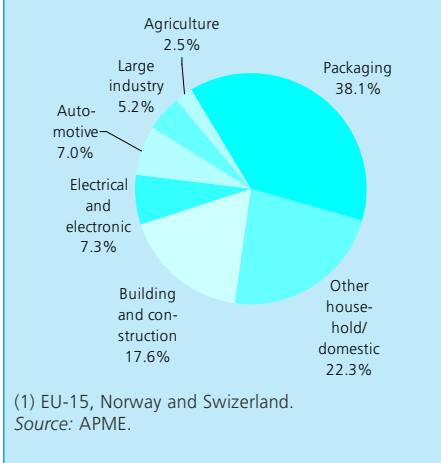
Germany generated the highest value added in plastics manufacturing among the Member States, accounting for 26.9 % of the EU-25 total in 2001. The United Kingdom (18.2 %), France (13.4 %) and Italy (13.3 %) followed in the ranking. The highest specialisation rate relative to manufacturing was registered in Luxembourg (26), where plastics manufacturing accounted for 8.2 % of manufacturing value

(24) Directive (EC) No 94/62 of the European Parliament and of the Council concerning packaging and packaging waste.

(25) Slovenia, number of employees.

(26) Greece, not available.

Figure 6.21 Plastic consumption by sector, Europe, 2002 (1)

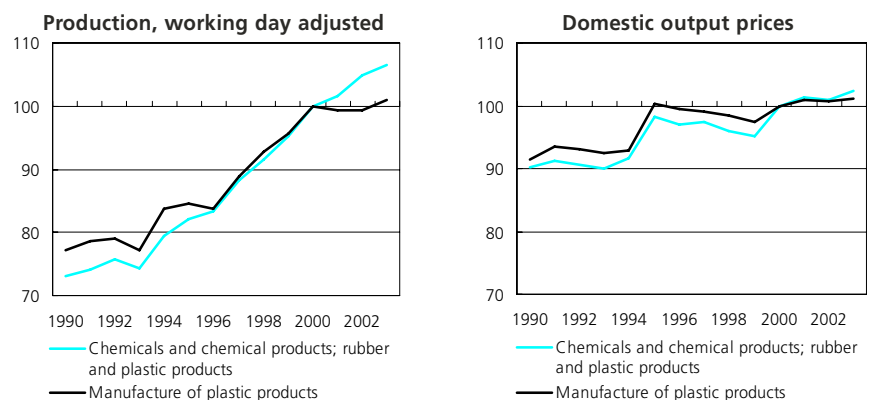


added, while Poland was also relatively highly specialised, generating 4.5 % of its manufacturing value added in this sector. In contrast, Ireland (2000) and Latvia were relatively unspecialised in plastics manufacturing.

The development of the working day production index for plastics manufacturing in the EU-25 was similar to that observed for the whole of manufacturing during the 10-year period to 2003. The production index for plastics manufacturing grew, on average, by 3.8 % per annum between 1993 and 2000, while there was little change in output in both 2001 and 2002 (+/-1 %). In 2003 the output of plastics manufacturing grew by 1.6 %.

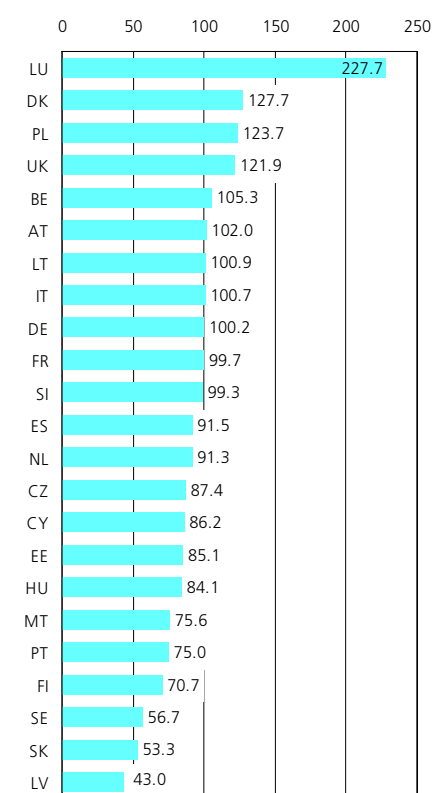
After peaking in 1995, domestic output prices for plastics in the EU-25 decreased until 1999 by an average rate of 0.7 % per annum. In the following period until 2003, price increases averaged 0.9 % per annum, with the main increase occurring in 2000 (2.6 %).

Figure 6.23 Manufacture of plastic products (NACE Group 25.2) Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Figure 6.22 Manufacture of plastic products (NACE Group 25.2) Value added specialisation ratio relative to total manufacturing, 2001 (EU-25=100) (1)



(1) Greece and Ireland, not available. Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 6.11

Selected plastic products (CPA Group 25.2), EU-15

	Prodcom code	Latest year for production	Production value (EUR million)
Monofilament with any cross-sectional dimension > 1 mm; rods, sticks and profile shapes of plastics	25.21.10.50 to 25.21.10.90	2001 (1)	3 619.7
Rigid tubes, pipes and hoses of plastics excluding of polymers of ethylen	25.21.21.55 to 25.21.21.70	2001	3 278.8
Other plastic tubes, pipes & hoses	25.21.22.20 to 25.21.22.50	2001 (2)	2 100.0
Other plates etc., of polymers of ethylene, not reinforced, thickness <= 0.125 mm	25.21.30.10	2000	4 458.7
Other plates etc., of biaxially orientated polymers of propylene, thickness <= 0.10 mm	25.21.30.21	2001	1 245.0
Other plates etc., of polymers of styrene, not reinforced, etc.	25.21.30.30	2001	1 002.0
Other plates etc., of polymers of vinyl chloride, rigid	25.21.30.41 to 25.21.30.44	2001 (1)	1 220.3
Other plates etc., of polymers of vinyl chloride, flexible (excluding flexible, non-plastified, thickness > 1mm)	25.21.30.47 to 25.21.30.49	2001 (1)	1 300.1
Cellular plates; sheets; film; foil and strip of plastics and polymers (excluding of polyurethanes and regenerated cellulose)	25.21.41.20, 25.21.41.30 and 25.21.41.80	2001 (1)	2 952.2
Non-cellular plates, sheets, film, foil, strip of condensation/ rearrangement polymerization products, polyesters, reinforced, laminated, supported/similarly combined with other materials), of phenolic resins; amino-resins (high pressure laminates, decorative surface one/both sides)	25.21.42.30 to 25.21.42.75	2001 (1)	1 633.1
Other plates etc., non cellular of plastics other than made by polymerization	25.21.42.80	2001	2 630.4
Sacks and bags of polymers of ethylene (including cones)	25.22.11.00	1999	5 023.7
Plastic sacks and bags (including cones) (excluding of polymers of ethylene)	25.22.12.00	2000	1 489.3
Plastic boxes; cases; crates and similar articles for the conveyance or packing of goods	25.22.13.00	1999	3 842.6
Plastic carboys; bottles; flasks and similar articles for the conveyance or packing of goods; of a capacity <= 2 litres	25.22.14.50	2001	4 545.1
Plastic spools, cops, bobbins and similar supports	25.22.15.21 and 25.22.15.23	2001 (1)	1 181.7
Plastic stoppers; lids; caps and other closures (excluding for bottles)	25.22.15.27	2001	2 431.2
Floor coverings in rolls or in tiles; and wall or ceiling coverings consisting of a support impregnated; coated or covered with polyvinyl chloride	25.23.11.55	2000	1 109.8
Plastic baths; shower-baths and wash-basins; plastic lavatory seats and covers; plastic bidets; lavatory pans; flushing cisterns and similar sanitary ware	25.23.12.50 to 25.23.12.90	2001 (2)	2 084.2
Other articles of plastic for construction including rawl plugs and other wall plugs; trunking, ducting and cable trays for electrical circuits	25.23.15.90	1999	1 348.7
Insulating fittings of plastic; for electrical machines; appliances or equipment (excluding electrical insulators)	25.24.26.00	2001	552.3
Plastic fittings for furniture; coachwork or the like	25.24.28.20	2001	675.8
Other articles made from sheet	25.24.28.50	2000	1 140.9
Other articles of plastics or other materials	25.24.28.70	2001	9 504.8

(1) 2000 for one or more headings in the aggregate.

(2) 1999 for one heading in the aggregate.

Source: Eurostat, European production and market statistics (Comext).

Table 6.12

Manufacture of plastic products (NACE Group 25.2)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Manufacture of plastic products	46.7	144.4	32.3
Manufacture of plastic plates, sheets, tubes and profiles	54.0	146.4	36.9
Manufacture of plastic packing goods	48.9	154.3	31.7
Manufacture of builders' ware of plastic	44.4	145.9	30.5
Manufacture of other plastic products	43.3	139.2	31.1

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

LABOUR AND PRODUCTIVITY

The EU-15's plastics manufacturing sector recorded apparent labour productivity of EUR 46 700 per person employed in 2001, compared to EUR 51 200 for manufacturing in general. Average personnel costs in this sector were EUR 32 300 per employee, some EUR 3 400 less than the corresponding average for manufacturing. In Estonia, Portugal, Luxembourg and Cyprus (2000), average personnel costs were higher in plastics manufacturing than national manufacturing averages⁽²⁷⁾. The wage adjusted labour productivity ratio for plastics manufacturing in the EU-15 was 144.4 % in 2001, which was close to the corresponding figure for manufacturing (143.5 %).

EXTERNAL TRADE

EU-25 exports of plastic products (CPA Group 25.2) were valued at EUR 13.3 billion in 2002, while imports of the same products were valued at EUR 10.3 billion, resulting in an external trade surplus of EUR 3.0 billion.

⁽²⁷⁾ Greece, not available.

The EU-25's external trade in plastic products was concentrated in two CPA classes. Plastic plates, sheets, tubes and profiles (CPA Class 25.21) accounted for 41.5 % of the EU-25's exports of plastic products and 28.0 % of its imports in 2002. Other plastic products (CPA Class 25.24) accounted for 35.2 % of the EU-25's exports and 47.3 % of its imports. The EU-25 recorded a trade surplus for plastic plates, sheets, tubes and profiles (EUR 2.6 billion) and for builders' ware of plastics (EUR 651.0 million), and relatively small deficits (of less than EUR 200 million) for the other two CPA classes.

The United States was the largest destination for EU-25 exports of plastic products, with a 17.9 % share in 2002. Exports of plastic products were also concentrated in Switzerland (13.0 %) and Russia (7.0 %). China was the most important country of origin for plastics imports, accounting for just over one quarter of the EU-25's total imports (25.9 %); the United States (22.9 %) and Switzerland (16.7 %) followed. This was the only chemicals, rubber and plastics CPA group in which China was the principal source of imports.

Germany was the largest exporter (intra- and extra-EU trade combined) of plastic products with exports valued at EUR 15.8 billion in 2002. With around half the German figure, Italy (EUR 7.3 billion) was the second largest exporter of these products, followed by France and Belgium. In terms of imports, Germany (EUR 8.5 billion), France (EUR 7.1 billion) and the United Kingdom (EUR 6.2 billion) were the top three importers among the Member States. Germany, Italy and Belgium reported the highest external trade surpluses, while the United Kingdom, France and Poland registered the highest external trade deficits.

In 2002, Luxembourg had the highest proportion of plastic products in its exports of manufactured goods (intra- and extra-EU trade combined), some 6.2 %, the fifth highest proportion recorded by any CPA group in Luxembourg. Denmark, Greece and Cyprus were also relatively specialised in the export of plastic products, as plastic products accounted for a 3.1 % share of all manufactured exports in each of these countries.

The 10 new Member States were relatively specialised in importing plastic products. Eight of the 10 new Member States occupied the first eight places in the ranking of Member States according to the importance of plastic product imports in total manufactured imports. The highest proportions were recorded in the Czech Republic, Slovakia and Poland, where plastic products accounted for 4.4 %, 4.2 % and 4.0 % of total manufactured imports.

Table 6.13

Plastic products (CPA Group 25.2)
External trade, EU-25, 2002

	Exports		Imports		Trade balance (EUR million)
	Value (EUR million)	Share of total (%)	Value (EUR million)	Share of total (%)	
Plastic products	13 335	100.0	10 328	100.0	3 007
Plastic plates, sheets, tubes and profiles	5 532	41.5	2 896	28.0	2 636
Packaging products of plastics	1 856	13.9	2 046	19.8	-190
Builders' ware of plastics	1 148	8.6	497	4.8	651
Other plastic products	4 693	35.2	4 889	47.3	-196

Source: Eurostat, Comext.

Table 6.14

Manufacture of chemicals and chemical products (NACE Division 24)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	28 431	3 524	7 412	123 026	185	1 909	34 559	100 499	24 774	62 824	164	127	299	538
Value added at factor cost (EUR million)	9 051	903	2 861	40 389	45	636	9 704	24 754	12 325	15 296	60	61	54	104
Purchases of goods and services (EUR million)	23 376	2 795	0	100 347	167	:	29 314	86 756	13 660	53 046	121	93	248	541
Gross investment in tangible goods (EUR million)	1 873	324	457	6 763	11	:	2 230	3 830	891	2 960	9	16	21	:
Number of persons employed (thousands)	70	43	27	489	3	14	140	292	23	208	2	4	6	2
App. labour productivity (EUR thous./pers. emp.)	128.6	20.9	105.9	82.6	14.6	44.3	69.4	84.9	532.9	73.6	36.3	13.8	8.8	66.8
Average personnel costs (EUR thous./employee) (2)	62.5	8.5	50.2	56.1	6.4	:	39.0	51.6	39.2	43.6	17.0	4.8	6.3	44.6
Wage adjusted labour productivity (%) (2)	205.8	246.6	210.9	147.2	227.6	:	178.1	164.6	1 360.6	168.9	221.4	290.3	139.1	149.8
Gross operating rate (%) (3)	15.1	15.0	21.3	9.2	12.0	:	11.5	8.7	46.1	9.7	17.6	30.1	4.9	5.4
	HU	MT	NL	AT	PL (1)	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	3 169	73	34 275	6 278	7 619	3 505	1 506	1 201	5 063	12 485	66 963	843	1 676	:
Value added at factor cost (EUR million)	1 080	25	7 079	1 955	2 492	954	448	249	1 649	5 000	23 497	210	453	:
Purchases of goods and services (EUR million)	2 406	48	31 571	5 297	6 123	2 898	1 034	1 017	3 867	8 506	52 734	693	1 432	:
Gross investment in tangible goods (EUR million)	356	3	1 185	395	678	246	128	74	369	796	4 285	60	278	:
Number of persons employed (thousands)	34	1	72	26	:	22	:	20	18	44	251	33	71	:
App. labour productivity (EUR thous./pers. emp.)	31.5	28.8	98.4	76.1	:	42.4	:	12.6	89.2	114.2	93.6	6.4	6.4	:
Average personnel costs (EUR thous./employee)	12.6	14.5	49.8	49.1	10.0	24.5	23.1	6.2	43.1	50.6	50.9	3.1	3.5	:
Wage adjusted labour productivity (%)	250.1	198.6	197.6	155.2	:	173.2	:	203.0	206.8	225.8	184.0	210.4	181.0	:
Gross operating rate (%)	19.1	19.1	9.3	9.5	17.4	10.8	8.8	10.1	15.7	22.6	14.2	13.1	12.3	:

(1) 2000.

(2) Ireland and Cyprus, 2000.

(3) Ireland, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 6.15

Manufacture of rubber products (NACE Group 25.1)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	888	1 222	217	10 575	8	:	3 943	9 702	100	6 831	2	4	3	338
Value added at factor cost (EUR million) (1)	258	295	96	4 415	3	:	1 590	3 198	43	2 174	1	5	1	168
Purchases of goods and services (EUR million)	1 019	1 061	0	8 500	7	:	3 044	7 048	64	5 438	1	3	2	289
Gross investment in tangible goods (EUR million)	41	143	13	544	1	:	266	487	2	382	0	3	0	:
Number of persons employed (thousands)	5	19	2	78	0	:	33	71	1	47	0	0	0	2
App. labour productivity (EUR thous./pers. emp.) (1)	57.1	15.7	51.0	56.7	8.0	:	48.8	45.1	31.4	46.0	20.4	19.8	3.6	88.5
Average personnel costs (EUR thous./employee) (2)	49.2	7.9	38.6	43.5	5.1	:	34.3	36.5	26.0	31.4	12.0	3.6	2.8	56.0
Wage adjusted labour productivity (%) (2)	116.1	199.5	132.2	130.3	156.3	:	142.3	123.5	120.9	146.4	154.4	553.9	129.1	158.0
Gross operating rate (%) (1)	3.1	11.4	12.1	8.0	10.6	:	10.6	5.8	6.1	10.3	14.1	91.2	7.2	13.6
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	385	49	538	603	1 167	443	302	344	408	904	4 608	41	230	:
Value added at factor cost (EUR million)	107	31	199	238	519	161	81	90	189	347	1 934	9	48	:
Purchases of goods and services (EUR million)	314	18	382	560	652	298	292	314	240	645	3 450	35	208	:
Gross investment in tangible goods (EUR million)	27	5	31	34	115	57	47	79	60	44	218	4	86	:
Number of persons employed (thousands)	8	1	4	4	22	5	:	6	3	7	38	4	14	:
App. labour productivity (EUR thous./pers. emp.)	13.9	33.0	50.7	57.1	23.4	32.2	:	14.9	68.6	48.0	51.1	2.2	3.4	:
Average personnel costs (EUR thous./employee)	9.0	18.0	38.6	44.7	9.4	15.6	18.7	7.2	38.0	35.9	41.7	1.9	3.2	:
Wage adjusted labour productivity (%)	154.0	183.4	131.3	127.6	248.6	207.0	:	205.1	180.4	133.7	122.7	120.1	106.8	:
Gross operating rate (%)	8.9	30.0	8.9	6.5	27.8	18.5	5.6	11.6	19.8	9.1	6.9	6.5	1.8	:

(1) Ireland, 2000.

(2) Ireland and Cyprus, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 6.16

Manufacture of plastic products (NACE Group 25.2)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	5 756	1 844	2 812	40 512	122	:	11 249	24 903	1 103	25 299	68	62	269	591
Value added at factor cost (EUR million) (1)	1 678	469	1 179	14 870	30	:	3 431	7 434	440	7 349	29	25	50	188
Purchases of goods and services (EUR million)	4 796	1 542	0	28 609	104	:	8 654	18 656	687	18 923	44	47	232	477
Gross investment in tangible goods (EUR million)	293	162	226	2 193	18	:	623	1 435	93	1 385	6	8	23	:
Number of persons employed (thousands)	26	44	22	315	3	:	90	172	9	163	1	2	6	2
App. labour productivity (EUR thous./pers. emp.) (1)	65.8	10.7	53.0	47.2	10.2	:	38.2	43.2	46.5	45.1	24.5	11.5	7.9	88.5
Average personnel costs (EUR thous./employee) (2)	43.4	6.4	36.5	36.5	5.7	:	25.1	32.3	25.5	27.2	15.5	2.8	3.5	44.4
Wage adjusted labour productivity (%) (2)	151.7	167.1	145.0	129.6	176.7	:	152.3	133.9	182.7	166.1	153.6	419.7	225.3	199.4
Gross operating rate (%) (1)	9.2	10.1	13.0	8.1	10.2	:	10.3	7.2	16.8	13.1	14.3	31.6	10.1	14.7
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	1 273	40	5 172	3 561	4 123	1 605	564	353	1 979	2 398	25 279	160	477	:
Value added at factor cost (EUR million)	350	20	1 781	1 314	2 013	483	144	75	791	851	10 047	36	125	:
Purchases of goods and services (EUR million)	1 056	18	3 765	2 533	2 716	1 253	409	306	1 227	1 712	16 389	137	428	:
Gross investment in tangible goods (EUR million)	137	3	292	261	305	172	34	19	101	164	1 272	19	92	:
Number of persons employed (thousands)	25	1	33	26	91	20	:	9	15	19	195	13	25	:
App. labour productivity (EUR thous./pers. emp.)	13.8	22.3	53.3	51.4	22.2	24.2	:	8.6	53.5	44.8	51.6	2.7	5.0	:
Average personnel costs (EUR thous./employee)	7.0	12.3	34.7	35.6	7.1	14.2	12.2	5.0	34.1	35.1	32.7	1.7	2.1	:
Wage adjusted labour productivity (%)	198.3	181.5	153.5	144.5	312.5	170.5	:	172.1	156.8	127.9	157.8	162.4	243.4	:
Gross operating rate (%)	12.6	24.4	12.1	10.8	33.0	12.0	6.6	8.4	14.7	8.0	14.3	9.3	15.0	:

(1) Ireland, 2000.

(2) Ireland and Cyprus, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Non-metallic mineral products



The manufacture of non-metallic mineral products involves the processing of materials that have been mined or quarried. Non-metallic mineral products are mostly intermediate goods used in downstream activities like construction, or as packaging in the case of glass. Some non-metallic mineral products, like glassware and ceramic tableware, are fabricated directly for use by the end-consumer.

STRUCTURAL PROFILE

Non-metallic mineral product manufacturers generated a value added of EUR 69.4 billion in the EU-25 in 2001, which was 4.5 % of the manufacturing total. In terms of employment the EU-25's ⁽¹⁾ non-metallic mineral products sector had 1.6 million persons employed in 2001, 4.6 % of the manufacturing total. The contribution of the ten new Member States to EU-25 value added in this sector (8.2 %) was well above the manufacturing average (5.6 %) in 2001.

The manufacture of articles of concrete, plaster and cement (NACE Group 26.6) accounted for 27.6 % of value added in the EU-25's non-metallic mineral products sector in 2001 and was the largest group. The second largest was the manufacture of glass and glass products (NACE Group 26.1) with 24.1 % of value added, which was nearly twice as large as the third largest group, the manufacture of cement, lime and plaster (12.7 %; NACE Group 26.5). The remaining five groups making up the non-metallic mineral products sector collectively generated 35.7 % of total value added in the EU-25 in 2001.

Germany and Italy were the largest producers of non-metallic mineral products in 2001, with EUR 14.5 billion and EUR 11.3 billion of value added respectively. Together they contributed 37.2 % of total value added in the EU-25 in this sector. In relation to their own manufacturing sectors, Cyprus, Luxembourg and Portugal were all relatively specialised in the manufacture of non-metallic mineral products, whereas Ireland and Sweden were relatively unspecialised. Non-metallic mineral products was the second largest NACE subsection within manufacturing in Cyprus (as measured by value added), and the third largest Subsection in both Luxembourg and Portugal.

An analysis by size-class shows that in the EU-25's non-metallic mineral products sector micro enterprises (with less than 10 persons employed) generated 7.1 % of the sector's value added. In contrast, 48.3 % of value added was accounted for by large enterprises (with 250 or more persons employed). As such, the main difference compared to a size-class breakdown for the whole of the manufacturing sector was the lower importance of large enterprises (as these generated 54.9 % of value added in the manufacturing sector). This was compensated by a higher share of value added being generated among small and medium-sized enterprises (44.5 % of value added in the non-metallic mineral products sector in 2001, compared with 37.8 % within manufacturing as a whole).

This chapter focuses on the manufacture of other non-metallic mineral products (NACE Division 26). The eight NACE groups that are included in Division 26 are split between the glass sector (NACE Group 26.1); the manufacture of ceramic goods and clay products (NACE Groups 26.2 to 26.4); and the manufacture and working of cement, concrete, stone and other non-metallic mineral products (NACE Groups 26.5 to 26.8). Note that the quarrying of non-metallic mineral products is covered in Chapter 2.

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 stone;
- 26.8: manufacture of other non-metallic mineral products.

⁽¹⁾ Poland and Slovenia, number of employees.

Table 7.1
Manufacture of other non-metallic mineral products (NACE Division 26)
Structural profile, 2001

Rank	Largest value added (EUR billion)	Highest value added specialisation relative to manufacturing (EU-25=100)	Largest number of persons employed (thousands) (1)	Main EU-25 trading partners: origin of imports, 2002 (EUR billion)	Main EU-25 trading partners: destination of exports, 2002 (EUR billion)
1	Germany (14.5)	Cyprus (256)	Germany (281.5)	China (1.2)	United States (4.5)
2	Italy (11.3)	Luxembourg (231)	Italy (249.5)	United States (1.2)	Switzerland (1.2)
3	Spain (9.1)	Portugal (217)	Spain (195.5)	Turkey (0.9)	Russian Federation (0.7)
4	France (7.9)	Greece (201)	France (149.9)	Japan (0.6)	Japan (0.6)
5	United Kingdom (7.6)	Spain (193)	United Kingdom (134.2)	Switzerland (0.4)	United Arab Emirates (0.5)

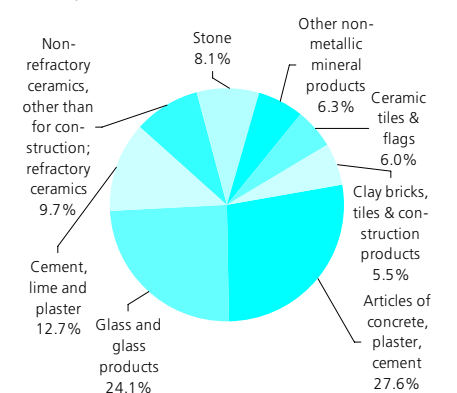
(1) Poland and Slovenia, not available.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Analysing annual short-term statistics for the working day adjusted production index of non-metallic mineral products, there was a period of growth between 1993 and 2000, averaging 2.3 % per annum; during this period there was growth each year except in 1996 when output contracted by 2.7 %. After 2000 there was a reduction in output, as production fell by 1.0 % in 2001 and a further 2.1 % in 2002. There was a modest recovery in 2003, as EU-25 output rose by 1.2 %. When breaking down the data by Member State, a similar recent evolution was reported in most of the EU-15 Member States, as production declined between 2001 and 2003 in Germany and France, while negative rates were also registered for Italy in 2002 and 2003 and in the United Kingdom in 2002.

The output price index for non-metallic mineral products has recorded uninterrupted year on year growth throughout the 1990s and through to 2003. Price increases were relatively low from 1996 to 2000, averaging 1.1 % per annum, but increased to an average of 2.0 % per annum over the next three years. In 2003 a 0.7 % increase in prices was recorded, the lowest for more than 10 years.

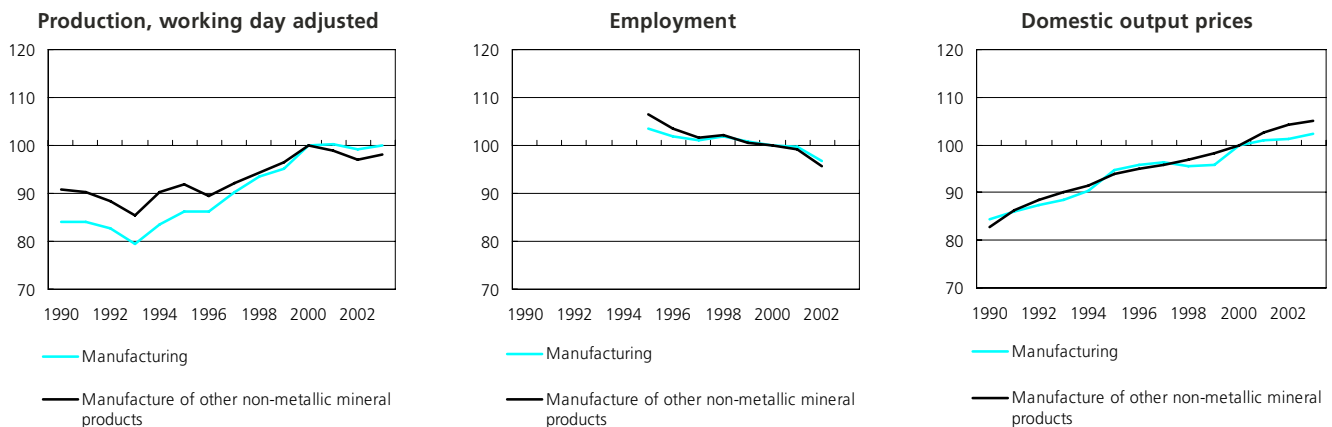
In terms of the employment index (gross data) there was a marked reduction in the level of employment between 1995 (beginning of the series) and 2002. Employment fell by 1.5 % per annum on average in the EU-25 and with the exception of 0.5 % growth in 1998, there was a fall in the employment index in each of the other years considered, the largest of which was recorded in 2002 (-3.6 %).

Figure 7.1
Manufacture of other non-metallic mineral products (NACE Division 26)
Share of value added at factor cost, EU-25, 2001



Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 7.2
Manufacture of other non-metallic mineral products (NACE Division 26)
Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/eht).

Table 7.2

Manufacture of other non-metallic mineral products (NACE Division 26)

Value added at factor cost and persons employed, by enterprise size-class, 2001 (% of total)

	Micro enterprises		Small enterprises		Medium-sized enterprises		Large enterprises	
	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed
EU-25	7.1	:	18.1	:	26.4	:	48.3	:
EU-15	7.3	13.6	18.7	24.0	26.0	26.1	48.0	36.2

Source: Eurostat, Structural Business Statistics (theme4/sbs/sizclass).

LABOUR AND PRODUCTIVITY

In 2002 the proportion of men in the non-metallic mineral products' workforce was 78.9 % in the EU-15, 7.3 percentage points higher than the manufacturing average, reflecting the physical nature of the work in this sector, in particular concerning the processing of construction materials. The non-metallic mineral products sector was characterised by a high proportion of full-time employment (94.9 %) in the EU-15 in 2002, slightly higher than the manufacturing average (92.4 %). The proportion of paid employees in total employment was 89.8 % in 2002, lower than the manufacturing average (91.9 %).

Apparent labour productivity in the EU-15's non-metallic mineral products sector was EUR 50 300 per person employed in 2001, close to the average recorded for the whole of manufacturing (EUR 51 200). In terms of wage adjusted labour productivity, the manufacture of non-metallic mineral products (153.0 %) registered a higher level of productivity than the manufacturing average (143.5 %).

Table 7.3

Manufacture of other non-metallic mineral products (NACE Division 26)

Labour force characteristics, 2002

	Share of men		Share of full-time		Share of employees	
	Value (%)	Index (manufacturing=100)	Value (%)	Index (manufacturing=100)	Value (%)	Index (manufacturing=100)
EU-25	:	:	:	:	:	:
EU-15	78.9	110.1	94.9	102.7	89.8	97.8
BE	84.4	113.5	94.4	103.7	97.4	102.8
CZ	67.4	109.4	97.4	99.8	94.3	101.9
DK	86.5	126.5	97.8	105.4	97.5	100.9
DE	76.8	107.0	91.5	102.0	93.6	98.1
EE	:	:	:	:	:	:
EL	86.1	121.4	100.0	102.0	77.9	106.2
ES	88.0	118.4	99.1	102.2	91.1	103.0
FR	79.6	112.6	95.0	100.6	93.2	98.2
IE	84.2	121.8	94.9	101.1	89.0	96.7
IT	72.8	104.6	95.0	100.4	80.0	96.7
CY	75.8	120.5	95.2	101.9	80.9	101.0
LV	85.3	138.3	100.0	105.6	94.4	98.8
LT	70.9	138.7	93.7	98.7	98.5	102.2
LU	80.3	99.0	100.0	104.7	96.0	97.7
HU	70.7	118.5	99.4	101.8	90.5	97.0
MT	79.7	113.9	93.9	97.2	69.3	74.4
NL	85.9	111.4	82.4	109.8	97.1	100.9
AT	75.5	101.5	:	:	97.7	102.7
PL	:	:	:	:	:	:
PT	70.4	125.6	98.8	101.9	90.7	104.1
SI	70.2	116.3	98.1	101.4	96.4	102.7
SK	64.2	108.4	97.0	98.3	98.9	103.0
FI	80.0	113.7	98.7	103.4	93.4	99.8
SE	79.3	107.3	89.9	98.0	93.5	99.4
UK	79.2	105.8	93.4	101.3	90.3	94.9

Source: Eurostat, Labour Force Survey.

Table 7.4
Manufacture of other non-metallic mineral products (NACE Division 26)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Manufacture of other non-metallic mineral products	50.3	153.0	32.9
Manufacture of glass and glass products	51.8	148.3	35.0
Manufacture of ceramic goods (excl. for construction)	35.4	123.0	28.8
Manufacture of ceramic tiles and flags	47.6	149.4	31.9
Manufacture of clay bricks, tiles and construction products	52.8	170.4	31.0
Manufacture of cement, lime and plaster	126.2	253.9	49.7
Manufacture of articles of concrete, plaster, cement	51.5	155.3	33.2
Cutting, shaping and finishing of stone	32.2	140.6	22.9
Manufacture of other non-metallic mineral products	51.8	129.2	40.1

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

EXTERNAL TRADE

The EU-25 exported EUR 15.7 billion of non-metallic mineral products (CPA Division 26) in 2002, while recording imports worth EUR 7.3 billion. By far the largest destination of non-metallic mineral products from the EU-25 was the United States, accounting for over one quarter (28.6 %) of the exports made in 2002. China, the United States and Turkey were the dominant suppliers of EU-25 imports, accounting for respectively 16.8 %, 16.3 % and 12.4 %.

Glass and glass products (CPA Group 26.1) made up the largest part of EU-25 exports of non-metallic mineral products in 2002 (33.2 % of the total), followed by ceramic goods other than for construction (20.1%; CPA Group 26.2) and ceramic tiles and flags (18.9 %; CPA Group 26.3). In terms of imports, glass and glass products were the most important (38.9 %) of all non-metallic mineral products, again followed by ceramic goods other than for construction (24.6 %).

When combining intra and extra-EU trade, Italy had the largest trade surplus (EUR 6.3 billion) in 2002, followed by Spain (EUR 2.4 billion) and Germany (2.2 EUR billion). In contrast, the highest deficit was registered by the United Kingdom (EUR 1.1 billion).

Table 7.5
Other non metallic mineral products (CPA Division 26)
External trade, EU-25, 2002 (EUR million)

	Exports	Imports	Trade balance	Cover ratio (%)
Other non metallic mineral products	15 696	7 295	8 400	215.1
Glass and glass products	5 218	2 837	2 382	183.9
Ceramic goods (excl. for construction)	3 149	1 797	1 352	175.2
Ceramic tiles and flags	2 964	245	2 719	1 208.9
Bricks, tiles and construction products, in baked clay	135	16	119	849.2
Cement, lime and plaster	436	639	-203	68.3
Articles of concrete, plaster and cement	542	128	414	423.7
Monumental or building stone and articles thereof	1 495	522	972	286.2
Other non-metallic mineral products	1 735	1 108	626	156.5

Source: Eurostat, Comext.

7.1: GLASS

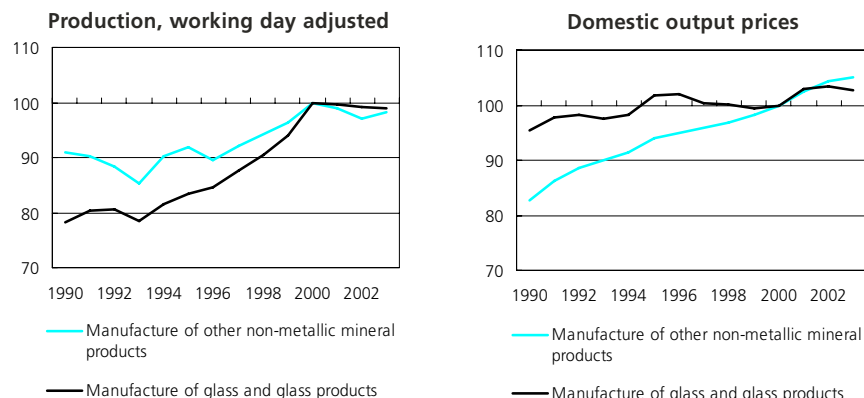
NACE Group 26.1 covers the manufacture of glass and glass products, such as flat glass, container glass, glass fibres or specialised glass.

Glass can be classified by varied aspects, for example, its chemical composition, or its kind of use. By use, five broad classes can be distinguished: container glass (like jars and bottles); flat glass (for cars and buildings); continuous filament glass fibre (mainly used for composite materials); domestic glass (glassware and decorative items); and special glass (for example, lighting glass, optical glass, glass for television screens or monitors).

STRUCTURAL PROFILE

In 2001 the EU-25's manufacture of glass and glass products sector (hereafter referred to as glass manufacturing) generated EUR 16.7 billion of value added, a 24.1 % share of the non-metallic mineral products total.

Figure 7.3

Manufacture of glass and glass products (NACE Group 26.1)
Main indicators, EU-25 (2000=100)


Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/eht).

Table 7.6

Selected glass and glass products (CPA Group 26.1), EU-15

	Prodcom code	Latest year for production	Production value (EUR million)
Non-wired sheets of float glass and surface ground/polished glass, having an absorbent/reflecting layer, not otherwise worked, thickness > 3.5 mm excluding horticultural sheet glass	26.11.12.17	2000	1 187.7
Non-wired sheets of float glass and surface ground/polished glass, coloured throughout the mass, opacified, flashed or merely surface ground excluding horticultural sheet glass; other sheets of float/ground/polished glass, n.e.c.	26.11.12.30 and 26.11.12.80	2000	1 074.4
Toughened safety glass (excluding for use in aircraft, spacecraft, ships or boats)	26.12.12.15 and 26.12.12.30	2001	2 665.7
Laminated safety glass for use in aircraft; spacecraft; ships or boats and n.e.c.	26.12.12.53 and 26.12.12.70	2001 (1)	1 239.5
Multiple-walled insulating units of glass	26.12.13.30	2001	3 195.2
Bottles of colourless glass of a nominal capacity of >= 0.15 litre for beverages and foodstuffs excluding bottles covered with leather or composition leather, infants' feeding bottles; glass containers for beverages and foodstuffs excluding bottles, flasks covered with leather or composition leather, domestic glassware - vacuum flasks and vessels	26.13.11.53, 26.13.11.55 and 26.13.11.59	2001	5 703.4
Glass containers used for the conveyance or packing of pharmaceutical products of a capacity <= 0.33 l	26.13.11.70	2000	437.4
Glass containers for the conveyance or packing of goods (excluding for beverages and foodstuffs, for pharmaceutical products, containers made from glass tubing)	26.13.11.90	2001	827.0
Drinking glasses (excluding cut or otherwise decorated drinking glasses of lead crystal gathered by hand, and drinking glasses of lead crystal gathered mechanically)	26.13.12.19, 26.13.12.35, 26.13.12.53 and 26.13.12.55	2001 (1)	1 006.7
Table or kitchen glassware (excluding glass-ceramics and drinking glasses)	26.13.13.10, 26.13.13.30, 26.13.13.50 and 26.13.13.20	2001 (1)	1 402.9
Glass fibre threads cut into lengths of at least 3 mm but <= 50 mm (chopped strands); glass fibre filaments (including rovings)	26.14.11.10 and 26.14.11.30	2001 (1)	606.1
Glass fibre mats and voiles (including of glass wool)	26.14.12.10 and 26.14.12.30	2001 (1)	730.9
Non-woven glass fibre webs; felts; mattresses and boards	26.14.12.50	2001	688.7
Unworked glass in balls, rods or tubes (excluding glass balls: as toys; which have been ground after shaping; used as stoppers for bottles; microspheres <= 1 mm in diameter), (excluding tubes coated inside with fluorescent material), including tubes which have had fluorescent material added to them in the mass	26.15.11.30 and 26.15.11.50	2000	571.5
Open glass envelopes for electric lamps, cathode-ray tubes or the like	26.15.21.00	2000	771.9
Other articles of glass n.e.s.	26.15.26.90	1999	752.4

(1) 2000 for one heading in the aggregate.

Source: Eurostat, European production and market statistics (Comext).

There were 391 800 persons employed ⁽²⁾ in the EU-25's glass manufacturing sector in 2001, 24.9 % of the total employed in the non-metallic mineral products sector. The average size of EU-15 glass manufacturing enterprise was 22 persons in 2001; six persons more than the corresponding figure for the whole of the non-metallic mineral products sector.

The two largest parts of glass manufacturing in the EU-15 were the manufacture of hollow glass (NACE Class 26.13) and the shaping and processing of flat glass (NACE Class 26.12), which in 2001 accounted for respectively 33.1 % and 27.6 % of value added in the glass manufacturing total.

⁽²⁾ Slovenia, number of employees.

Germany, France and Italy had the largest glass manufacturing sectors in the EU in 2001. However, in terms of its contribution to total manufacturing value added, glass manufacturing was most important in the Czech Republic, Slovakia, Austria and Belgium ⁽³⁾, and least important in Latvia.

Between 1993 and 2000 glass manufacturing in the EU-25 experienced uninterrupted growth, the working-day adjusted production index growing by an average of 3.5 % per annum, compared to an average of 2.3 % over the same period for non-metallic mineral products manufacturing. A moderate contraction in output was recorded in each of the three years after 2000, averaging -0.3 % per annum.

⁽³⁾ Greece, Ireland and Luxembourg, not available

LABOUR AND PRODUCTIVITY

The wage adjusted labour productivity ratio shows the relationship between value added and personnel costs. This ratio stood at 148.3 % in the EU-15's glass manufacturing sector in 2001, which was 4.7 percentage points below the non-metallic mineral products average.

EXTERNAL TRADE

Both in terms of exports and imports glass and glass products (CPA Group 26.1) was the largest product group among non-metallic mineral products in the EU-25 in 2002, accounting for 33.3 % of exports and 38.9 % of imports. The trade surplus of the EU-25 was EUR 2.4 billion in 2002. The main destination of EU-25 exports of glass and glass products was the United States, which was also the biggest origin of EU-25 imports. Other important origins of imports for the EU-25 included two Asian countries (China and Japan), as well as Turkey.

Germany, Belgium and the Czech Republic recorded the largest trade surpluses (intra and extra-EU trade), while the United Kingdom had the largest trade deficit.

Table 7.7

Manufacture of glass and glass products (NACE Group 26.1) Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Manufacture of glass and glass products	51.8	148.3	35.0
Manufacture of flat glass	77.6	198.0	39.2
Shaping and processing of flat glass	41.0	134.9	30.4
Manufacture of hollow glass	53.7	147.9	36.3
Manufacture of glass fibres	65.9	154.4	42.7
Manufacture and processing of other glass, including technical glassware	51.8	144.5	35.8

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 7.8

Glass and glass products (CPA Group 26.1) External trade, EU-25, 2002

	Exports		Imports		Trade balance (EUR million)
	Value (EUR million)	Share of total (%)	Value (EUR million)	Share of total (%)	
Glass and glass products	5 218	100.0	2 837	100.0	2 382
Flat glass	410	7.8	263	9.3	146
Shaped and processed flat glass	654	12.5	719	25.3	-65
Hollow glass	2 232	42.8	746	26.3	1 486
Glass fibres	459	8.8	435	15.3	24
Other glass, processed, including technical glassware	1 435	27.5	672	23.7	762

Source: Eurostat, Comext.

7.2: CERAMIC GOODS AND CLAY PRODUCTS

This subchapter includes information on three NACE groups: the manufacture of ceramic goods other than tiles or flags (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 sectors are collectively referred to as ceramics manufacturing.

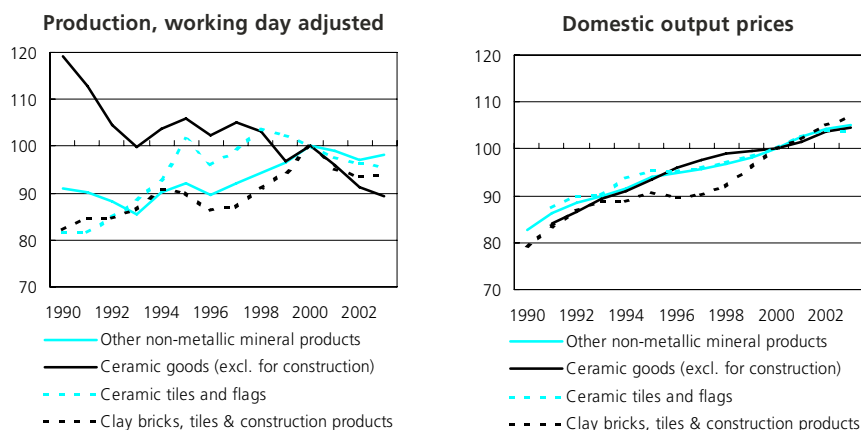
The largest share of output of this sector goes to the construction sector, for example, as bricks, tiles and sanitaryware. The demand for ceramic ornaments and tableware comes from private consumers as well as hotels, restaurants and institutional users, such as hospitals. Refractory products are supplied to other manufacturers that use high temperatures for their own production, for example, the steel, cement and glass manufacturing sectors.

STRUCTURAL PROFILE

In 2001 ceramics manufacturing in the EU-25 generated a value added of EUR 14.7 billion, equivalent to 21.2 % of the non-metallic mineral products total. Employment⁽⁴⁾ in the EU-25 in 2001 was 403 900 persons; in the EU-15 this sector accounted for one quarter (25.3 %) of employment in the non-metallic mineral products sector.

⁽⁴⁾ Estonia and Malta, not available; Latvia, 2002; Slovenia, number of employees, 2000.

Figure 7.4
Manufacture of ceramic goods and clay products (NACE Groups 26.2, 26.3 and 26.4)
Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/eht).

The largest part of ceramics manufacturing in the EU-25 was the manufacture of non-refractory ceramic goods other than for construction purposes/the manufacture of refractory ceramic products, which made up 45.7 % of ceramics manufacturing in 2001. This part of ceramics manufacturing was particularly dominant in Austria (72.2 % of the ceramics manufacturing total) and Slovakia (70.4 %).

The Italian ceramics manufacturing sector generated EUR 3.5 billion of value added, close to one quarter of the EU-25 total, followed by Spain (EUR 2.6 billion) and Germany (EUR 2.5 billion). In terms of manufacturing specialisation⁽⁵⁾, this sector was particularly important in Portugal and Spain, while Ireland (2000), Finland (1999) and Belgium were the least specialised.

⁽⁵⁾ Denmark, Estonia, Greece, Latvia, Malta and Sweden, not available.

Table 7.9
Selected ceramic goods and clay products (CPA Groups 26.2 to 26.4), EU-15

	Prodcom code	Latest year for production	Production value (EUR million)
Porcelain or china tableware and kitchenware (excluding electro-thermic apparatus, coffee or spice mills with metal working parts)	26.21.11.30	2001	1 352.4
Ceramic sinks etc. and other sanitary fixtures, of porcelain of china	26.22.10.30	2000	1 507.5
Refractory bricks, blocks etc., weight > 50% Al₂O₃ and/or SiO₂; 7% < Al₂O₃ <= 45% and others; and n.e.c.	26.26.12.35 to 26.26.12.90	2001 (1)	808.5
Refractory cement; mortar; concrete and similar compositions (including refractory plastics, ramming mixes, gunning mixes) (excluding carbonaceous pastes)	26.26.13.00	2001	830.9
Refractory ceramic goods n.e.s., alumina or silica or mixture > 50%: alumina >= 45%	26.26.14.59	2000	255.5
Unglazed stoneware flags and paving; hearth or wall tiles (excluding double tiles of the Spaltplatten type)	26.30.10.53	1999	1 065.0
Unglazed ceramic flags and paving; hearth or wall tiles (excluding stoneware, earthenware or fine pottery, double tiles of the Spaltplatten type)	26.30.10.59	1999	528.8
Non-refractory clay building bricks and flooring blocks; support or filler tiles and the like (excluding of siliceous fossil meals or earth)	26.40.11.10 and 26.40.11.30	2000	4 299.4
Non-refractory clay roofing tiles; non-refractory clay constructional prod. (including chimney pots, cowl, liners and flue-blocks, architectural ornaments, ventilator grills, clay-lath; excluding pipes, guttering and the like)	26.40.12.50 and 26.40.12.70	2000	2 164.0

(1) 2000 for one or more headings in the aggregate.

Source: Eurostat, European production and market statistics (Comext).

The three NACE groups making up this subchapter showed contrasting fortunes as regards the evolution of annual short-term statistics in the EU-25. The working day adjusted index of production for non-refractory goods other than for construction purposes/the manufacture of refractory ceramic products (NACE Group 26.2) fell by 2.1 % per annum on average between 1995 and 2003, despite growth of 2.5 % in 1997 and of 3.5 % in 2000. The manufacture of ceramic tiles and flags (NACE Group 26.3) reported a less significant decline in activity, as output fell on average by 0.7 % between 1995 and 2003; growth of 3.3 % and 4.5 % was recorded in 1997 and 1998 respectively, since when a negative rate of change was recorded each year. The production index for the manufacture of bricks, tiles and construction products (NACE Group 26.4) also recorded a decline to a low point in 1996, however it then recorded four years of uninterrupted growth averaging 3.8 % per annum. Like the other activities in this subchapter this was followed by a decline in production in the following three years, averaging -2.1 % per annum.

LABOUR AND PRODUCTIVITY

Apparent labour productivity in ceramics manufacturing was EUR 42 000 per person employed in the EU-15 in 2001, and average personnel costs were EUR 30 100 per employee, both below the respective averages for the non-metallic mineral products sector, particularly the figure for apparent labour productivity. Consequently, wage adjusted labour productivity was also relatively low, at 139.5 % in the EU-15, compared with the non-metallic mineral products average of 153.0 %.

EXTERNAL TRADE

The external trade of ceramic goods and clay products (CPA Groups 26.2 to 26.4) registered a trade surplus of EUR 4.2 billion in the EU-25 in 2002. These products made up 39.8 % of total exports and 28.2 % of total imports of non-metallic mineral products. The main destination of EU-25 exports of ceramic goods and clay products was the United States, accounting for 28.7 % of the total in 2002. In terms of imports, the main origin was China, with more than one quarter of the total.

Italy and Spain had by far the highest trade surpluses, EUR 3.8 billion and EUR 2.0 billion respectively in 2002. These Member States, together with Germany, Portugal, the Czech Republic and Slovakia, were the only ones to record a trade surplus in 2002, while the highest trade deficit was registered in France.

Table 7.10

Manufacture of ceramic goods and clay products (NACE Groups 26.2, 26.3 and 26.4) Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Ceramic goods and clay products	42.0	139.5	30.1
Ceramic goods (excl. for construction)	35.4	123.0	28.8
Ceramic tiles and flags	47.6	149.4	31.9
Clay bricks, tiles and construction products	52.8	170.4	31.0

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 7.11

Ceramic goods and clay products (CPA Groups 26.2, 26.3 and 26.4) External trade, EU-25, 2002

	Exports		Imports		Trade balance (EUR million)
	Value (EUR million)	Share of total (%)	Value (EUR million)	Share of total (%)	
Ceramic goods and clay products	6 247	100.0	2 058	100.0	4 189
Ceramic goods (excl. for construction)	3 149	50.4	1 797	87.3	1 352
Ceramic tiles and flags	2 964	47.4	245	11.9	2 719
Bricks, tiles and construction products, in baked clay	135	2.2	16	0.8	119

Source: Eurostat, Comext.

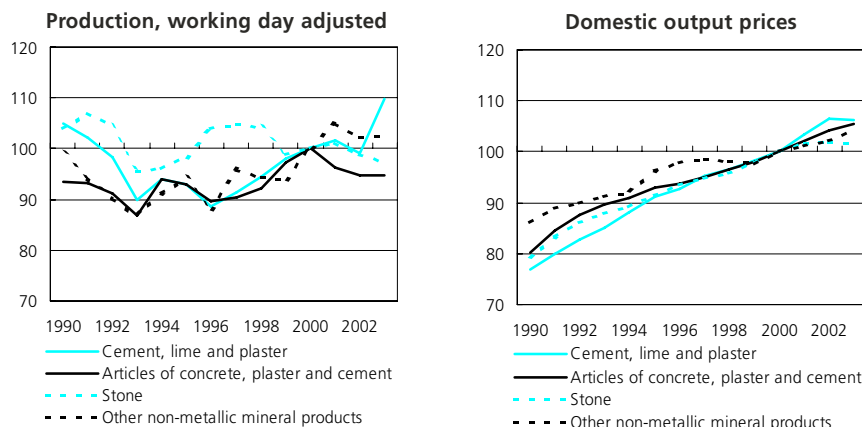
7.3: CEMENT, CONCRETE, STONE AND OTHER NON-METALLIC MINERAL PRODUCTS

This final subchapter groups together the four remaining activities that make up NACE Division 26. The manufacture of cement, lime and plaster (NACE Group 26.5) is treated together with the manufacture of articles made from concrete, plaster and cement (NACE Group 26.6). There are also separate sections covering the activities of cutting, shaping and finishing stone (NACE Group 26.7) and the manufacture of other non-metallic mineral products (NACE Group 26.8), a miscellaneous collection of activities that includes the production of abrasive products, non-metallic mineral yarns, and mineral insulating materials (be they for heat or sound insulation).

This subchapter analyses four NACE groups, treated in three separate sections. The manufacture of cement and concrete (NACE Groups 26.5 and 26.6) was by far the largest, with value added in the EU-25 of EUR 27.9 billion in 2001. The working of stone contributed EUR 5.6 billion of value added and the manufacture of other non-metallic mineral products contributed EUR 4.4 billion.

Figure 7.5

Cement, concrete, stone and other non-metallic mineral products (NACE Groups 26.5 to 26.8)
Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Table 7.12

Cement, concrete, stone and other non-metallic mineral products (NACE Groups 26.5 to 26.8)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Cement, concrete, stone and other non-metallic mineral products	53.6	160.6	33.4
Manufacture of cement, lime and plaster	126.2	253.9	49.7
Manufacture of articles of concrete, plaster, cement	51.5	155.3	33.2
Cutting, shaping and finishing of stone	32.2	140.6	22.9
Manufacture of other non-metallic mineral products	51.8	129.2	40.1

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 7.13

Cement, concrete, stone and other non-metallic mineral products (CPA Groups 26.5 to 26.8)
External trade, EU-25, 2002

	Exports		Imports		Trade balance (EUR million)
	Value (EUR million)	Share of total (%)	Value (EUR million)	Share of total (%)	
Cement, lime and plaster	436	10.4	639	26.6	-203
Articles of concrete, plaster and cement	542	12.9	128	5.3	414
Monumental or building stone and articles thereof	1 495	35.5	522	21.8	972
Other non-metallic mineral products	1 735	41.2	1 108	46.2	626

Source: Eurostat, Comext.

Table 7.14
Selected cement and concrete products (CPA Groups 26.5 and 26.6), EU-15

	Prodcom code	Latest year for production	Production value (EUR million)
Cement clinker	26.51.11.00	2000	292.3
White Portland cement	26.51.12.10	2000	440.9
Grey Portland cement (including blended cement)	26.51.12.30	2001	11 102.2
Other hydraulic cements	26.51.12.90	2000	1 564.0
Plasters consisting of calcined gypsum or calcium sulphate (including for use in building, for use in dressing woven fabrics or surfacing paper, for use in dentistry)	26.53.10.00	2000	866.1
Building blocks and bricks of cement; concrete or artificial stone	26.61.11.30	2000	3 166.9
Tiles; flagstones and similar articles of cement; concrete or artificial stone (excluding building blocks and bricks)	26.61.11.50	2000	5 201.1
Plaster products for construction purposes	26.62.10.50 and 26.62.10.90	2000	2 117.4
Factory made mortars	26.64.10.00	2000	3 326.1
Sheets; panels; tiles and similar articles; of asbestos-cement; cellulose fibre-cement; vegetable fibres; synthetic polymer; glass or metallic fibres	26.65.12.30	2000	844.2

Source: Eurostat, European production and market statistics (Comext).

MANUFACTURE OF CEMENT AND CONCRETE

Cement and concrete manufacturing (NACE Groups 26.5 and 26.6) generated EUR 27.9 billion of value added in the EU-25 in 2001, making up 40.2 % of the non-metallic mineral products total. One fifth (20.0 %) of value added in the EU-25 was accounted for by Germany, followed by Italy (13.7 %) and Spain (12.9 %). Employment⁽⁶⁾ in the EU-25 was 502 800 persons in 2001. Average personnel costs were equal to EUR 35 800 per employee in the EU-15, while apparent labour productivity reached EUR 62 900 per person employed; both of these values were above the non-metallic mineral products average. Wage adjusted labour productivity was 175.8 %, which was also well above the average for non-metallic mineral products. This resulted from a particularly high ratio in cement, lime and plaster manufacturing (253.9 %), the highest wage adjusted labour productivity ratio among all of the NACE groups that form the non-metallic mineral products sector. The articles made from concrete, plaster and cement manufacturing (NACE Group 26.6) sector recorded the third highest wage adjusted labour productivity ratio (155.1 %).

⁽⁶⁾ Estonia, NACE Group 26.5 not available; Latvia and Slovenia, number of employees; Malta, 2000.

The working day adjusted index of production for the manufacture of cement, lime and plaster (NACE Group 26.5) did not follow the pattern of falling output that was witnessed in the majority of NACE groups that compose non-metallic mineral products manufacturing. Output increased overall on average by 2.0 % per annum between 1993 and 2003, with a particularly rapid expansion with respect to the latest year available, as production grew by 10.7 % in 2003.

In contrast, the evolution of output for the manufacture of articles of concrete, plaster and cement (NACE Group 26.6) resembled more closely that recorded for the whole of non-metallic mineral products. The index of production grew by 2.0 % per annum on average between 1993 and 2000, but then declined by 1.8 % per annum between 2000 and 2003.

External trade flows for cement, lime, plaster and concrete products (CPA Groups 26.5 and 26.6) were relatively small, with exports in 2002 valued at close to EUR 1.0 billion (6.2 % of total exports of non-metallic mineral products) and imports valued at EUR 766.5 million (10.5 % of the non-metallic mineral products' total). This led to a trade surplus of EUR 211.9 million for the EU-25. The main destinations for EU-25 exports were China, the United States and Norway, accounting respectively for 19.4 %, 14.9 % and 7.2 % of EU-25 exports in 2002. The main origin of imports of these products was Turkey, accounting for 37.5 % of the total. The Netherlands showed by far the highest trade deficit among the Member States (EUR 298.8 million), while in contrast, Belgium and Denmark registered the highest trade surpluses in 2002, with respectively EUR 454.3 million and EUR 402.2 million.

WORKING OF STONE

Enterprises active in the cutting, shaping and finishing of stone (NACE Group 26.7) generated EUR 5.6 billion of value added in 2001 in the EU-25, equivalent to 8.1 % of the non-metallic mineral products total. Italy, as the largest Member State in this sector accounted for 27.6 % of the EU-25 total, followed by Spain (20.4 %) and Germany (18.2 %). In relation to the whole non-metallic mineral products sector, several southern Member States showed the highest specialisation rates⁽⁷⁾. This was notably the case in Portugal, Spain, Cyprus, Italy and Malta. Employment⁽⁸⁾ in this sector in the EU-25 in 2001 was 183 700 persons employed, with Italy and Spain together employing 88 600 persons.

The development of the EU-25's working day adjusted index of production for the cutting, shaping and finishing of stone sector increased on average by 2.3 % between 1993 and 1997. In 1998 (-0.4 %) and 1999 (-5.2 %) output contracted, after which there was a more modest expansion in output of 1.2 % in both 2000 and 2001. This was followed by a further period of contraction, -2.2 % in 2002 and -1.6 % in 2003.

⁽⁷⁾ Greece and Ireland, not available.

⁽⁸⁾ Poland and Slovenia, number of employees.

EU-25 exports of monumental and building stone products (CPA Group 26.7) were EUR 1.5 billion in 2002, compared with imports of EUR 522.3 million, resulting in a trade surplus of EUR 972.2 million. Almost half of all EU-25 exports of monumental and building stone (47.5 %) were destined for the United States in 2002. There was no other country accounting for more than 10 % of EU-25 exports. Imports came mainly from China (39.2 %) and India (25.7 %) in 2002, with Turkey the third largest source (9.0 %).

The majority of Member States recorded trade deficits in monumental and building stone. In particular, all of the new Member States reported a trade deficit with the exception of the Czech Republic and Malta. Italy registered the highest trade surplus (EUR 1.6 billion), far ahead of Spain (EUR 592.2 million). Germany registered the highest trade deficit, some EUR 395.2 million in 2002.

MANUFACTURE OF OTHER NON-METALLIC MINERAL PRODUCTS

This activity (NACE Group 26.8) is composed of a diverse range of products, often destined for specialist markets, covering, for example, peat flower pots for gardening and automotive brake linings. In 2001 this sector generated EUR 4.4 billion of value added in the EU-25, which was equivalent to 6.3 % of the non-metallic mineral products total. Germany had the largest other non-metallic mineral products sector and contributed EUR 1.5 billion of value added to the EU-25 total, almost three times higher than the second largest contribution that was made by the United Kingdom (EUR 556.0 million). Slovenia, and to a lesser extent, Luxembourg, Austria and Cyprus were all relatively specialised in this sector, whereas France and Ireland (2000) were relatively unspecialised ⁽⁹⁾. There were 93 600 persons employed ⁽¹⁰⁾ in this sector in the EU-25 in 2001, around 6 % of the total for the non-metallic mineral products sector. Average personnel costs were EUR 40 100 per employee in the EU-15, EUR 7 200 above the non-metallic mineral products average, while apparent labour productivity reached EUR 51 800 per person employed, just EUR 1 500 above the non-metallic mineral products average. Consequently, wage adjusted labour productivity was relatively low at 129.2 %.

⁽⁹⁾ Greece and Latvia, not available.

⁽¹⁰⁾ Latvia, 2002; Slovenia, number of employees.

Annual short-term statistics for the other non-metallic mineral products sector show that the EU-25's working day adjusted index of production rose by 6.2 % overall between 1995 and 2000, with a rapid jump in production between 1999 and 2000 (6.3 %). This was followed by a further increase of 5.0 % between 2000 and 2001, since when a reduction of 2.7 % was registered in 2002, followed by a modest change in 2003 (+ 0.3 %).

Some EUR 1.7 billion of other non-metallic mineral products (CPA Group 26.8) were exported from the EU-25 in 2002, while imports of these products were valued at EUR 1.1 billion. The resulting trade surplus was EUR 626.3 million. The main destination of EU-25 exports in 2002 was the United States (21.6 %), which was also the main origin of EU-25 imports (31.4 %), although Switzerland (15.8 %) and Japan (14.1 %) also provided significant shares.

The 10 new Member States were generally net importers of other non-metallic mineral products, with Poland recording the highest trade deficit among the 10 new Member States, some EUR 103.0 million in 2002 and indeed among all 25 of the Member States. Slovenia was the only new Member State that registered a trade surplus (EUR 70.0 million). Germany recorded by far the highest surplus among the complete set of 25 Member States, valued at EUR 564.9 million.

Table 7.15

Manufacture of other non-metallic mineral products (NACE Division 26)

Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	7 180	3 524	2 286	36 731	182	1 858	25 317	23 259	1 624	35 670	286	116	198	586
Value added at factor cost (EUR million)	2 338	1 278	935	14 466	63	808	9 087	7 891	766	11 341	107	66	66	238
Purchases of goods and services (EUR million)	5 259	2 440	0	25 409	130	:	17 934	16 948	1 104	25 724	199	84	138	356
Gross investment in tangible goods (EUR million)	666	335	194	2 178	18	:	1 917	1 267	174	2 471	24	22	17	:
Number of persons employed (thousands)	37	87	18	281	5	16	196	150	11	249	3	4	11	3
App. labour productivity (EUR thous./pers. emp.)	63.5	14.7	53.3	51.4	13.8	52.0	46.5	52.7	69.3	45.5	38.2	16.7	6.0	81.1
Average personnel costs (EUR thous./employee) (1)	43.0	7.3	38.7	38.8	6.8	:	25.4	36.6	31.9	29.1	19.3	4.1	4.2	40.9
Wage adjusted labour productivity (%) (1)	147.4	200.7	137.7	132.5	203.9	:	183.0	143.9	216.8	156.0	193.4	410.6	142.6	198.1
Gross operating rate (%) (2)	11.1	18.8	12.1	9.8	16.6	:	16.3	10.0	24.1	14.5	18.2	43.5	10.5	19.9
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	1 340	64	6 107	4 786	6 059	4 494	592	798	2 469	2 678	17 596	394	1 101	:
Value added at factor cost (EUR million)	494	23	2 316	2 130	3 134	1 754	172	276	995	994	7 606	108	388	:
Purchases of goods and services (EUR million)	982	41	4 248	3 155	3 291	3 168	400	561	1 616	1 932	10 730	317	851	:
Gross investment in tangible goods (EUR million)	126	2	406	385	611	552	44	115	142	128	956	61	241	:
Number of persons employed (thousands)	29	1	35	35	:	66	:	24	16	19	134	23	86	:
App. labour productivity (EUR thous./pers. emp.)	17.0	17.1	66.5	61.2	:	26.6	:	11.5	60.9	51.6	56.7	4.6	4.5	:
Average personnel costs (EUR thous./employee)	7.7	10.8	40.0	43.7	7.9	13.6	13.4	5.5	35.3	37.1	34.9	2.4	2.5	:
Wage adjusted labour productivity (%)	221.4	158.4	166.4	139.9	:	195.0	:	207.0	172.5	139.0	162.3	189.6	180.6	:
Gross operating rate (%)	18.8	19.1	15.3	12.4	33.1	18.5	5.7	17.4	16.6	10.9	16.4	13.2	16.2	:

(1) Ireland and Cyprus, 2000.

(2) Ireland, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

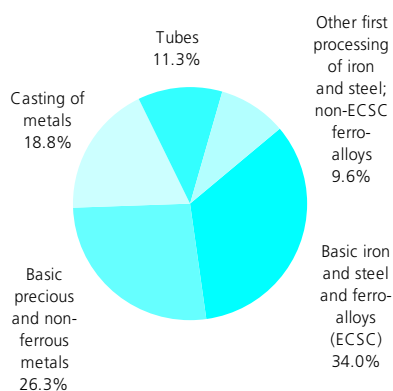
Metals



The metals sector has historically been a cornerstone of the EU: the Treaty establishing the European Steel and Coal Community (ECSC) was indeed the first European Community Treaty ratified. Signed in Paris on 18 April 1951, it entered into force the next year for a period of 50 years, and expired on 23 July 2002. The Council did not extend its life beyond this date, so that ECSC industries are now treated as any other industry within the EU (and statistical work in this area has now been merged into mainstream business statistics). This reflects the decline in the strategic importance of this sector over time, accompanied by a progressive privatisation of publicly held coal and steel enterprises and the complete deregulation of markets, ending with full reliance on free market mechanisms.

Metals production nevertheless maintains its importance in economic terms. Major metals consuming sectors include mechanical and transport engineering, packaging and construction. However, on all markets, metals face increasing competition from substitute materials, such as plastics and ceramics.

Figure 8.1
Manufacture of basic metals
(NACE Division 27)
Share of value added at factor cost,
EU-25, 2001



Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

EU enlargement has had a notable impact on this industry. Indeed, several of the new Member States or candidate countries have important metals industries: for example, raw steel production in the new Member States and candidate countries accounted for 5 % of the world's production in 2002, compared to the EU-15's share of world production which was 15 % ⁽¹⁾, according to the European Commission Directorate-General for Enterprise. Although restructuring already took place in many of the new Member States, the Commission has negotiated specific agreements on steel restructuring with all accession countries that foresee a transition period during which governments are allowed to grant restructuring aid under certain conditions. One of the conditions is the adoption of a national restructuring programme, such as those set up in the Czech Republic and Poland in 2002 and 2003.

STRUCTURAL PROFILE

The sector of metals manufacturing generated EUR 56.0 billion of value added in 2001, which represented a 3.6 % share of manufacturing. The 10 new Member States contributed 6.8 % to the EU-25's total value added, compared with 5.6 % for manufacturing as a whole, an indication of the relatively greater importance of this sector in several new Member States.

The largest activity within the EU-25 metal manufacturing sector at the level of NACE Groups was basic iron and steel and ferro-alloys manufacturing (NACE Group 27.1) with EUR 19.0 billion in 2001, or 34.0 % of the total metal manufacturing value added. The manufacture of basic precious and non-ferrous metals (NACE Group 27.4) accounted for a further EUR 14.7 billion, 26.3 % of the sectoral total, and casting (NACE Group 27.5) accounted for EUR 10.5 billion of value added (18.8 % of the sectoral total).

⁽¹⁾ Source: http://europa.eu.int/comm/enterprise/steel/restructuring-steel/accession_and_memberstates.htm.

NACE Division 27 covers the manufacture of basic metals, including iron, steel and ferro-alloys, basic precious and non-ferrous metals. It also includes first processing stages that cover activities such as the manufacture of tubes, bars, strips, wires and sheets of metal and the casting of metals.

NACE

- 27: manufacture of basic metals;
- 27.1: manufacture of basic iron and steel and of ferro-alloys (ECSC*);
- 27.2: manufacture of tubes;
- 27.3: other first processing of iron and steel and production of non-ECSC* ferro-alloys;
- 27.4: manufacture of basic precious and non-ferrous metals;
- 27.5: casting of metals.

(*): ECSC: European Coal and Steel Community.

Table 8.1

Manufacture of basic metals (NACE Division 27)
Structural profile, 2001

Rank	Largest value added (EUR billion)	Highest value added specialisation relative to manufacturing (EU-25=100)	Largest number of persons employed (thousands) (1)	Main EU-25 trading partners: origin of imports, 2002 (EUR billion)	Main EU-25 trading partners: destination of exports, 2002 (EUR billion)
1	Germany (16.3)	Luxembourg (544)	Germany (270.4)	Russian Federation (6.8)	United States (6.5)
2	Italy (7.2)	Slovakia (351)	Italy (140.3)	Switzerland (5.2)	Switzerland (3.7)
3	France (6.5)	Greece (212)	France (125.0)	South Africa (4.5)	China (1.8)
4	United Kingdom (5.3)	Austria (197)	United Kingdom (103.0)	United States (3.9)	Turkey (1.5)
5	Spain (4.7)	Czech Republic (169)	Spain (76.4)	Norway (3.7)	Norway (1.4)

(1) Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Almost one third of metals manufacturing output in the EU-25 in 2001 originated from Germany (EUR 16.3 billion). Among the other Member States, only Italy, France and the United Kingdom reported value added above EUR 5.0 billion. In relative terms, however, metals manufacturing was most important in Luxembourg, where its contribution to national manufacturing value added was more than five times higher than the corresponding EU-25 average. Other relatively specialised countries according to this ratio were Slovakia, Greece and Austria. In contrast, Malta, Estonia, Ireland and Lithuania were clearly the least specialised in metals manufacturing.

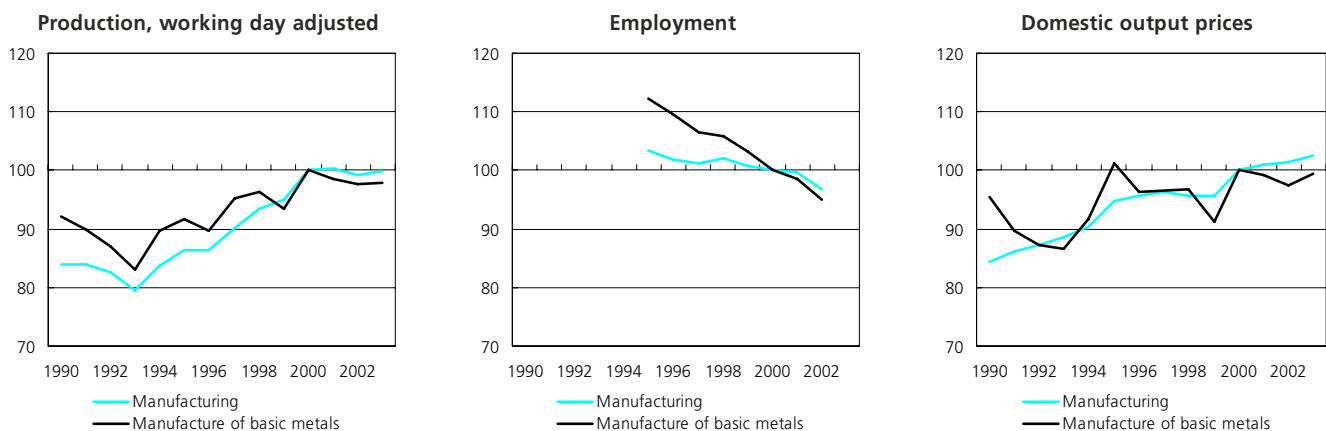
The working day adjusted production index for metals manufacturing displayed a similar progression to that for manufacturing, with a period of growth from a low point in output in 1993 through to a peak in 2000, followed by a short period of contraction with an upturn in 2003. Despite this apparent similarity with the overall manufacturing production index, metals manufacturing displays one particular characteristic which can be described as mini-cycles of strong growth and more modest contraction (possibly linked to changes in demand for intermediate goods in relation to levels of inventories): growth was recorded in 1994 and 1995, as well as 1997 and 1998, with both pairs of years being followed by a year of contraction in output. As such, this activity appears to react more strongly than the manufacturing average to the positive or negative variations in general economic activity. The overall annual average growth of production between 1993 and 2000 was 2.7 % in metals manufacturing, slightly below the manufacturing average of 3.3 % during the same period.

Large enterprises (with 250 or more persons employed) clearly dominate basic metals manufacturing. In 2001, 71.2 % of the sector's value added in the EU-25 originated from enterprises with more than 250 persons employed compared with a manufacturing average of 54.9 %. Medium-sized enterprises (with 50 to 249 persons employed) accounted for a further 19.7 % of the total, although they played a significantly greater role in Italy (27.0 %), Denmark (28.4 %), Portugal (42.7 %) and the United Kingdom (41.4 %) (2).

The importance of large enterprises was even more marked in the manufacture of basic iron and steel and ferro-alloys (NACE Group 27.1), where this enterprise size-class generated 95.4 % of the EU-25's value added. In contrast, in the activities of other first processing activities within the iron and steel industry, and the casting of metals (NACE Groups 27.3 and 27.5), the contribution of large enterprises to total value added was at least 20 percentage points lower than the average contribution of large enterprises to total value added in the metals manufacturing sector as a whole.

(2) Estonia, Greece, Ireland, Cyprus, Latvia, Lithuania, Luxembourg and Malta, not available; Slovakia, 1999.

Figure 8.2

Manufacture of basic metals (NACE Division 27)
Main indicators, EU-25 (2000=100)


Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Table 8.2

Manufacture of basic metals (NACE Division 27)

Value added at factor cost and persons employed, by enterprise size-class, 2001 (% of total)

	Micro enterprises		Small enterprises		Medium-sized enterprises		Large enterprises	
	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed
EU-25	1.6	:	7.5	:	19.7	:	71.2	:
EU-15	1.8	2.8	7.8	10.1	20.3	22.0	70.2	65.1

Source: Eurostat, Structural Business Statistics (theme4/sbs/sizclass).

LABOUR AND PRODUCTIVITY

The characteristics of the workforce in the metals manufacturing sector are typical of a traditional industrial sector. Practically all of those employed in the sector were paid employees (97.6 %) in the EU-15 in 2002, while men accounted for as much as 87.5 % of the workforce. Shares were in both cases clearly above the manufacturing average (91.9 % and 71.7 % respectively). In addition, only 3.9 % of the persons employed in the EU-15 in 2002 worked part-time, almost half the manufacturing average (7.6 %). High rates of full-time work, paid employees and male employment were observed in all Member States ⁽³⁾.

Apparent labour productivity in metals manufacturing was EUR 58 400 per person employed in the EU-15 in 2001, some EUR 7 200 above the manufacturing average. However, this apparent productivity advantage was cancelled out by higher than average personnel costs that reached EUR 34 700 per employee in the EU-25 in 2001, against EUR 30 900 in manufacturing. As a consequence, the wage adjusted labour productivity ratio was slightly below the manufacturing average at 142.7 % against 143.5 % for manufacturing as a whole in 2001 in the EU-15. Several Member States nevertheless reported that their wage adjusted labour productivity in this sector was significantly above their respective manufacturing average.

⁽³⁾ Estonia, Cyprus, Latvia, Lithuania and Poland, not available; Austria, full-time work, not available.

Table 8.3

Manufacture of basic metals (NACE Division 27)

Labour force characteristics, 2002

	Share of men		Share of full-time		Share of employees	
	Value (%)	Index (manufacturing=100)	Value (%)	Index (manufacturing=100)	Value (%)	Index (manufacturing=100)
EU-25	:	:	:	:	:	:
EU-15	87.5	122.1	96.1	104.0	97.6	106.2
BE	93.3	125.5	97.4	106.9	100.0	105.5
CZ	78.0	126.6	98.8	101.4	98.5	106.4
DK	89.1	130.2	100.0	107.8	100.0	103.6
DE	85.8	119.5	97.0	108.2	98.6	103.4
EE	:	:	:	:	:	:
EL	89.3	125.8	100.0	102.0	94.8	129.3
ES	93.0	125.2	98.5	101.7	96.4	109.0
FR	85.6	121.0	95.5	101.1	99.4	104.8
IE	90.8	131.3	96.9	103.3	89.3	97.1
IT	86.7	124.6	97.3	102.8	93.0	112.4
CY	:	:	:	:	:	:
LV	:	:	:	:	:	:
LT	:	:	:	:	:	:
LU	96.5	119.0	98.8	103.4	100.0	101.7
HU	84.4	141.5	97.5	99.8	94.2	101.0
MT	100.0	142.8	73.9	76.5	79.1	85.0
NL	93.3	120.9	69.5	92.6	100.0	104.0
AT	88.4	118.9	:	:	99.3	104.3
PL	:	:	:	:	:	:
PT	85.9	153.3	97.8	100.8	98.7	113.2
SI	76.6	126.8	100.0	103.4	96.9	103.3
SK	76.7	129.5	99.4	100.7	100.0	104.1
FI	82.6	117.4	98.7	103.4	100.0	106.9
SE	80.9	109.3	94.9	103.5	99.1	105.4
UK	87.7	117.2	94.9	102.9	97.2	102.1

Source: Eurostat, Labour Force Survey.

Table 8.4

Manufacture of basic metals (NACE Division 27)

Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Manufacture of basic metals	58.4	142.7	40.9
Manufacture of basic iron and steel and of ferro-alloys (ECSC)	61.9	135.4	45.7
Manufacture of tubes	58.8	148.6	39.6
Other first processing of iron & steel & production of non-ECSC ferro-alloys	54.5	142.8	38.1
Manufacture of basic precious and non-ferrous metals	71.6	164.4	43.5
Casting of metals	43.7	128.4	34.0

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

EXTERNAL TRADE

EU-25 exports of basic metals (CPA Division 27) were valued at EUR 32.1 billion and imports at EUR 46.3 billion in 2002. This represented 3.8 % of total EU-25 exports of manufactured goods, and 6.3 % of manufactured imports. The trade balance of the EU-25 with non-Community countries for basic metals was negative to the extent of EUR 14.2 billion in 2002, which was the fourth largest deficit of all

CPA divisions of manufactured goods. This was due to the trade of basic precious and metals clad with precious metals (CPA Group 27.4), which was the only CPA group among basic metals to register a trade deficit in 2002, valued at EUR 21.0 billion. In comparison, the highest trade surplus among the CPA groups of basic metals was EUR 3.9 billion for tubes (CPA Group 27.2).

The principal export markets of the EU-25 for basic metals in 2002 were the United States (20.1 % of total exports), Switzerland (11.6 %) and China (5.6 %). Imports in 2002 originated mainly from Russia (14.7 %), followed by Switzerland (11.1 %), South Africa (9.7 %), the United States (8.4 %) and Norway (8.1 %). No other countries recorded more than a 5 % share for exports or imports.

Table 8.5**Basic metals (CPA Division 27)
External trade, EU-25, 2002 (EUR million)**

	Exports	Imports	Trade balance	Cover ratio (%)
Basic metals	32 083	46 294	-14 211	69.3
Basic iron and steel and ferro-alloys (ECSC)	11 078	9 703	1 375	114.2
Tubes	5 663	1 726	3 936	328.1
Other iron and steel and non-ECSC ferro-alloys	2 296	975	1 321	235.5
Basic precious metals and metals clad with precious metals	12 883	33 853	-20 970	38.1

Source: Eurostat, Comext.

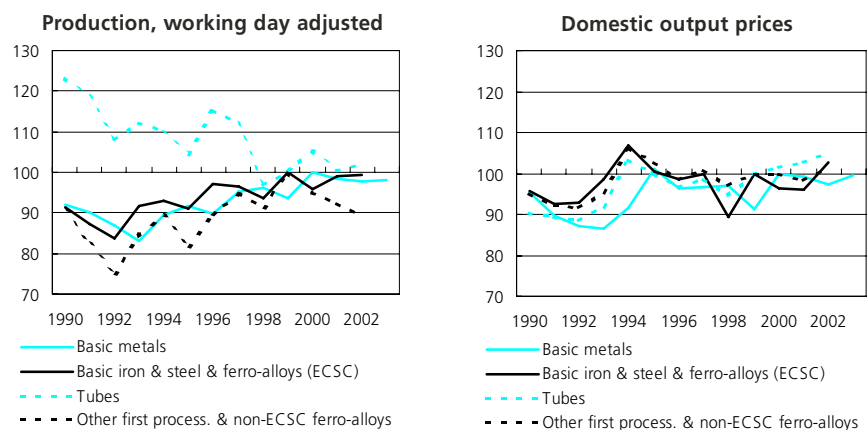
8.1: MANUFACTURE AND FIRST PROCESSING OF FERROUS METALS

This subchapter includes information covering three NACE groups, 27.1 to 27.3. The first of these is the manufacture of basic iron and steel and ferro-alloys, which covers the activities of the iron and steel industry, as defined by the former European Coal and Steel Community (ECSC) Treaty. The manufacture of tubes (be they of iron or steel) is included in NACE Group 27.2, while other first processing activities within the iron and steel industry are contained within NACE Group 27.3.

STRUCTURAL PROFILE

The manufacture and first processing of ferrous metals generated EUR 30.7 billion of value added in the EU-25 in 2001, of which EUR 2.4 billion originated from the 10 new Member States. As such, the contribution of the new Member States to value added reached 7.9 % of the EU-25 total, more than their 6.8 % share of metals manufacturing value added and their 5.6 % share of total manufacturing value added. This activity employed some 481 500 persons in the EU-15 in 2001, of which 476 900 were paid employees. The new Member States had 133 300 employees out of an EU-25 total of 610 200 employees.

Germany's share of the EU-25's value added was 27.1 %, which was more than double the next largest contributions: Italy (12.9 %) and France (11.5 %). Within the manufacture and

Figure 8.3
**Manufacture and first processing of ferrous metals (NACE Groups 27.1, 27.2 and 27.3)
Main indicators, EU-25 (2000=100)**

Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

first processing of ferrous metals sector, the largest individual NACE group in terms of value added was the manufacture of basic iron and steel and ferro-alloys (NACE Group 27.1), which accounted for 61.9 % of the sector's value added in the EU-25 in 2001. A difference between EU-15 Member States and the 10 new Member States could be observed, in that the manufacture of tubes (NACE Group 27.2) was relatively much more developed in the EU-15, with a 21.6 % share of sectoral value added against 9.7 % in the new Member States.

Slovakia clearly emerged as the most specialised country⁽⁴⁾ in the manufacture and first processing of ferrous metals, as the contribution of this activity to national manufacturing value added was more than five times higher when compared with the EU-25 average. Austria, Sweden and the Czech Republic all reported that this sector's share of manufacturing value added was more than double the EU-25 average.

⁽⁴⁾ Denmark, Estonia, Greece, Ireland, Latvia, Lithuania, Luxembourg, Malta and the Netherlands, not available; Slovenia, 1999.

Table 8.6
Steel production, 2002 (thousand tonnes)

	Crude steel production	Production of long steel products (1)	Production of flat steel products (1)	Cold rolled plates and sheets of steel (1)
EU-15	158 869	55 584	85 560	42 167
BE	11 495	1 188	12 064	5 165
DK	392	379	664	0
DE	44 999	12 472	24 418	12 315
EL	1 835	1 746	61	68
ES	16 358	10 030	5 276	3 509
FR	20 524	4 619	11 512	7 163
IE	-	0	0	0
IT	25 930	13 336	9 664	3 854
LU	2 736	2 966	0	213
NL	6 144	180	5 168	2 475
AT	6 208	1 167	4 080	1 797
PT	800	991	0	236
FI	4 001	569	3 231	1 516
SE	5 730	668	4 068	1 211
UK	11 718	5 405	5 586	2 647

(1) June 2001 to June 2002.
Source: Eurostat, Iron and Steel (theme4/steel/monthly).

Table 8.7
Steel production in selected new Member States, 2001 (thousand tonnes)

	Crude steel production	Production of long steel products (1)	Production of flat steel products (2)
CZ	6 316	3 299	1 546
LV	:	500	:
HU	1 954	352	1 405
PL	8 814	4 600	4 000
SI	462	139	327
SK	3 989	:	3 187

(1) Latvia, Poland and Slovenia, 2000.
(2) Poland, Slovenia and Slovakia, 2000.
Source: IISI (International Iron and Steel Institute), available at <http://www.worldsteel.org>.

Table 8.8
Top five steel producing enterprises/groups in the EU, 2002 (million tonnes)

	Crude steel production	World ranking
Arcelor (ES, FR, LU)	44.0	1
LNM Group (NL)	34.8	2
Corus (UK)	16.8	6
Thyssen Krupp (DE)	16.4	7
Riva (IT)	15.0	9

Source: IISI (International Iron and Steel Institute), available at <http://www.worldsteel.org>.

LABOUR AND PRODUCTIVITY

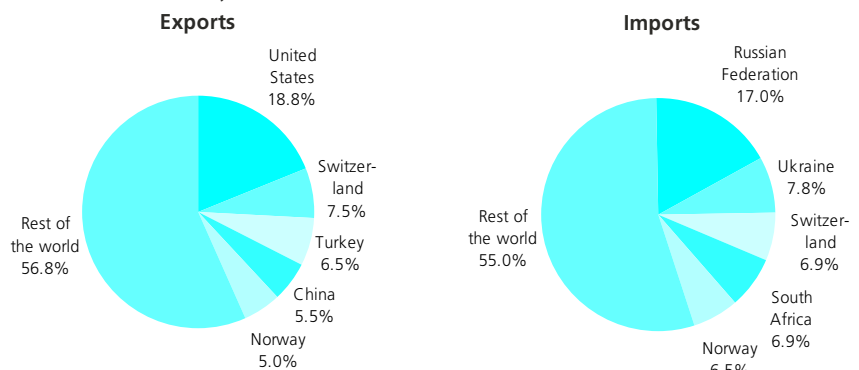
Apparent labour productivity in the manufacture and first processing of ferrous metals was EUR 58 800 per person employed in the EU-15 in 2001, and as such higher than the manufacturing average of EUR 51 200. However, this was more than matched by high average personnel costs that reached EUR 35 700 per employee in this sector in the EU-25 in 2001 (EUR 43 200 in the EU-15). For the EU-25, average personnel costs were 15.5 % above the manufacturing average of EUR 30 900 (EUR 35 700 in the EU-15). This resulted in a wage adjusted labour productivity ratio of 136.0 % in the EU-15 in 2001, a level below both the metals manufacturing average (142.7 %) and the overall manufacturing average (143.5 %). Note that this was a reversal of the situation observed in 2000, when wage adjusted labour productivity in this sector exceeded both averages. This was due to a sharp fall in apparent labour productivity between 2000 and 2001, while average personnel costs remained unchanged.

EXTERNAL TRADE

In 2002 the EU-25 ran a trade surplus in each of the three CPA groups that make up ferrous metal products (CPA Groups 27.1 to 27.3), totalling EUR 6.6 billion, of which more than half was accounted for by tubes (EUR 3.9 billion). The United States was the main destination of EU-25 exports for these products, accounting for between 14.6 % (tubes, CPA Group 27.2) and 22.7 % (other first processed iron and steel, CPA Group 27.3) of the total. Turkey, Switzerland and China

were also major destinations for basic and first processed iron and steel and ferro-alloys (CPA Groups 27.1 and 27.3), as were Norway, Switzerland and Saudi Arabia for tubes. As regards imports, Russia was the largest supplier to the EU-25 of basic and first processed iron and steel and ferro-alloys in 2002, with an 18.4 % share for ECSC products (CPA Group 27.1) and a 23.7 % share for non-ECSC products (CPA Group 27.3). Switzerland accounted for 20.6 % of the EU-25's imports of tubes (CPA Group 27.2).

Figure 8.4
Basic iron and steel and ferro-alloys (ECSC); tubes; other iron and steel and non-ECSC ferro-alloys (CPA Groups 27.1, 27.2 and 27.3)
Share in extra-EU trade, 2002



Source: Eurostat, Comext.

8.2: 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), aluminium, lead, zinc, tin, copper, chrome, nickel and manganese.

STRUCTURAL PROFILE

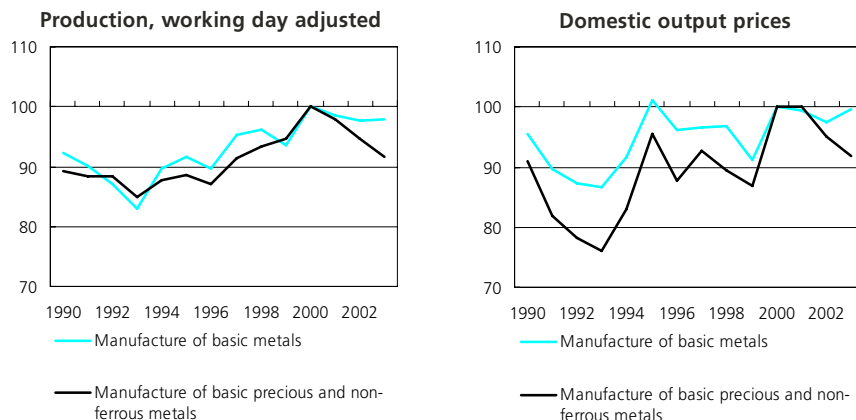
The value added generated in the EU-25's basic precious and non-ferrous metals sector was EUR 14.7 billion in 2001. The 10 new Member States contributed 4.8 % to this total (EUR 0.7 billion). There were 197 100 persons employed in this sector in the EU-15 in 2001, practically all of whom were employees, while in the EU-25 there were 225 900 persons employed ⁽⁵⁾.

Germany accounted for almost one third of total EU-25 value added in 2001 (31.3 %), while the United Kingdom, France and Italy each had shares of between 13.4 and 10.0 %, bringing the total contribution of these countries to almost two thirds of the EU-25 total. However, Luxembourg emerged in relative terms as by far the most specialised country for the manufacture of basic precious and non-ferrous metals, as the contribution of this sector to national manufacturing value added was four times greater than the corresponding EU-25 average. Slovakia, and to a lesser extent Belgium, also reported relatively high specialisation ratios ⁽⁶⁾, as opposed to Cyprus (2000), Ireland (1999), Lithuania, Malta and Portugal who were the least specialised in this sector.

⁽⁵⁾ Estonia, not available; Cyprus and Latvia, 2000; Slovenia, number of employees.

⁽⁶⁾ Denmark and Cyprus, 2000; Ireland, 1999; Estonia, Greece and the Netherlands, not available.

Figure 8.5 Manufacture of basic precious and non-ferrous metals (NACE Group 27.4) Main indicators, EU-25 (2000=100)



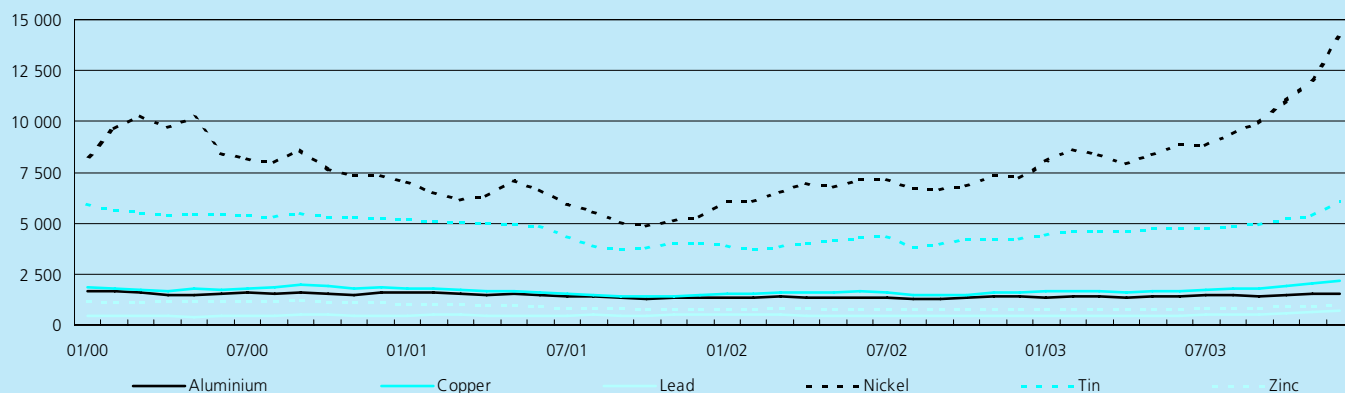
Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Table 8.9 Secondary production of metals, EU-25, 2000 (thousand tonnes) (1)

	Production	Share of EU-25 in world secondary production (%)
Aluminium	2 452	27.5
Copper	904	46.1
Lead	873	29.8
Tin	8 878	35.5
Zinc	100	28.7

(1) Secondary metal production: metal recovered from scrap by remelting and refining.
Source: USGS, Minerals Yearbook 2002.

Figure 8.6 Metal prices (USD per tonne, cash settlement price)



Source: LME.

Table 8.10

Manufacture of basic precious and non-ferrous metals (NACE Group 27.4)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Manufacture of basic precious and non-ferrous metals	71.6	164.4	43.5
Precious metals production	97.7	266.5	36.6
Aluminium production	68.8	159.0	43.2
Lead, zinc and tin production	77.9	160.7	48.5
Copper production	67.2	154.4	43.5
Other non-ferrous metal production	79.2	182.8	43.3

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

LABOUR AND PRODUCTIVITY

The basic precious and non-ferrous metals sector reported the highest apparent labour productivity among metals manufacturing NACE groups in the EU-15 in 2001, at EUR 71 600 per person employed, against a metals manufacturing average of EUR 58 400. Due to average personnel costs more in line with the other metals manufacturing NACE groups, the wage adjusted labour productivity ratio in the EU-15 for this sector (164.4 %) was clearly above the metals manufacturing average (142.7 %).

EXTERNAL TRADE

The EU trade deficit for basic precious and metals clad with precious metals (CPA Group 27.4) reached EUR 21.0 billion in the EU-25, which was the third largest among CPA groups of manufactured goods. The main origin of EU imports of these metals were Russia, Switzerland and South Africa, which provided between 13.8 and 10.7 % of the EU-25's imports in 2002. The United States constituted the main export market, accounting for 21.9 % of the EU-25 total, followed by Switzerland with a 17.8 % share.

Table 8.11

Basic precious metals and metals clad with precious metals (CPA Group 27.4)
External trade, EU-25, 2002

	Exports		Imports		Trade balance (EUR million)
	Value (EUR million)	Share of total (%)	Value (EUR million)	Share of total (%)	
Basic precious metals and metals clad with precious metals	12 883	100.0	33 853	100.0	-20 970
Precious metals	3 717	28.9	14 335	42.3	-10 618
Aluminium and aluminium products	4 568	35.5	9 409	27.8	-4 841
Lead, zinc and tin and products thereof	349	2.7	990	2.9	-642
Copper products	2 621	20.3	4 339	12.8	-1 718
Other non-ferrous metal products	1 629	12.6	4 780	14.1	-3 150

Source: Eurostat, Comext.

8.3: CASTING

NACE Group 27.5 concerns the casting of metals, covering the manufacture of semi-finished products, as well as castings for downstream customers according to tailor-made specifications. The information contained in this subchapter does not include the manufacture of standardised, finished cast products, such as pipes (treated as part of NACE Group 27.2) or boilers or radiators (treated as part of NACE Groups 28.2 and 28.3). Note also that external trade statistics are not available for foundry work services (CPA Group 27.5).

STRUCTURAL PROFILE

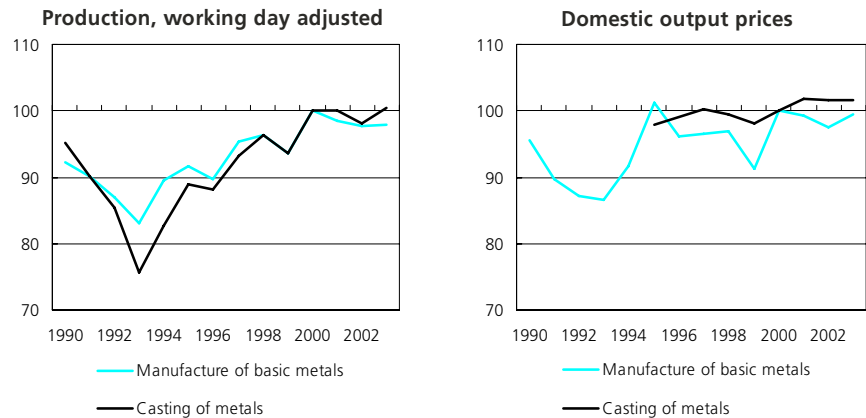
Casting activities in the EU-25 generated value added of EUR 10.5 billion in 2001, or 18.8 % of the metals manufacturing total. The 10 new Member States contributed EUR 0.6 billion to this amount, equivalent to 6.0 % of the EU-25 total, which was slightly less than for metals manufacturing as a whole (6.8 %). There were 226 300 persons employed in EU-15 casting activities in 2001, or one quarter of the metals manufacturing total, while the addition of the 10 new Member States brought the total number of persons employed in the EU-25 ⁽⁷⁾ up to 281 800.

Three quarters of the EU-25's casting value added originated from just four countries in 2001. Germany was the largest contributor with 32.0 % of the total, followed by Italy (16.6 %), France (13.0 %) and the United Kingdom (12.9 %). However the most specialised countries were Slovenia and the Czech Republic, where casting's contribution to manufacturing value added was more than double the EU-25 average ⁽⁸⁾. Sweden and Slovakia were among the least specialised countries, while no casting activity was recorded in Cyprus and Malta (2000).

⁽⁷⁾ Estonia, not available; Malta, 2000; Latvia and Lithuania, 2002; Slovenia, number of employees.

⁽⁸⁾ Denmark, Ireland and Malta, 2000; Estonia, Greece, Cyprus, Latvia, Lithuania and Luxembourg, not available.

Figure 8.7
Casting of metals (NACE Group 27.5)
Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Table 8.12
Total production of metal castings, 2002
(thousand tonnes)

	Iron, steel and malleable iron castings	Non-ferrous metal castings
BE	143.7	26.7
CZ	381.6	59.6
DK	87.3	4.6
DE	3 749.7	845.8
EE	:	:
EL	:	:
ES	992.9	149.9
FR	2 128.6	390.3
IE	:	:
IT	1 460.9	979.7
CY	:	:
LV	:	:
LT	:	:
LU	:	:
HU	67.9	68.3
MT	:	:
NL	123.7	:
AT	181.2	116.2
PL	598.0	76.3
PT	96.7	25.6
SI	:	:
SK	:	:
FI	112.5	9.7
SE	234.6	52.9
UK	886.3	:

Source: CAEF, The European Foundry Association.

Table 8.13

Casting of metals (NACE Group 27.5)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Casting of metals	43.7	128.4	34.0
Casting of iron	43.4	121.2	35.8
Casting of steel	44.2	128.2	34.5
Casting of light metals	44.6	131.1	34.0
Casting of other non-ferrous metals	42.6	143.5	29.7

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

LABOUR AND PRODUCTIVITY

The casting sector recorded the lowest apparent labour productivity of all NACE groups in metals manufacturing, at EUR 43 700 per person employed in the EU-15 in 2001. Only Spain, Italy, Austria and Portugal reported higher apparent labour productivity in casting than in manufacturing activities ⁽⁹⁾, although by this measure productivity was still below the metals manufacturing average in all four of these countries. Average personnel costs were EUR 28 700 per employee in the EU-25 in 2001, against a metals manufacturing average of EUR 34 700 and the overall manufacturing average of EUR 30 900. Nevertheless, combining these two indicators and adjusting to take account of the share of employees in persons employed, the wage adjusted labour productivity ratio was the lowest of the NACE groups in metals manufacturing at 128.4 % in the EU-15 in 2001.

⁽⁹⁾ Denmark, Estonia, Greece, Ireland, Cyprus, Latvia, Lithuania, Luxembourg, Malta and Slovenia, not available.

Table 8.14

Manufacture of basic metals (NACE Division 27)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	12 937	4 262	1 409	59 378	11	2 940	19 162	30 077	482	35 617	47	203	34	1 668
Value added at factor cost (EUR million)	2 596	917	434	16 317	2	689	4 660	6 517	141	7 163	15	64	8	453
Purchases of goods and services (EUR million)	10 589	3 639	0	45 855	10	:	15 143	24 964	258	29 783	33	158	27	1 584
Gross investment in tangible goods (EUR million)	708	477	73	2 887	0	:	1 238	1 155	20	2 288	4	15	1	:
Number of persons employed (thousands)	40	73	9	270	0	11	76	125	3	140	0	3	1	6
App. labour productivity (EUR thous./pers. emp.)	64.1	12.6	47.7	60.3	6.3	60.5	61.0	52.1	48.1	51.1	44.9	19.9	6.0	74.0
Average personnel costs (EUR thous./employee) (1)	55.3	8.0	37.5	44.9	3.9	:	34.4	38.9	33.3	34.1	20.0	6.2	5.0	52.5
Wage adjusted labour productivity (%) (1)	115.9	158.3	127.2	134.3	161.4	:	177.5	133.9	144.5	149.9	233.0	322.3	119.6	140.8
Gross operating rate (%) (2)	2.8	7.8	6.8	6.8	6.0	:	10.5	5.2	9.0	7.1	17.3	22.1	3.9	6.5
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	1 766	2	5 651	7 767	5 349	1 432	830	1 934	4 876	7 646	22 086	940	2 604	:
Value added at factor cost (EUR million)	271	1	1 547	2 570	1 837	325	163	503	1 201	2 298	5 284	101	437	:
Purchases of goods and services (EUR million)	1 593	1	4 155	5 498	3 849	1 178	621	1 462	3 770	5 586	17 906	933	2 361	:
Gross investment in tangible goods (EUR million)	83	0	232	522	169	94	80	114	222	410	637	139	275	:
Number of persons employed (thousands)	20	0	24	32	76	12	:	31	17	35	103	28	103	:
App. labour productivity (EUR thous./pers. emp.)	13.3	14.8	63.7	80.2	24.1	27.5	:	16.2	72.5	65.4	51.3	3.6	4.2	:
Average personnel costs (EUR thous./employee)	9.5	13.9	44.5	48.5	9.4	16.3	15.0	7.1	43.0	42.6	42.2	3.8	3.9	:
Wage adjusted labour productivity (%)	141.0	107.1	143.0	165.4	256.5	169.3	:	228.9	168.5	153.7	121.5	95.9	107.3	:
Gross operating rate (%)	4.3	13.3	8.1	12.8	19.2	8.9	3.6	14.6	9.9	10.4	4.2	-0.3	1.4	:

(1) Ireland and Cyprus, 2000.

(2) Ireland, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Metal products



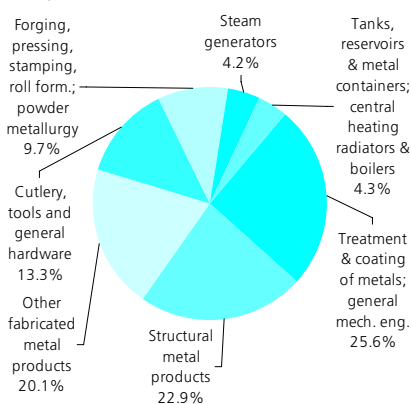
The metal products sector processes materials that are provided by the previous production stage, namely the manufacture of basic metals (see Chapter 8), and, as such, can be viewed as a secondary stage in the processing of metals. The metal products sector is heterogeneous both in terms of its products and its customers. There are a relatively high number of SMEs operating in the metal products sector, and this may explain why enterprises often focus on the production of a specific product or on the production of goods for a specific downstream market (automotive constructors or the construction sector, for example). In general, enterprises that produce metal products specialise in the manufacture of capital goods (Groups 28.1 to 28.3) and intermediate goods and services (Groups 28.4 to 28.7) made from ferrous and non-ferrous materials, as well as from alloys.

The construction sector demands central heating equipment, hot water boilers or hinges, while other manufacturers are customers for metal packaging, for example, in the form of aluminium tins for the food processing sector. Only a small part of output from this sector finds its way directly to the private, consumer market, for example, products such as cutlery or tools.

Manufacturers using specified materials need to demonstrate the compliance of their products with the requirements of the pressure equipment Directive ⁽¹⁾, and thus permit their products to be marketed within the Single Market, and in order to facilitate this, in November 2003, a first set of European Approvals of Materials (EAMs), which relate to the safety of materials used in pressure equipment, was published. It is expected that this initiative will encourage the use of safer, more modern materials.

⁽¹⁾ Directive 97/23/EC of the European Parliament and the Council concerning pressure equipment.

Figure 9.1
Manufacture of fabricated metal products, except machinery and equipment (NACE Division 28)
Share of value added at factor cost, EU-25, 2001



Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

STRUCTURAL PROFILE

Metal products manufacturers generated EUR 137.9 billion of value added in the EU-25 in 2001, equivalent to 9.0 % of manufacturing value added. There were 3.7 million persons employed in this sector in the EU-25 ⁽²⁾, which equated to 10.9 % of manufacturing employment.

⁽²⁾ Slovenia, number of employees.

The manufacture of fabricated metal products (other than machinery and equipment, which is covered in Chapter 10) is classified within NACE Division 28. It is split into seven different Groups, however, for the purpose of this publication there are three subchapters: the first of which covers structural metal products (NACE Group 28.1); the second covers boilers, metal containers and steam generators (NACE Groups 28.2 and 28.3); and the third all remaining metal products (NACE Groups 28.4 to 28.7). Note that there are no external trade statistics for the services covered by CPA Groups 28.4 (forging, pressing, stamping and roll forming metal services) and 28.5 (treatment and coating of metal services; general mechanical engineering services), as these are not goods that are traded.

NACE

- 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.

Table 9.1

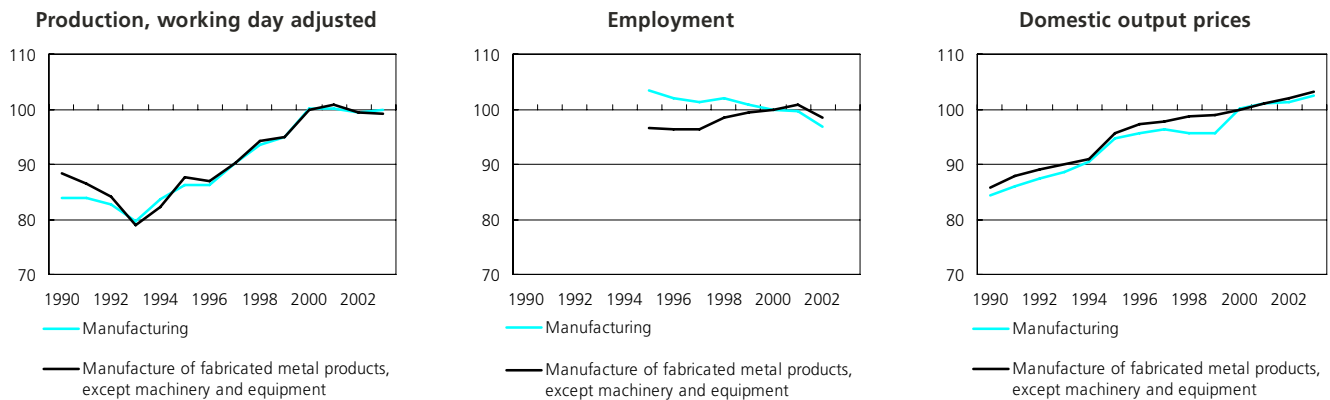
Manufacture of fabricated metal products, except machinery and equipment (NACE Division 28)
Structural profile, 2001

Rank	Largest value added (EUR billion)	Highest value added specialisation relative to manufacturing (EU-25=100)	Largest number of persons employed (thousands) (1)	Main EU-25 trading partners: origin of imports, 2002 (EUR billion)	Main EU-25 trading partners: destination of exports, 2002 (EUR billion)
1	Germany (38.0)	Italy (140)	Germany (816.0)	China (3.6)	United States (4.7)
2	Italy (25.5)	Slovenia (131)	Italy (686.0)	United States (2.5)	Switzerland (2.3)
3	France (19.3)	Luxembourg (129)	France (457.8)	Switzerland (2.1)	Norway (1.2)
4	United Kingdom (18.7)	Spain (115)	United Kingdom (383.6)	Taiwan (1.3)	Russian Federation (1.1)
5	Spain (10.8)	Czech Republic (108)	Spain (344.3)	Japan (0.9)	China (1.1)

(1) Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 9.2

Manufacture of fabricated metal products, except machinery and equipment (NACE Division 28)
Main indicators, EU-25 (2000=100)


Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/eht).

Treatment and coating of metals and general mechanical engineering (NACE Group 28.5) accounted for 25.6 % of the value added generated in the metal products sector in the EU-25 in 2001, and as such was the largest subsector. The structural metal products subsector (NACE Group 28.1, 22.9 %) and the other fabricated metal products subsector (NACE Group 28.7, 20.1 %) followed. The cutlery, tools and general hardware subsector (NACE Group 28.6) was about half the size of the treatment and coating subsector, and generated 13.3 % of value added, while the remaining NACE groups (the manufacture of tanks, reservoirs and containers of metal; the manufacture of central heating radiators and boilers; and the manufacture of steam generators) accounted for just over 4 % each of value added in this sector.

A breakdown by Member State shows that more than one quarter of the value added generated by metal products manufacturers in the EU-25 was contributed from Germany (27.5 %) in 2001. Italy (18.5 %), France (14.0 %), the United Kingdom (13.5 %) and Spain (7.8 %) followed in the ranking. The remaining Member States reported values below 4 %.

In terms of manufacturing specialisation, Italy, Slovenia, Luxembourg and Spain were the most specialised Member States in this sector, all generating more than 10 % of their manufacturing value added within the metal products sector. In contrast, Poland and Ireland were the least specialised.

The working day adjusted production index of metal products manufacturing recorded a low in 1993, after which a period of expansion was experienced through to 2001, averaging 3.1 % growth per annum, with only 1996 recording a year-on-year reduction (-0.9 %). In 2002, following five consecutive years of growth, the production index fell by 1.3 % and in 2003 the index fell again, but by a modest 0.2 %. As such, the development in the metal products manufacturing branch since 1993 was very similar to that of manufacturing as a whole. Several of the new Member States recorded very strong growth in output in recent years. For example, in the five years to 2003, Estonia averaged 16.6 % growth per annum, Poland 12.6 % and Latvia and Lithuania around 7 %.

The EU-25's employment index for the metal products sector followed a similar evolution to that of the production index, although with slower growth through to 2001 (averaging 0.9 % per annum over five years), and a larger contraction in 2002 (-2.4 %).

Table 9.2

Manufacture of fabricated metal products, except machinery and equipment (NACE Division 28)
Value added at factor cost and persons employed, by enterprise size-class, 2001 (% of total)

	Micro enterprises		Small enterprises		Medium-sized enterprises		Large enterprises	
	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed
EU-25	14.1	:	34.3	:	29.0	:	22.6	:
EU-15	15.7	20.7	34.2	35.7	28.1	26.3	21.9	17.3

Source: Eurostat, Structural Business Statistics (theme4/sbs/sizclass).

The development of output prices in the EU-25 for the metal products sector followed a similar evolution to that recorded for the whole of manufacturing, with the exception of the period from 1998 to 2000, when manufacturing price growth stopped and then rose sharply, in contrast to a more regular pattern of price increases within metal products manufacturing. In the 10 years to 2003 the annual average output prices' growth rates in manufacturing (1.5 %) and for metal products manufacturing (1.4 %) were very close.

Even if micro enterprises (with less than 10 persons employed) generated the smallest proportion (14.1 %) of EU-25 value added in the metal products sector; this was 6.8 percentage points more than the contribution of micro enterprises to total manufacturing value added. Large enterprises (with 250 or more persons employed) generated over one fifth (22.6 %) of the value added generated by the metal products sector, compared with more than half (54.9 %) in manufacturing as a whole. The remaining enterprises from the metal products manufacturing sector, small and medium-sized (with 10 to 249 persons employed), generated together more than 60 % of value added (while the manufacturing average was 37.8 %). In employment terms, micro enterprises in the EU-15 accounted for a larger share of the metal products activity, providing employment for 20.7 % of those employed, while the employment share of large enterprises was 17.3 %, 4.6 percentage points less than their share of value added.

Table 9.3

Manufacture of fabricated metal products, except machinery and equipment (NACE Division 28)

Labour force characteristics, 2002

	Share of men		Share of full-time		Share of employees	
	Value (%)	Index (manu-facturing=100)	Value (%)	Index (manu-facturing=100)	Value (%)	Index (manu-facturing=100)
EU-25	:	:	:	:	:	:
EU-15	83.6	116.7	94.2	102.0	90.1	98.1
BE	81.2	109.3	89.7	98.5	93.2	98.4
CZ	79.6	129.3	97.5	99.9	88.3	95.4
DK	86.7	126.7	93.7	101.0	91.4	94.6
DE	80.9	112.7	92.4	103.0	94.9	99.5
EE	79.1	151.7	97.8	101.1	98.8	102.3
EL	92.6	130.5	98.8	100.8	64.7	88.2
ES	90.4	121.8	97.9	101.0	84.3	95.3
FR	84.8	119.9	97.2	103.0	95.2	100.4
IE	89.6	129.6	96.6	102.9	86.5	94.0
IT	80.9	116.2	95.2	100.5	81.8	98.9
CY	84.5	134.4	97.8	104.8	71.6	89.5
LV	94.6	153.3	87.4	92.3	100.0	104.6
LT	94.1	184.2	95.5	100.7	94.0	97.5
LU	84.9	104.7	90.8	95.0	96.5	98.2
HU	78.0	130.7	98.1	100.5	89.1	95.5
MT	100.0	142.8	92.9	96.1	64.8	69.6
NL	89.0	115.4	86.0	114.6	95.5	99.3
AT	81.3	109.3	:	:	95.9	100.7
PL	:	:	:	:	:	:
PT	88.3	157.5	96.6	99.6	74.3	85.2
SI	82.1	136.0	96.4	99.7	91.7	97.8
SK	80.9	136.6	99.0	100.3	93.5	97.3
FI	84.3	119.9	98.0	102.7	91.3	97.6
SE	83.9	113.5	90.8	99.1	89.7	95.4
UK	84.8	113.4	92.7	100.6	92.3	97.0

Source: Eurostat, Labour Force Survey.

LABOUR AND PRODUCTIVITY

Men made up 83.6 % of the metal products workforce in the EU-15's metal products sector in 2002. The corresponding figure for manufacturing as a whole was 71.7 %, clearly lower, which was a situation repeated in all of the Member States⁽³⁾. By far the highest deviation, in relative terms, was in Lithuania, where 94.1 % of the workforce was male in the metal products manufacturing sector, compared with 51.1 % in manufacturing.

⁽³⁾ Poland, not available.

Analysing the full-time and part-time employment rates of the metal products manufacturing sector, 94.2 % of persons were in full-time employment in 2002, which was 1.8 percentage points higher than the corresponding figure for manufacturing. Among the Member States⁽⁴⁾, the Netherlands reported the largest difference between full-time employment rates for metal products manufacturing (86.0 %) and for the manufacturing sector as a whole (75.1 %).

⁽⁴⁾ Austria and Poland not available.

Table 9.4

Manufacture of fabricated metal products, except machinery and equipment (NACE Division 28)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Manufacture of fabricated metal products, except machinery and equipment	41.7	131.9	31.6
Structural metal products	36.7	125.5	29.2
Tanks, reservoirs & metal containers; central heating radiators & boilers	46.3	135.5	34.2
Steam generators, except central heating hot water boilers	42.9	108.2	39.6
Forging, pressing, stamping and roll forming of metal; powder metallurgy	45.9	134.8	34.0
Treatment and coating of metals; general mechanical engineering	39.5	132.0	29.9
Cutlery, tools and general hardware	49.2	139.9	35.2
Other fabricated metal products	44.4	140.7	31.5

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

In 2002 some 90.1 % of those employed in the EU-15's metal products sector were paid employees, the rest being self-employed or family workers; as such, this proportion was slightly lower than the corresponding figure for manufacturing as a whole (91.9 %). Malta recorded one of the lowest proportions of paid employees in the metal products manufacturing sector (64.8 %) among the Member States ⁽⁵⁾ and consequently the highest deviation between the metal products sector and the national manufacturing average (93.1 %).

Apparent labour productivity in the EU-15's metal products sector was EUR 41 700 per person employed, which was EUR 9 500 lower than the corresponding figure in the manufacturing sector in 2001. This pattern of apparent labour productivity being lower in the metal products sector than for the manufacturing average was observed in every Member State ⁽⁶⁾, with the exception of Estonia. Poland reported the lowest level of apparent labour productivity (EUR 3 300 per person employed) among the Member States ⁽⁷⁾ within the metal products manufacturing sector and also the highest relative difference for this indicator between value added in the metal products sector and the national manufacturing average (EUR 19 100).

⁽⁵⁾ Poland, not available.

⁽⁶⁾ Slovenia, not available.

⁽⁷⁾ Slovenia, not available.

Average personnel costs in the metal products manufacturing sector in the EU-25 were EUR 28 400 per employee in 2001, lower than the manufacturing average of EUR 30 900. This pattern of somewhat lower average personnel costs was observed in the majority of Member States ⁽⁸⁾, with the exception of the Czech Republic and Estonia.

The particularly low apparent labour productivity ratio and the somewhat more typical average personnel costs figures resulted in the metal products sector having a lower than average wage adjusted labour productivity ratio in the EU-15. Value added in 2001 was the equivalent of 131.9 % of personnel costs (after an adjustment for the ratio of persons employed to employees). This value could be compared with the EU-15 manufacturing average of 143.5 %. In all Member States ⁽⁹⁾, wage adjusted labour productivity ratios for the metal products manufacturing sector were lower than the corresponding values of recorded for the manufacturing average. Poland was also the only Member State that registered a value of less than 100 % for this ratio, indicating that adjusted personnel costs were higher than value added; this resulted mainly from negative value added within NACE Group 28.5 (the treatment and coating of metals).

⁽⁸⁾ Greece, Ireland and Cyprus, not available.

⁽⁹⁾ Greece, Ireland, Cyprus and Slovenia, not available.

EXTERNAL TRADE

In 2002 there were EUR 23.0 billion of fabricated metal products (CPA Division 28) exported from the EU-25, while imports were valued at EUR 14.8 billion. These figures equated to 2.7 % of total manufacturing exports and 2.0 % of manufacturing imports.

An analysis of the CPA groups that make up fabricated metal products, indicates that other fabricated metal products (CPA Group 28.7) accounted for the highest proportion (40.3 %) of EU-25 exports in 2002, followed by cutlery, tools and general hardware (CPA Group 28.6, 28.0 %) and structural metal products (CPA Group 28.1, 15.3 %). The remaining two groups, tanks, reservoirs and containers of metal/central heating radiators and boilers (CPA Group 28.2) and steam generators (CPA Group 28.3) together accounted for 15.8 % of the exports of fabricated metal products. A trade surplus was recorded for each of the CPA groups, reaching over EUR 2 billion for structural metal products and for steam generators.

Fabricated metal products exported from the EU-25 were mainly destined for the United States, which accounted for 20.3 % of total exports in 2002. Switzerland was the next largest destination, with a share that was half the American level (9.8 %). The main origins of EU-25 imports were China (24.6 %), the United States (16.6 %) and Switzerland (14.1 %), together providing more than half of the EU-25's imports in 2002.

Germany exported (intra- and extra-EU trade combined) the highest value of fabricated metal products, EUR 22.7 billion worth, corresponding to a 29.3 % share of all fabricated metal product exports made by the Member States in 2002. This was more than twice as high as the share of the next largest exporter, Italy (13.9 %).

Table 9.5

Fabricated metal products, except machinery and equipment (CPA Division 28)
External trade, EU-25, 2002 (EUR million)

	Exports	Imports	Trade balance	Cover ratio (%)
Fabricated metal products, except machinery and equipment	22 968	14 810	8 158	155.1
Structural metal products	3 519	906	2 613	388.4
Tanks, reservoirs & metal containers; central heating radiators & boilers	1 204	464	740	259.5
Steam generators, except central heating hot water boilers	2 427	113	2 314	2 143.2
Cutlery, tools and general hardware	6 442	5 618	824	114.7
Other fabricated metal products	9 267	7 700	1 567	120.3

Source: Eurostat, Comext.

9.1: STRUCTURAL METAL PRODUCTS

This subchapter includes information on NACE Group 28.1 that covers structural metal products. This activity manufactures metal products for use in the construction sector (see Chapter 15), in particular metal supports and structures, prefabricated buildings, metal doors, window frames and shutters.

Structural metal products are mainly used in the construction sector and therefore the economy of the structural metal products manufacturing sector is closely linked to developments in the construction sector (both for new housing starts and for renovation).

STRUCTURAL PROFILE

In 2001 the EU-25's structural metal products sector generated EUR 31.6 billion of value added, which was equivalent to 22.9 % of the value added for the whole of the metal products sector. The structural metal products sector employed 952 000 persons in the EU-25 ⁽¹⁰⁾ in 2001, which was just over one quarter (25.6 %) of the metal products manufacturing total.

The manufacture of structural metal products is composed of the manufacture of metal structures and parts of structures (NACE Class 28.11) and the manufacture of builders' carpentry and joinery of metal (NACE Class 28.12). Almost three quarters (73.0 %) of the value added in this sector in the EU-15 was accounted for by the manufacture of metal structures and parts of structures in 2001. In terms of employment, the relative importance of these two sectors together was lower, at 66.4 % of the EU-15 total for structural metal products manufacturing.

⁽¹⁰⁾ Slovenia, number of employees.

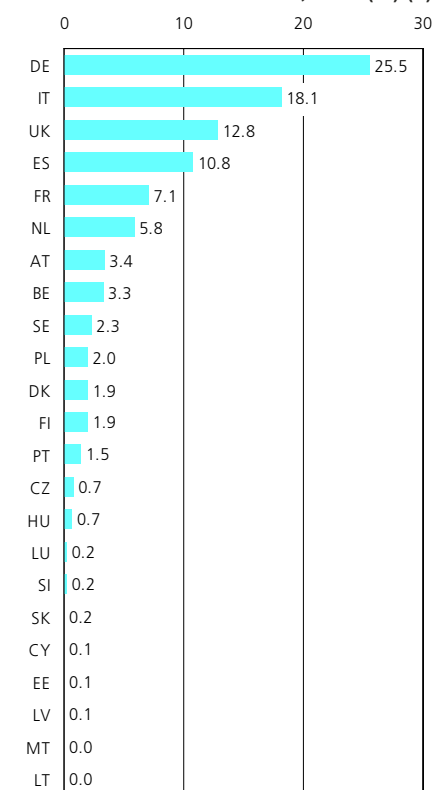
Germany generated EUR 8.1 billion of value added in 2001 within the structural metal products manufacturing sector, equivalent to 25.5 % of the EU-25 total. Italy (18.1 %), the United Kingdom (12.8 %) and Spain (10.8 %) had the next largest shares. Several of the smaller new Member States, in particular Cyprus, Malta and Estonia, generated more than 40 % of their metal products manufacturing value added within this sector ⁽¹¹⁾.

The production index for structural metal products manufacturing in the EU-25 shows that, while this activity has grown since its low of 1994, a year in which the index fell by 6.2 %, growth was neither strong nor continuous. In both 1996 and 1997 the production index fell by 0.5 %, and despite strong growth in 1998 (4.9 %), 1999 (7.1 %) and 2000 (3.3 %), the index of production in 2001 was still below its level of 1992. In 2002 the positive development of the previous four years came to an end and activity in the structural metal products branch contracted by 2.5 %. In 2003, the EU-25 recorded modest output growth (0.4 %), while the situation in the EU-15 was stable (-0.1 %).

The development of domestic output prices in EU-25 structural metal products manufacturing showed annual increases averaging 1.7 % in the 10 years to 2003, slightly higher than the average for metal products manufacturing (1.4 %).

⁽¹¹⁾ Poland generated the equivalent of 97.6 % of its metal products manufacturing value added in the structural products sector (NACE Group 28.1). However, this ratio is distorted by the large, negative value added recorded within the treatment and coating of metals; general mechanical engineering (NACE Group 28.5). Nevertheless, it can be concluded that Poland was more specialised in the manufacture of structural metal products than the EU-25 average.

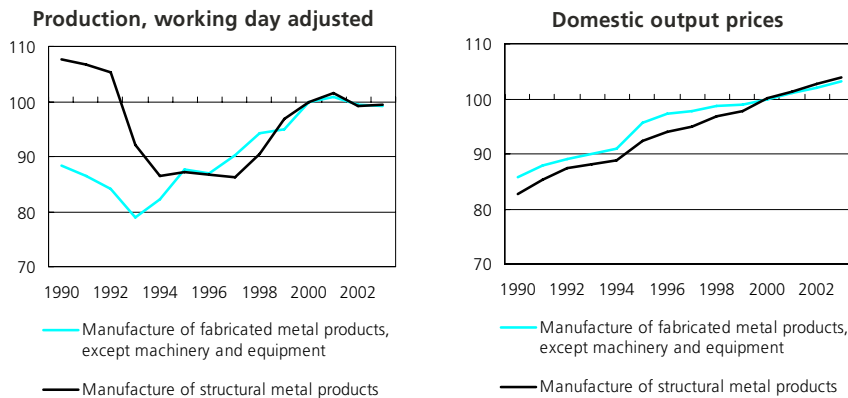
Figure 9.3
Manufacture of structural metal products (NACE Group 28.1)
Share of EU-25 value added, 2001 (%) (1)



(1) Greece and Ireland, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 9.4

Manufacture of structural metal products (NACE Group 28.1)
Main indicators, EU-25 (2000=100)


Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Table 9.6

Selected structural metal products (CPA Group 28.1), EU-15

	Prodcom code	Latest year for production	Production value (EUR million)
Other structures principally of sheet	28.11.23.50	2001	6 791.4
Other structures of iron or steel	28.11.23.60	2001	19 253.8
Aluminium structures and parts of structures n.e.c.	28.11.23.70	2001	5 529.2
Installation in situ of self produced metal structures	28.11.90.00	2000	2 847.5
Iron or steel doors, thresholds for doors, windows and their frames	28.12.10.30	2001	4 497.5
Aluminium doors, thresholds for doors, windows and their frames	28.12.10.50	2001	8 343.6

Source: Eurostat, European production and market statistics (Comext).

LABOUR AND PRODUCTIVITY

In 2001, apparent labour productivity for the structural metal products manufacturing sector was EUR 36 700 per person employed in the EU-15. This was EUR 5 000 less than the average for metal products manufacturing (EUR 41 700), and was the lowest level of apparent labour productivity among any of the groups in the metal products manufacturing sector.

Average personnel costs in 2001 were EUR 26 200 in the EU-25's structural metal products manufacturing sector, nearly 10 % less than the average for metal products manufacturing; again, this was the lowest level for any metal products manufacturing group.

Despite low average personnel costs, the wage adjusted labour productivity ratio of the structural metal products manufacturing sector in the EU-15 in 2001 was the lowest among the NACE groups that form the metal products manufacturing sector. This ratio showed that value added was equivalent to 125.5 % of personnel costs (adjusted for the ratio of persons employed to employees), some 6.4 percentage points lower than the average for the whole of the metal products manufacturing sector. This situation was observed in the majority of the Member States ⁽¹²⁾, with the exception of Poland, Lithuania, Latvia, France, Sweden and Portugal.

⁽¹²⁾ Greece, Ireland, Cyprus and Slovenia, not available.

EXTERNAL TRADE

Exports of structural metal products (CPA Group 28.1) amounted to EUR 3.5 billion in the EU-25 in 2002, equivalent to 15.3 % of total exports of fabricated metal products. Imports were much lower, at EUR 905.9 million, resulting in a trade surplus of EUR 2.6 billion.

The vast majority (90.3 %) of exports were composed of metal structures and parts of structures (CPA Class 28.11) and this was also true of imports, although to a lesser extent (85.8 % of the total).

Switzerland was the most important destination for the EU-25's exports of structural metal products in 2002, accounting for 15.5 % of the total. Norway (10.8 %), the United States (9.7 %) and Russia (7.3 %) were the next most significant export markets, with no other country accounting for more than 3 % of exports. Switzerland was by far the most important origin of EU-25 imports of structural metal products in 2002, providing more than one quarter (27.7 %) of the total. The United States and China followed, supplying 15.4 % and 7.3 % respectively.

Germany was the largest exporter (intra- and extra-EU exports combined) of structural metal products in 2002, registering nearly one quarter (24.1 %) of the total exports made by the EU-25 Member States. The next largest exporters were Italy, Belgium and the Netherlands, each with between 7 and 10 % of the total. Germany also had the highest share of imports (23.1 %), with France (12.4 %) and the United Kingdom (9.8 %) the next largest markets for imports of structural metal products.

9.2: BOILERS, METAL CONTAINERS AND STEAM GENERATORS

NACE Groups 28.2 and 28.3 are combined in this subchapter. The former covers the manufacture of metal tanks, reservoirs and containers, as well as central heating radiators and boilers. The latter covers the manufacture of steam generators, for example, steam or vapour generators, condensers or nuclear reactors.

The manufacture of boilers, containers and steam generators supplies various downstream sectors, most notably the construction and energy sectors.

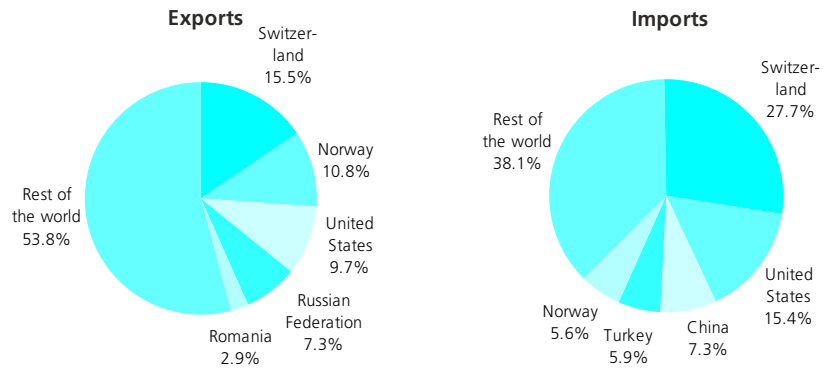
STRUCTURAL PROFILE

The EU-25's boilers, containers and steam generators sector generated EUR 11.7 billion of value added in 2001, equivalent to 8.5 % of the metal products manufacturing sector total. The EU-15 Member States accounted for 94.6 % of this figure, close to their share of manufacturing value added, but less than their share of metal products manufacturing.

In terms of employment, there were 300 300 persons employed ⁽¹³⁾ in the EU-25's boilers, containers and steam generators sector in 2001, while in the EU-15 the figure was 248 000, which equated to 7.7 % of the EU-15's employment within the whole of the metal products manufacturing sector.

⁽¹³⁾ Estonia, 2002, excluding NACE Group 28.3; Slovenia, 1999, number of employees; Cyprus and Lithuania, excluding NACE Group 28.3; Malta, excluding NACE Group 28.2.

Figure 9.5
Structural metal products (CPA Group 28.1)
Share in extra-EU trade, 2002



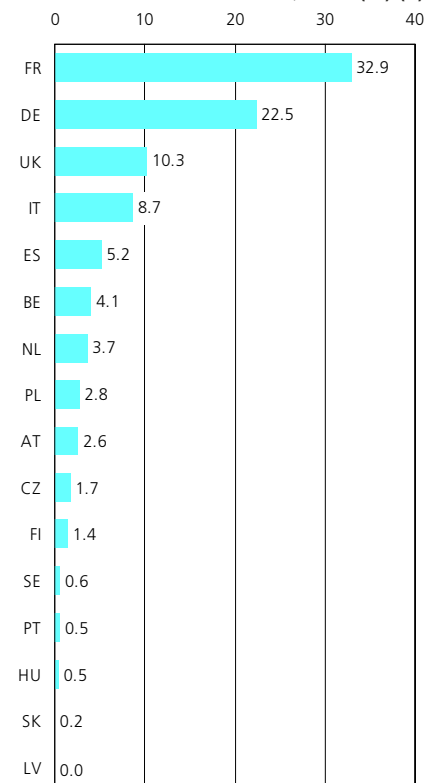
Source: Eurostat, Comext.

The manufacture of steam generators (NACE Group 28.3) generated 49.6 % of this sector's value added in the EU-25 in 2001. This was almost the same as its share within the EU-15 (49.7 %), where the manufacture of central heating radiators and boilers (NACE Class 28.22) accounted for 27.1 % of the value added generated in the boilers, containers and steam generators sector, while the remaining 23.1 % was created in the tanks, reservoirs and containers of metal sector (NACE Class 28.21).

France and Germany contributed the highest shares of value added within the boilers, containers and steam generators sector in the EU-25 in 2001, with EUR 3.8 billion and EUR 2.6 billion respectively, which was equivalent to 32.9 % and 22.5 % of the EU-25 total. In comparison to metal products manufacturing in general, France, Belgium and the Czech Republic were relatively specialised in this activity ⁽¹⁴⁾. Indeed, the manufacture of steam generators recorded the highest value added specialisation ratio in France, on the basis of a comparison across all manufacturing NACE groups in 2001.

⁽¹⁴⁾ Poland recorded the highest specialisation ratio - see the footnote in the previous subchapter.

Figure 9.6
Manufacture of boilers, metal containers and steam generators
(NACE Groups 28.2 and 28.3)
Share of EU-25 value added, 2001 (%) (1)



(1) Denmark, Estonia, Greece, Ireland, Cyprus, Lithuania, Luxembourg, Malta and Slovenia, not available.

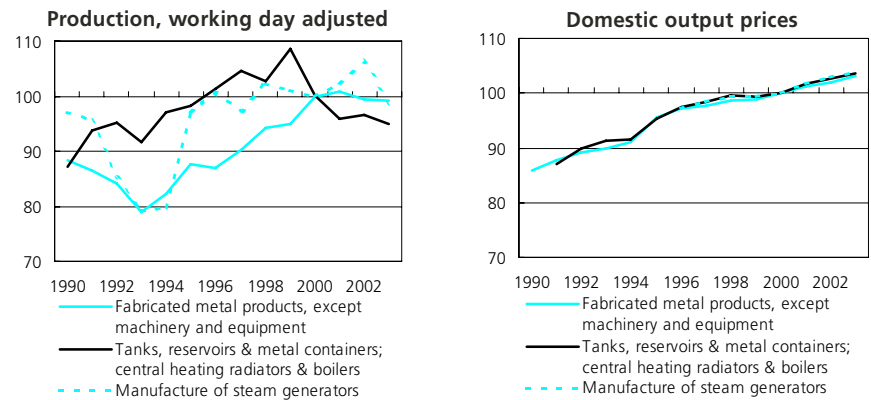
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

The production index for the manufacture of tanks, reservoirs, containers, central heating radiators and boilers (NACE Group 28.2) in the EU-25 grew from a low in 1993 by an average of 2.8 % through until 1999, with 1998 the only year in which the index actually fell (-1.9 %). Strong growth in 1999 (5.7 %) contrasted an even more sizeable contraction in 2000 (-7.8 %) and a further decline in activity in 2001 (-4.1 %). In 2002 more modest growth was recorded (0.7 %), but this was more than erased in 2003 by a further fall of 1.8 %.

The production index for steam generator manufacturing (NACE Group 28.3) in the EU-25 also grew from a low in 1993, by 5.3 % per annum, on average, through to 1998. This relatively high average growth rate was strongly influenced by growth in 1995 (21.5 %). There followed two years of contraction in production (1999 and 2000) and then two years of growth, most notably a gain of 4.2 % in 2002. However, 2003 saw a fall in production, as output declined by 6.9 %. As such the index in 2003 was at its lowest level since 1997.

In terms of EU-25 output prices, the manufacture of tanks, reservoirs, containers, central heating radiators and boilers (NACE Group 28.2) and steam generator manufacturing (NACE Group 28.3) developed in an almost identical manner between 1996 (beginning of the time-series) and 2003. Output prices rose by less than 1 % per annum, on average, during the five years to 2003.

Figure 9.7 Manufacture of boilers, metal containers and steam generators (NACE Groups 28.2 and 28.3) Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/eht).

LABOUR AND PRODUCTIVITY

Apparent labour productivity in the EU-15's manufacture of boilers, containers and steam generators sector was EUR 44 500 per person employed in 2001, which was EUR 2 800 higher than the corresponding figure for the whole of metal products manufacturing. Average personnel costs amounted to EUR 37 000 in the EU-15, again above the average for metal products manufacturing (EUR 31 600). Wage adjusted labour productivity in the EU-15 was 120.3 % in the boilers, containers and steam generators sector, compared to an average of 131.9 % for the whole of metal products manufacturing.

However, the manufacture of tanks, reservoirs, containers, central heating radiators and boilers (NACE Group 28.2) recorded an above average value (135.5 %), while the other subsector, steam generator manufacturing (NACE Group 28.3) recorded the lowest ratio for adjusted labour productivity (108.2 %) among all of the NACE groups that make up the metal products manufacturing sector, mainly due to a particularly low level in Germany.

Table 9.7 Selected boilers, metal containers and steam generators (CPA Groups 28.2 and 28.3), EU-15

	Prodcom code	Latest year for production	Production value (EUR million)
Iron or steel reservoirs, tanks, vats and similar containers for gases; lined or heat-insulated, for liquids of a capacity > 300 litres (excluding compressed or liquefied gas, fitted with mechanical or thermal equipment)	28.21.11.10 and 28.21.11.20	2000	873.4
Iron, steel or aluminium containers for compressed or liquefied gas (excluding steam accumulators)	28.21.12.30 and 28.21.12.50	2000	922.6
Radiators, not electrically heated, and parts thereof of cast iron, iron and steel	28.22.11.30 to 28.22.11.50	2000 (1)	2 110.0
Boilers for central heating	28.22.12.00	2001	4 048.1
Parts of boilers for central heating	28.22.13.00	2000	723.6
Watertube boilers (excluding central heating water boilers capable of producing low pressure steam)	28.30.11.10 to 28.30.11.30	2000	1 023.5
Vapour generating boilers (including hybrid boilers) (excluding central heating hot water boilers capable of producing low pressure steam, watertube boilers)	28.30.11.50	1999	470.6
Super-heated water boilers (excluding central heating hot water boilers capable of producing low pressure steam)	28.30.11.70	2000	151.4

(1) 1999 for one heading in the aggregate.

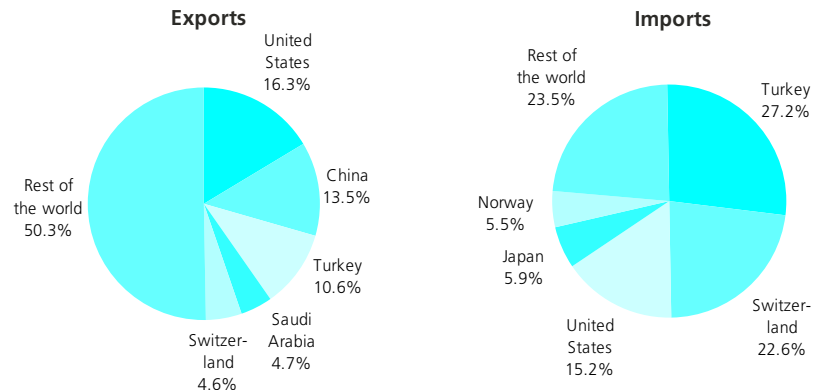
Source: Eurostat, European production and market statistics (Comext).

EXTERNAL TRADE

In 2002 the EU-25 exported boilers, containers and steam generators (CPA Groups 28.2 and 28.3) to the value of EUR 3.6 billion, while EUR 577.3 million worth of goods were imported, resulting in a trade surplus of EUR 3.1 billion and a cover ratio of 629.0 %. EU-25 exports of boilers, containers and steam generators were mainly destined for the United States (16.3 % of EU-25 exports), China (13.5 %) and Turkey (10.6 %) in 2002. The main origins of imports were Turkey (27.2 % of EU-25 imports), Switzerland (22.6 %) and the United States (15.2 %).

By far the largest exporter of these products was Germany, with a 40.8 % share of exports (intra- and extra-EU combined) made by EU-25 Member States, nearly three times as much as Italy, the second largest exporter (14.3 %). The largest importers were the United Kingdom and Germany, each accounting for just under 17 % of the total.

Figure 9.8
Boilers, metal containers and steam generators (CPA Groups 28.2 and 28.3)
Share in extra-EU trade, 2002



Source: Eurostat, Comext.

9.3: MISCELLANEOUS METAL PRODUCTS

The remaining four NACE groups that form Division 28 are placed together in this final subchapter. The first (NACE Group 28.4) covers forging, pressing, stamping and roll forming of metal. The second (NACE Group 28.5) covers the treatment and coating of metal, as well as general mechanical engineering (such as turning, milling, welding or planing metal pieces). The third (NACE Group 28.6) covers the manufacture of cutlery, tools and general hardware, such as locks and hinges. The final activity (NACE Group 28.7) includes information on other fabricated metal products, such as the manufacture of metal drums, light metal packaging (including metal tins and cans for food producers), wire products, fasteners, screws, baths and sinks made of metal and household articles made of metal (saucepans and non-electric kitchen appliances). The aggregate consisting of these four NACE groups is hereafter referred to as miscellaneous metal products manufacturing.

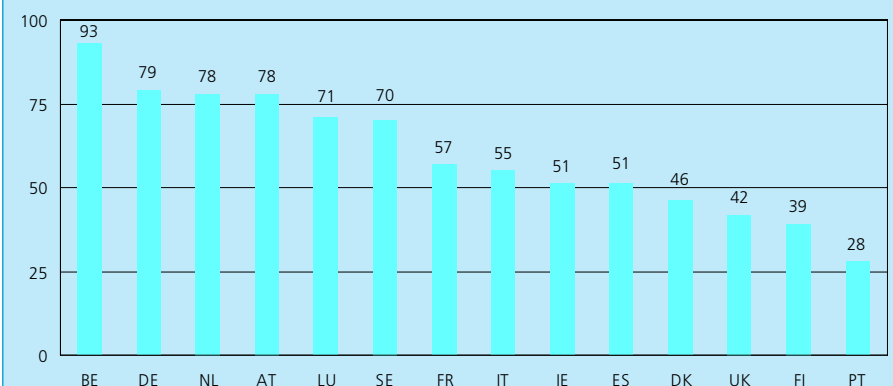
Steel packaging may bring advantages in the transport and storage of products, as it can combine low weight and robustness; in particular steel cans may be favourable for non-durable products that quickly deteriorate when in contact with air, light or water.

At the beginning of 2004, an amendment to the packaging directive ⁽¹⁵⁾ (see Subchapter 13.3) was adopted. This modified

⁽¹⁵⁾ Directive 94/62/EC of the European Parliament and the Council concerning packaging and packaging waste.

the recovery rates for packaging, setting the target for metal packaging at a minimum of 50 % to be achieved by the end of 2008 for EU-15 Member States, except for Greece, Ireland and Portugal who would have an extra three years. The Association of European Producers of Steel for Packaging (APEAL) provides data for 2002 in terms of steel recycling and shows that 10 of the 14 EU-15 Member States with data available already met these recycling targets in 2002 (see Figure 9.9).

Figure 9.9
Recycling rate of steel packaging, EU-15 Member States, 2002 (%) (1)



(1) Greece, not available; Belgium, the Netherlands, Luxembourg and Finland, steel and aluminium packaging. Source: APEAL.

STRUCTURAL PROFILE

In 2001 miscellaneous metal products manufacturing generated EUR 94.7 billion of value added in the EU-25 (98.2 % of which was accounted for by the EU-15). The EU-25 figure was equivalent to 68.6 % of the total value added generated by the metal products manufacturing sector as a whole. In terms of employment, there were 2.5 million persons employed ⁽¹⁶⁾ in the EU-25's miscellaneous metal products manufacturing sector in 2001. The miscellaneous metal products manufacturing sector employed 66.7 % of those employed in the EU-15's metal products manufacturing sector, less than its corresponding share of value added (69.2 %).

Among the four NACE groups that make up the miscellaneous metal products manufacturing sector, the largest activity was the treatment and coating of metals and general mechanical engineering (NACE Group 28.5), which contributed EUR 35.3 billion, or 25.6 % of the value added created within the metal products manufacturing sector in 2001. It was followed by the manufacture of other fabricated metal products (NACE Group 28.7) and by the manufacture of cutlery, tools and general hardware (NACE Group 28.6) making up respectively 20.1 % and 13.3 % of the total. The smallest activity was forging, pressing, stamping and roll forming of metal, and powder metallurgy (NACE Group 28.4), which accounted for 9.7 % of value added in the metal products manufacturing sector. A similar analysis based on employment shows approximately the same distribution between subsectors.

In 2001, Germany contributed the highest share of value added within the miscellaneous metal products manufacturing sector, contributing EUR 27.3 billion of value added, which was 28.9 % of the EU-25 total. Italy had the next highest share (19.8 %), followed by the United Kingdom and France, with around 14 % of EU-25 value added each.

⁽¹⁶⁾ Estonia, excluding NACE Group 28.4; Lithuania, excluding NACE Group 28.5; Malta, NACE Group 28.6, 2000; Slovenia, number of employees.

An analysis of the importance of the particular subsectors relative to the metal products manufacturing in each country indicates the following specialisation in 2001 in terms of value added. Germany, France and Slovenia were most specialised ⁽¹⁷⁾ in forging, pressing, stamping and roll forming of metal/powder metallurgy. Sweden, Finland and France were relatively specialised ⁽¹⁸⁾ in the treatment and coating of metals, and general mechanical engineering, while in the manufacture of cutlery, tools and general hardware, Slovenia, Austria, the Czech Republic and Germany were the most specialised countries ⁽¹⁹⁾. In the manufacture of cutlery, tools and general hardware the highest specialisation rates ⁽²⁰⁾ were in Malta, Lithuania and Latvia.

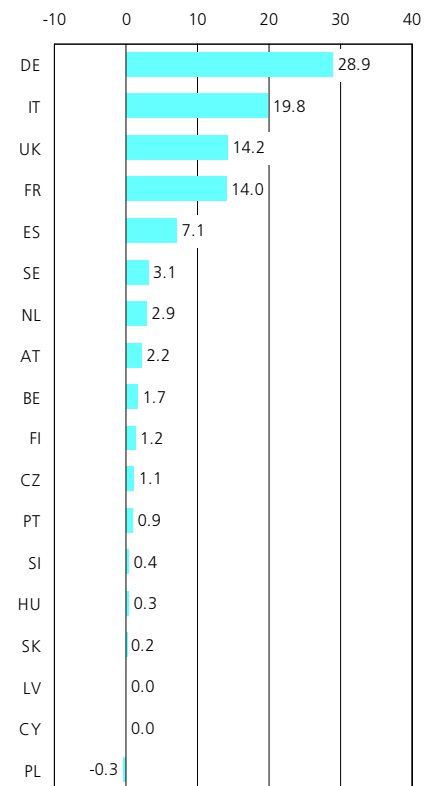
⁽¹⁷⁾ Spain, Greece, Ireland and Luxembourg, not available.

⁽¹⁸⁾ Greece, Ireland and Lithuania, not available.

⁽¹⁹⁾ Greece, Ireland and Luxembourg, not available.

⁽²⁰⁾ Greece and Ireland, not available.

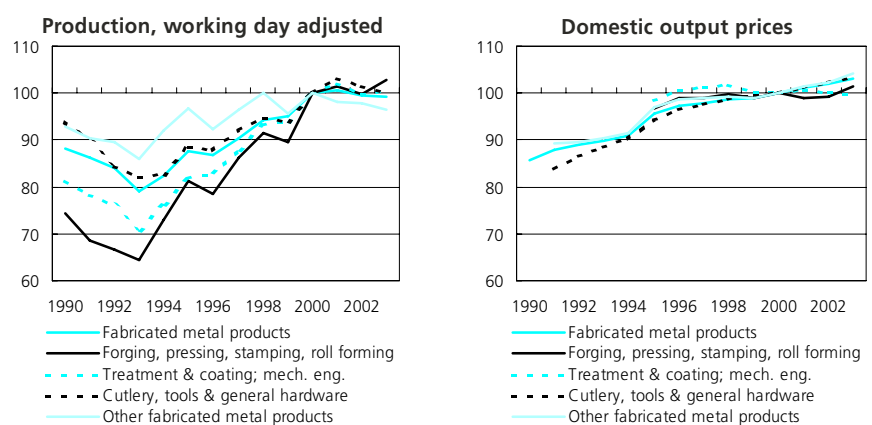
Figure 9.10
Miscellaneous metal products (NACE Groups 28.4 to 28.7)
Share of EU-25 value added, 2001 (%) (1)



(1) Denmark, Estonia, Greece, Ireland, Lithuania, Luxembourg and Malta, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 9.11
Miscellaneous metal products (NACE Groups 28.4 to 28.7)
Main indicators, EU-25 (2000=100)



Source: Eurostat, Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Table 9.8

Selected cutlery, tools and general hardware products (CPA Group 28.6), EU-15

	Prodcom code	Latest year for production	Production value (EUR million)
Band saw blades; circular saw blades with steel working parts (including slotting or slitting saw blades)	28.62.20.20 and 28.62.20.30	2001 (1)	368.2
Saw blades with working part of steel, for working metal; saw blades with working part of other materials excluding band-, circular-, chain- or straight saw blades	28.62.20.95	2000	290.6
Screwdrivers; household hand tools	28.62.30.63 and 28.62.30.65	2001 (2)	294.1
Drilling tools with working part of sintered metal carbide, for working metal excluding unmounted sintered metal carbide plates, sticks, tips and the like for tools	28.62.40.27	1999	327.8
Drilling tools with working part of high speed steel, for working metal excluding work and tool holders for machines or hand tools - for rock drilling	28.62.40.31	2001	436.8
Milling tools with working part of sintered metal carbide, for working metal excluding unmounted sintered metal carbide plates, sticks, tips and the like for tools	28.62.40.50	2001	368.0
Turning tools with working part of sintered metal carbide, for working metal excluding unmounted sintered metal carbide plates, sticks, tips and the like for tools	28.62.40.71	2000	337.9
Interchangeable hand tools with working part of sintered metal carbide excluding unmounted sintered metal carbide plates, sticks, tips and the like for tools	28.62.40.87	2001	289.7
Pressing, stamping or punching tools for working metal (excluding work and tool holders for machines or hand tools)	28.62.50.33	2001	3 319.6
Knives and cutting blades for machines or for mechanical appliances for working metal; for working wood	28.62.50.43 and 28.62.50.45	2000 (2)	279.9
Unmounted sintered metal carbides or cermet plates, sticks, tips and the like for tools (excluding indexable inserts)	28.62.50.90	2001	319.5
Base metal locks and cylinder locks used for doors of buildings	28.63.12.30 to 28.63.12.70	2001 (2)	1 610.0
Castors with mountings of base metal	28.63.14.20	2001	374.1
Base metal mountings, fittings and similar articles suitable for motor vehicles (excluding hinges, castors, locks and keys)	28.63.14.30	2001	1 594.6

(1) 2000 for one heading in the aggregate.

(2) 1999 for one heading in the aggregate.

Source: Eurostat, European production and market statistics (Comext).

The four activities that make up miscellaneous metal products manufacturing developed in a similar fashion to metal products manufacturing as a whole in recent years, as regards the evolution of their respective production indices. There was generally a period of growth starting in 1994 and continuing through to 2001, interspersed in nearly all of these subsectors with one or more years of contraction. The manufacture of other fabricated metal products (NACE Group 28.7) reported the weakest growth, its production index having fallen by more than 4 % twice during the second half of the 1990s, such that between its low in 1993 and its most recent high in 2000, average growth was 2.2 % per annum. Since 2000 output of other fabricated metal products fell on three consecutive occasions, although each time by less than 2 %. The manufacture of cutlery, tools and general hardware (NACE Group 28.6) displayed an almost identical development to that for metal products manufacturing in general, averaging growth of 2.9 % per annum between 1993 and 2001, despite a small contraction in activity in 1996 and 1999. Since 2001 the production index for this activity fell each year by around 1.5 %. The two remaining activities (NACE Groups 28.4 and 28.5)

reported a more rapid increase in their respective production indices. Between 1993 and 2001 there was average annual growth of 5.8 % for the forging, pressing, stamping and roll forming of metal/powder metallurgy sector (NACE Group 28.4), while the corresponding rate for the treatment and coating of metals/general mechanical engineering sector (NACE Group 28.5) was 4.7 % per annum. Nevertheless, both of these branches experienced a reduction in activity in 2002 (-1.4 % for Group 28.4 and -2.1 % for Group 28.5), followed by a return to growth in 2003 (3.1 % for Group 28.4 and 0.6 % for Group 28.5).

Table 9.9

Miscellaneous metal products (NACE Groups 28.4 to 28.7)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Miscellaneous metal products	43.3	135.9	31.9
Forging, pressing, stamping and roll forming of metal; powder metallurgy	45.9	134.8	34.0
Treatment and coating of metals; general mechanical engineering	39.5	132.0	29.9
Manufacture of cutlery, tools and general hardware	49.2	139.9	35.2
Manufacture of other fabricated metal products	44.4	140.7	31.5

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

LABOUR AND PRODUCTIVITY

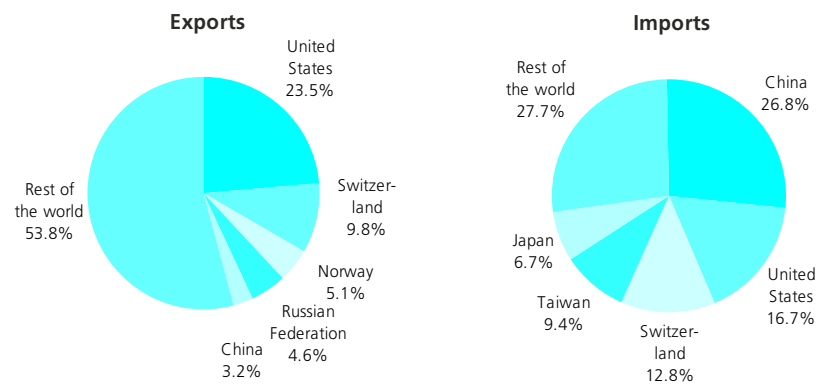
In 2001 apparent labour productivity was EUR 43 300 per person employed in the miscellaneous metal products manufacturing sector in the EU-15, this was EUR 1 600 higher than the corresponding figure for the metal products manufacturing sector. In the same year, average personnel costs per employee were EUR 31 900 in the EU-15's miscellaneous metal products manufacturing sector, and therefore close to the metal products manufacturing average of EUR 31 600. In terms of wage adjusted labour productivity, the ratio for miscellaneous metal products manufacturing was 135.9 %, which was 4.0 percentage points higher than for metal products manufacturing; this situation of higher than average wage adjusted labour productivity was observed in the majority of the Member States.

EXTERNAL TRADE

There are no external trade statistics for CPA Group 28.4 (forging, pressing, stamping and roll forming metal services) and CPA Group 28.5 (treatment and coating of metal services/general mechanical engineering services) as these are not goods that are traded. As a consequence, the following analysis covers only cutlery, tools and general hardware (CPA Group 28.6) and other fabricated metal products (CPA Group 28.7).

In 2002 some EUR 6.4 billion of cutlery, tools and general hardware were exported from the EU-25, while EUR 5.6 billion of these goods were imported. EU-25 exports of other fabricated metal products were valued at EUR 9.3 billion and imports EUR 7.7 billion. The two groups together provided a trade surplus of EUR 2.4 billion.

Figure 9.12

Miscellaneous metal products (CPA Groups 28.4 to 28.7)
Share in extra-EU trade, 2002


Source: Eurostat, Comext.

Cutlery, tools and general hardware were mainly destined for the United States, which had a 24.8 % share of EU-25 exports in 2002. Switzerland was the second largest destination for EU-25 exports, with an 8.3 % share, while no other country had a share in excess of 5 %. Exports of other fabricated metal products were also mainly destined for the United States (22.6 %), while China (10.7 %) was the second largest destination.

On the imports side, China, the United States and Switzerland were the main origins of EU-25 imports of cutlery, tools and general hardware in 2002, accounting for 26.5 %, 18.0 % and 11.8 % of total EU-25 imports. The same countries were the largest origins of EU-25 imports for other fabricated metal products too, with similar shares.

Among the Member States the main exporters of cutlery, tools and general hardware were Germany, Italy and the United Kingdom. Germany and Italy were also present among the main exporters of other fabricated metal products, together with France, which had the third highest value of exports for these products. Imports of cutlery, tools and general hardware, and also other fabricated metal products, were mainly destined for Germany, France and the United Kingdom.

Table 9.10

Manufacture of fabricated metal products, except machinery and equipment (NACE Division 28)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	9 308	4 845	5 029	89 072	272	1 018	28 701	51 883	1 468	71 149	163	146	130	966
Value added at factor cost (EUR million)	3 140	1 440	2 214	37 998	73	395	10 751	19 344	604	25 470	66	59	39	265
Purchases of goods and services (EUR million)	6 381	3 611	0	54 554	208	:	19 170	33 783	864	46 840	117	109	96	717
Gross investment in tangible goods (EUR million)	539	313	288	4 232	13	:	1 609	2 178	109	4 382	11	16	13	:
Number of persons employed (thousands)	67	163	48	816	9	13	344	458	14	686	3	7	9	5
App. labour productivity (EUR thous./pers. emp.)	46.5	8.8	46.1	46.6	8.1	31.5	31.2	42.3	43.0	37.1	20.8	8.2	4.1	54.7
Average personnel costs (EUR thous./employee) (1)	37.0	6.8	35.7	37.0	5.5	:	24.0	33.7	25.9	26.0	16.0	3.2	2.9	39.2
Wage adjusted labour productivity (%) (1)	125.7	129.6	129.0	125.9	148.2	:	129.9	125.3	165.9	142.9	119.7	256.4	142.1	139.4
Gross operating rate (%) (2)	9.3	11.4	11.5	10.0	8.8	:	10.8	7.7	16.4	16.2	12.1	25.2	9.0	7.9
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	1 728	59	14 407	7 779	8 764	3 998	1 660	810	4 774	9 051	40 245	267	821	:
Value added at factor cost (EUR million)	581	28	5 013	3 416	644	1 351	472	250	1 900	3 734	18 668	64	260	:
Purchases of goods and services (EUR million)	1 356	32	10 029	4 995	3 637	2 770	1 160	604	3 011	5 770	23 036	239	715	:
Gross investment in tangible goods (EUR million)	143	3	506	523	282	362	79	70	282	574	1 610	21	92	:
Number of persons employed (thousands)	59	2	109	67	195	80	:	33	40	88	384	26	81	:
App. labour productivity (EUR thous./pers. emp.)	9.9	17.7	46.1	50.8	3.3	16.8	:	7.6	47.1	42.6	48.7	2.4	3.2	:
Average personnel costs (EUR thous./employee)	6.3	11.8	34.5	36.8	7.4	12.4	12.3	4.9	33.1	33.8	33.1	1.8	2.2	:
Wage adjusted labour productivity (%)	157.3	149.7	133.8	138.1	44.8	136.0	:	154.0	142.2	126.0	146.9	136.4	147.3	:
Gross operating rate (%)	11.2	25.6	10.0	12.6	-8.2	11.7	5.9	10.3	12.6	9.9	15.8	8.2	10.1	:

(1) Ireland and Cyprus, 2000.

(2) Ireland, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 9.11

Manufacture of structural metal products (NACE Group 28.1)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	3 229	906	1 508	21 565	127	:	9 868	7 021	643	17 220	105	56	47	198
Value added at factor cost (EUR million) (1)	1 045	235	615	8 055	30	:	3 398	2 240	231	5 717	37	22	11	75
Purchases of goods and services (EUR million)	2 252	692	0	14 042	101	:	6 789	4 957	419	11 761	74	43	39	123
Gross investment in tangible goods (EUR million)	120	47	73	578	6	:	448	219	25	885	7	7	4	:
Number of persons employed (thousands)	24	26	13	205	4	:	135	53	5	182	2	2	3	2
App. labour productivity (EUR thous./pers. emp.) (1)	44.2	9.0	48.5	39.3	7.7	:	25.2	42.3	42.3	31.5	19.4	9.1	4.1	45.0
Average personnel costs (EUR thous./employee) (2)	36.2	6.6	37.9	33.0	5.4	:	21.4	31.9	25.0	24.4	15.7	3.1	2.3	39.1
Wage adjusted labour productivity (%) (2)	122.1	135.5	128.1	119.2	143.9	:	117.5	132.5	169.3	128.7	113.4	291.5	175.4	115.0
Gross operating rate (%) (1)	8.0	7.8	9.2	7.8	7.0	:	8.4	7.9	14.8	14.7	10.7	27.3	9.9	5.4
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	616	30	5 670	2 718	2 290	1 407	250	172	1 633	2 123	10 659	67	347	:
Value added at factor cost (EUR million)	212	12	1 838	1 073	629	461	60	48	603	730	4 045	13	97	:
Purchases of goods and services (EUR million)	496	18	3 942	1 890	1 091	986	186	128	1 120	1 420	6 994	66	293	:
Gross investment in tangible goods (EUR million)	39	0	162	109	65	133	10	8	70	94	267	4	35	:
Number of persons employed (thousands)	23	1	42	24	54	28	:	7	13	16	80	8	32	:
App. labour productivity (EUR thous./pers. emp.)	9.2	12.5	43.6	45.2	11.6	16.3	:	6.5	47.3	46.0	50.4	1.7	3.0	:
Average personnel costs (EUR thous./employee)	5.9	10.0	33.3	35.1	7.6	12.0	12.6	4.9	33.4	35.5	35.6	1.5	2.1	:
Wage adjusted labour productivity (%)	154.3	125.9	131.0	128.8	151.4	136.1	:	133.0	141.6	129.4	141.5	110.9	146.2	:
Gross operating rate (%)	10.8	20.5	8.5	9.2	12.4	10.8	3.5	6.5	11.0	8.3	11.3	5.2	9.2	:

(1) Ireland, 2000.

(2) Ireland and Cyprus, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 9.12

Manufacture of tanks, reservoirs and containers of metal; manufacture of central heating radiators and boilers (NACE Group 28.2)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	867	427	206	3 685	:	:	1 328	1 745	:	3 293	10	6	15	:
Value added at factor cost (EUR million)	306	116	92	1 469	:	:	522	568	:	938	5	3	3	:
Purchases of goods and services (EUR million)	568	341	0	2 829	:	:	854	1 246	:	2 390	7	4	12	:
Gross investment in tangible goods (EUR million)	66	17	7	128	:	:	48	79	:	243	1	1	1	:
Number of persons employed (thousands)	6	12	2	29	:	:	17	12	:	21	0	0	1	:
App. labour productivity (EUR thous./pers. emp.)	52.4	9.6	48.3	50.7	:	:	30.6	45.5	:	44.3	23.7	6.7	4.4	:
Average personnel costs (EUR thous./employee) (2)	39.6	6.7	39.2	40.9	:	:	25.1	35.5	:	28.5	18.7	2.7	3.4	:
Wage adjusted labour productivity (%) (2)	132.3	143.2	123.1	123.9	:	:	122.1	128.0	:	155.3	112.3	247.5	129.1	:
Gross operating rate (%)	9.9	8.5	8.4	6.8	:	:	8.2	6.8	:	11.5	11.9	31.4	4.6	:
	HU	MT	NL	AT	PL	PT	SI (1)	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	212	:	1 151	451	470	227	23	64	208	155	1 946	15	62	:
Value added at factor cost (EUR million)	49	:	369	209	135	58	7	13	80	61	794	4	22	:
Purchases of goods and services (EUR million)	180	:	825	274	212	174	17	55	129	96	1 247	13	50	:
Gross investment in tangible goods (EUR million)	11	:	26	15	27	16	1	3	7	13	57	1	6	:
Number of persons employed (thousands)	4	:	7	4	11	3	:	2	2	1	13	1	7	:
App. labour productivity (EUR thous./pers. emp.)	11.2	:	54.5	52.7	12.4	22.1	:	8.0	45.9	44.3	59.1	2.7	2.9	:
Average personnel costs (EUR thous./employee)	8.4	:	41.5	42.2	7.6	18.2	11.4	4.6	34.3	34.0	35.1	1.9	2.3	:
Wage adjusted labour productivity (%)	134.1	:	131.3	125.0	164.0	121.2	:	175.5	133.8	130.2	168.6	143.7	128.2	:
Gross operating rate (%)	5.6	:	8.3	8.6	14.8	4.8	2.8	8.2	10.2	10.0	15.9	7.8	8.0	:

(1) 1999.

(2) Cyprus, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 9.13

Manufacture of steam generators, except central heating hot water boilers (NACE Group 28.3)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU (1)
Production (EUR million)	484	331	:	3 552	:	:	222	8 496	:	274	:	3	:	18
Value added at factor cost (EUR million)	170	88	:	1 153	:	:	86	3 275	:	73	:	1	:	12
Purchases of goods and services (EUR million)	320	242	:	2 389	:	:	137	5 162	:	200	:	3	:	6
Gross investment in tangible goods (EUR million)	21	8	:	45	:	:	10	207	:	7	:	0	:	:
Number of persons employed (thousands)	4	7	:	26	:	:	3	81	:	2	:	0	:	0
App. labour productivity (EUR thous./pers. emp.)	44.6	12.3	:	43.9	:	:	33.9	40.4	:	43.9	:	11.4	:	65.8
Average personnel costs (EUR thous./employee)	37.4	8.8	:	48.6	:	:	29.3	35.5	:	38.4	:	7.9	:	30.7
Wage adjusted labour productivity (%)	119.3	140.5	:	90.3	:	:	115.5	113.9	:	114.4	:	143.6	:	214.2
Gross operating rate (%)	6.3	10.8	:	-3.2	:	:	5.8	5.2	:	4.4	:	8.8	:	35.8
	HU	MT	NL	AT	PL	PT	SI (2)	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	26	0	410	167	381	9	1	29	538	25	934	13	33	:
Value added at factor cost (EUR million)	8	0	58	90	187	3	0	12	86	10	409	5	13	:
Purchases of goods and services (EUR million)	24	0	351	84	121	6	1	17	454	15	525	8	25	:
Gross investment in tangible goods (EUR million)	2	0	1	4	10	0	0	0	4	1	17	1	1	:
Number of persons employed (thousands)	1	0	1	1	11	0	:	2	2	0	6	1	4	:
App. labour productivity (EUR thous./pers. emp.)	6.9	:	76.4	64.7	17.1	19.7	:	6.2	36.9	70.9	64.5	3.4	3.5	:
Average personnel costs (EUR thous./employee)	7.0	:	47.9	45.3	9.5	17.3	15.3	5.7	42.8	45.5	56.8	2.8	2.8	:
Wage adjusted labour productivity (%)	98.7	:	159.5	142.8	179.3	113.7	:	109.2	86.1	155.8	113.6	122.3	123.7	:
Gross operating rate (%)	-0.1	:	5.4	15.7	24.2	4.6	2.0	3.5	-2.8	15.0	5.7	7.2	8.0	:

(1) 2000.

(2) 1999.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 9.14

Forging, pressing, stamping and roll forming of metal; powder metallurgy (NACE Group 28.4)
Main indicators, 2001

	BE	CZ	DK (1)	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	295	301	15	11 281	:	:	3 444	7 666	39	8 543	0	7	6	:
Value added at factor cost (EUR million) (2)	99	91	6	4 520	:	:	1 148	2 260	22	2 492	0	3	2	:
Purchases of goods and services (EUR million)	210	214	9	6 897	:	:	2 444	5 492	18	6 180	0	4	4	:
Gross investment in tangible goods (EUR million)	22	20	1	704	:	:	285	396	2	500	0	0	2	:
Number of persons employed (thousands)	2	9	0	91	:	:	28	55	1	54	0	0	1	:
App. labour productivity (EUR thous./pers. emp.) (2)	44.3	9.9	35.6	49.9	:	:	40.4	40.8	43.6	46.4	:	8.3	4.3	:
Average personnel costs (EUR thous./employee) (2)	35.5	7.5	27.5	40.4	:	:	27.1	32.1	23.0	29.7	:	3.3	3.3	:
Wage adjusted labour productivity (%) (2)	124.8	133.2	129.4	123.7	:	:	149.3	126.9	189.4	156.1	:	249.9	127.7	:
Gross operating rate (%) (2)	12.2	11.3	16.4	7.7	:	:	11.5	6.3	22.9	12.2	:	33.1	9.4	:
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	56	0	1 468	772	189	93	320	19	24	258	3 920	7	29	:
Value added at factor cost (EUR million)	17	0	458	300	57	32	55	9	11	104	1 701	2	10	:
Purchases of goods and services (EUR million)	42	0	1 078	529	125	64	257	12	13	154	2 198	5	28	:
Gross investment in tangible goods (EUR million)	4	0	44	56	4	11	6	8	2	13	150	1	4	:
Number of persons employed (thousands)	1	0	9	6	6	2	:	1	0	3	35	1	3	:
App. labour productivity (EUR thous./pers. emp.)	12.1	:	49.3	48.8	10.3	14.6	:	11.4	46.8	34.6	49.2	2.0	3.4	:
Average personnel costs (EUR thous./employee)	8.1	:	34.8	35.0	7.5	10.5	14.5	5.4	33.1	31.6	33.3	1.7	2.2	:
Wage adjusted labour productivity (%)	149.0	:	141.6	139.6	137.6	138.7	:	213.2	141.1	109.6	147.6	118.5	154.3	:
Gross operating rate (%)	9.6	:	8.7	13.1	8.7	14.7	4.7	24.8	18.6	10.9	14.8	6.9	11.0	:

(1) 2000.

(2) Ireland, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 9.15

Treatment and coating of metals; general mechanical engineering (NACE Group 28.5)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	2 577	861	1 139	13 455	28	:	5 652	14 454	85	18 492	11	6	:	416
Value added at factor cost (EUR million) (1)	948	354	573	6 911	9	:	2 509	6 469	48	8 106	6	3	:	59
Purchases of goods and services (EUR million)	1 631	656	0	6 566	20	:	3 277	8 066	38	10 419	8	4	:	356
Gross investment in tangible goods (EUR million)	213	83	88	1 147	2	:	403	831	6	1 525	1	0	:	:
Number of persons employed (thousands)	20	35	14	156	1	:	79	155	1	233	0	0	:	1
App. labour productivity (EUR thous./pers. emp.) (1)	47.1	10.0	41.9	44.4	7.3	:	31.7	41.9	33.8	34.7	22.1	7.7	:	56.9
Average personnel costs (EUR thous./employee) (2)	35.8	6.6	33.2	32.5	5.0	:	24.5	34.0	23.7	24.6	21.4	4.6	:	37.8
Wage adjusted labour productivity (%) (2)	131.6	151.0	126.1	136.6	144.7	:	129.1	123.2	142.4	141.1	96.5	165.1	:	150.5
Gross operating rate (%) (1)	12.3	19.1	15.5	17.0	10.2	:	12.8	8.9	15.9	20.3	16.9	18.0	:	5.1
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	260	3	2 515	925	1 858	786	264	159	1 353	2 986	10 287	28	26	:
Value added at factor cost (EUR million)	100	2	1 180	436	-648	278	94	60	645	1 329	5 798	10	11	:
Purchases of goods and services (EUR million)	191	1	1 396	545	411	521	154	111	721	1 857	4 667	20	19	:
Gross investment in tangible goods (EUR million)	22	0	131	80	45	59	8	15	129	261	589	3	16	:
Number of persons employed (thousands)	11	0	26	8	37	19	:	8	14	37	131	3	2	:
App. labour productivity (EUR thous./pers. emp.)	8.9	10.8	45.7	51.8	-17.8	14.5	:	7.6	45.9	35.8	44.4	3.1	5.1	:
Average personnel costs (EUR thous./employee)	5.4	9.3	33.1	33.3	6.4	12.1	10.4	4.6	31.5	31.9	32.2	1.8	2.6	:
Wage adjusted labour productivity (%)	165.0	115.5	138.1	155.7	-276.5	119.8	:	165.2	145.9	112.2	137.8	173.6	194.1	:
Gross operating rate (%)	13.9	27.2	16.8	17.4	-93.2	12.5	8.0	14.2	16.1	7.4	18.2	21.4	20.6	:

(1) Ireland, 2000.

(2) Ireland and Cyprus, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 9.16

Manufacture of cutlery, tools and general hardware (NACE Group 28.6)

Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	488	1 034	408	16 228	12	:	2 690	3 948	151	4 838	4	10	14	:
Value added at factor cost (EUR million) (2)	172	317	186	7 949	6	:	1 171	1 722	77	1 923	2	4	5	:
Purchases of goods and services (EUR million)	331	676	0	9 199	6	:	1 816	2 617	82	3 170	2	6	9	:
Gross investment in tangible goods (EUR million)	42	71	22	828	1	:	156	183	42	248	1	1	1	:
Number of persons employed (thousands)	4	48	4	148	1	:	32	40	2	43	0	1	1	:
App. labour productivity (EUR thous./pers. emp.) (2)	45.9	6.6	49.9	53.6	9.2	:	37.2	42.9	50.1	44.2	23.3	4.5	4.6	:
Average personnel costs (EUR thous./employee) (3)	37.9	7.0	36.3	41.0	6.6	:	26.8	33.4	29.4	28.9	15.9	2.9	4.0	:
Wage adjusted labour productivity (%) (3)	121.3	94.1	137.5	130.9	139.4	:	138.9	128.5	170.5	153.1	115.3	154.9	112.9	:
Gross operating rate (%) (2)	8.6	12.3	13.4	12.2	13.9	:	14.0	9.1	21.0	16.5	16.8	17.1	5.7	:
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	153	4	726	1 517	640	523	321	68	342	1 188	3 903	30	79	:
Value added at factor cost (EUR million)	62	1	343	794	95	197	120	24	193	601	2 194	12	35	:
Purchases of goods and services (EUR million)	118	2	442	819	295	348	187	49	159	712	2 202	24	65	:
Gross investment in tangible goods (EUR million)	16	0	37	141	21	50	34	5	24	73	211	3	6	:
Number of persons employed (thousands)	6	0	7	13	16	12	:	4	3	11	38	4	10	:
App. labour productivity (EUR thous./pers. emp.)	11.0	17.9	50.7	59.6	5.9	16.2	:	6.8	57.9	57.1	58.1	2.8	3.3	:
Average personnel costs (EUR thous./employee)	7.1	11.8	38.2	40.4	7.5	11.3	13.6	4.6	32.6	37.2	32.8	2.0	2.5	:
Wage adjusted labour productivity (%)	154.0	151.9	132.9	147.6	78.7	144.4	:	146.7	177.7	153.4	177.2	143.4	135.8	:
Gross operating rate (%)	12.2	14.2	12.0	17.2	-2.4	13.6	6.8	10.8	25.6	17.2	22.6	12.4	11.6	:

(1) 2000.

(2) Ireland, 2000.

(3) Ireland and Cyprus, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 9.17

Manufacture of other fabricated metal products (NACE Group 28.7)

Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	1 367	985	1 587	19 306	58	:	5 497	8 552	383	18 490	33	59	44	109
Value added at factor cost (EUR million) (1)	399	239	681	7 941	20	:	1 917	2 812	176	6 221	15	23	15	50
Purchases of goods and services (EUR million)	1 069	790	0	12 633	42	:	3 853	6 244	247	12 722	27	45	30	60
Gross investment in tangible goods (EUR million)	56	68	93	801	3	:	260	263	29	974	3	6	4	:
Number of persons employed (thousands)	8	25	15	162	2	:	51	61	3	151	1	2	4	1
App. labour productivity (EUR thous./pers. emp.) (1)	49.3	9.6	45.7	49.2	7.9	:	37.9	45.9	44.1	41.3	23.0	9.1	3.9	49.8
Average personnel costs (EUR thous./employee) (2)	39.9	6.4	34.2	37.6	5.2	:	25.8	33.6	25.9	26.7	14.2	3.1	2.9	40.8
Wage adjusted labour productivity (%) (2)	123.4	150.5	133.5	130.6	152.8	:	146.8	136.5	170.6	154.6	156.4	293.4	135.9	122.1
Gross operating rate (%) (1)	6.9	8.6	11.4	10.1	12.1	:	11.9	8.4	17.3	16.5	13.8	25.2	9.7	8.4
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	405	21	2 468	1 229	2 935	953	472	300	678	2 317	8 595	108	244	:
Value added at factor cost (EUR million)	133	12	766	513	189	321	135	84	284	899	3 728	17	73	:
Purchases of goods and services (EUR million)	307	10	1 996	854	1 383	671	355	232	414	1 516	5 203	103	236	:
Gross investment in tangible goods (EUR million)	48	2	105	119	111	94	21	31	45	119	320	10	25	:
Number of persons employed (thousands)	12	0	17	10	60	16	:	10	6	20	81	7	22	:
App. labour productivity (EUR thous./pers. emp.)	11.3	39.2	45.0	50.3	3.1	20.3	:	8.5	47.8	45.9	46.2	2.6	3.3	:
Average personnel costs (EUR thous./employee)	6.4	14.7	34.4	36.7	7.0	13.2	11.8	5.1	32.5	34.3	29.7	1.7	2.0	:
Wage adjusted labour productivity (%)	177.1	265.8	130.6	137.0	44.7	153.7	:	164.8	147.2	134.0	155.3	150.0	161.0	:
Gross operating rate (%)	13.5	38.9	8.2	11.8	-7.0	12.6	6.2	10.5	14.6	10.4	16.5	5.7	10.4	:

(1) Ireland, 2000.

(2) Ireland and Cyprus, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Machinery and equipment



As a producer of capital goods the machinery and equipment manufacturing sector provides a basis for the performance of tasks in other sectors. The range of products offered has changed over time, away from single mechanical machines towards integrated systems using information technology. The increased complexity of products has led to the need for support by manufacturers in terms of training, maintenance and the provision of specialised software.

A proposal for a directive on the eco-design of energy-using products ⁽¹⁾ was approved by the European Commission in August 2003. The aim of the directive is to facilitate the free movement of goods and to enhance product quality and environmental protection. Many pieces of machinery and equipment are covered by this draft directive, for example electrical domestic appliances.

STRUCTURAL PROFILE

In 2001 the machinery and equipment manufacturing sector generated EUR 167.6 billion of value added in the EU-25, equivalent to 10.9 % of total value added in manufacturing. As such it was the second largest manufacturing NACE division after the manufacture of food products and beverages. There were 3.6 million persons employed in the machinery and equipment manufacturing sector in the EU-25 in 2001 ⁽²⁾, of which 3.1 million were in the EU-15.

The contribution of the 10 new Member States to the EU-25's value added for the machinery and equipment manufacturing sector was 3.8 %, lower than the average for manufacturing as a whole (5.6 %). In fact, the machinery and equipment manufacturing sector recorded the lowest contribution of the 10 new Member States to the EU-25 total of any manufacturing NACE subsection, marginally below the share of the manufacture of basic metals and fabricated metal products (NACE Subsection DJ).

The manufacture of other general purpose machinery (NACE Group 29.2) and the manufacture of other special purpose machinery (NACE Group 29.5) accounted for 29.4 % and 26.6 % respectively of value added in the EU-25's machinery and equipment manufacturing sector in 2001. The manufacture of machinery for the production and use of mechanical power (NACE Group 29.1) was the third largest subsector with a 20.5 % contribution.

Germany dominated the EU-25's machinery and equipment manufacturing sector with 37.4 % of the EU-25's value added in 2001. This was the second highest proportion of EU-25 value added accounted for by Germany among the NACE manufacturing subsections, behind the manufacture of transport equipment. With the exception of the manufacture of weapons and ammunition, Germany was the dominant EU-25 manufacturer in each of the NACE groups making up the machinery and equipment manufacturing sector. For example, in the manufacture of machine-tools (NACE Group 29.4) Germany alone accounted for half (50.7 %) of the EU-25's value added. Germany was also the most specialised in machinery and equipment manufacturing relative to manufacturing as a whole, generating 15.2 % of its manufacturing value added in this sector; Denmark (14.4 %) and Italy (14.2 %) were also relatively highly specialised. For all three of these countries the machinery and equipment manufacturing sector was the second largest manufacturing NACE subsection, while it was the third largest manufacturing NACE subsection in Austria, Poland and Finland.

This chapter covers NACE 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). Data availability for the weapons and ammunitions subsector is generally weaker than the other subsections and it is not treated in a separate subchapter.

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⁾ COM(2003) 453.

⁽²⁾ Slovenia, number of employees.

Table 10.1
Manufacture of machinery and equipment n.e.c. (NACE Division 29)
Structural profile, 2001

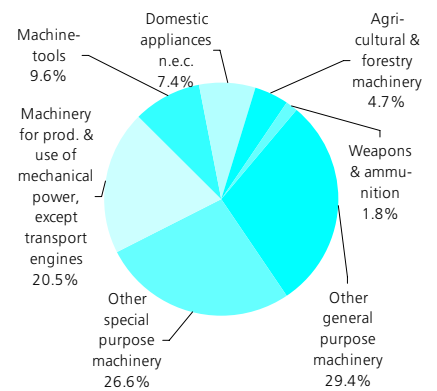
Rank	Largest value added (EUR billion)	Highest value added specialisation relative to manufacturing (EU-25=100)	Largest number of persons employed (thousands) (1)	Main EU-25 trading partners: origin of imports, 2002 (EUR billion)	Main EU-25 trading partners: destination of exports, 2002 (EUR billion)
1	Germany (62.7)	Germany (139)	Germany (1 106.6)	United States (16.1)	United States (24.1)
2	Italy (28.8)	Denmark (132)	Italy (597.0)	Japan (7.9)	China (10.1)
3	United Kingdom (18.4)	Italy (130)	United Kingdom (355.0)	Switzerland (6.7)	Switzerland (6.2)
4	France (16.3)	Sweden (127)	France (334.4)	China (5.3)	Russian Federation (5.2)
5	Spain (7.6)	Austria (115)	Poland (197.3)	South Korea (1.8)	Turkey (3.9)

(1) Slovenia, not available.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

The working day adjusted EU-25 production index for machinery and equipment manufacturing showed generally an upward trend between its low in 1993 and 2001, with one notable fall during this period of 2.4 % in 1999. In 2002 and 2003, however, the index fell by 1.3 % and 1.1 % respectively. In contrast the EU-25 employment index for machinery and equipment manufacturing showed a general decline from 1994 (the beginning of the series) until the most recent value for 2002. During this period the average rate of change was -1.0 % per annum, with modest growth recorded in just two years: 0.4 % in 1998 and 0.2 % in 2001. The domestic output price index for machinery and equipment manufacturing in the EU-25 increased without interruption throughout the 1990s and through to 2003. In the 10 years to 2003 the average increase was 1.5 % per annum (the same as the manufacturing average), with the highest growth rates recorded in 1995 and 1996 (2.7 % or more) and the lowest between 1998 and 2000 and again in 2003 (all around 1 %).

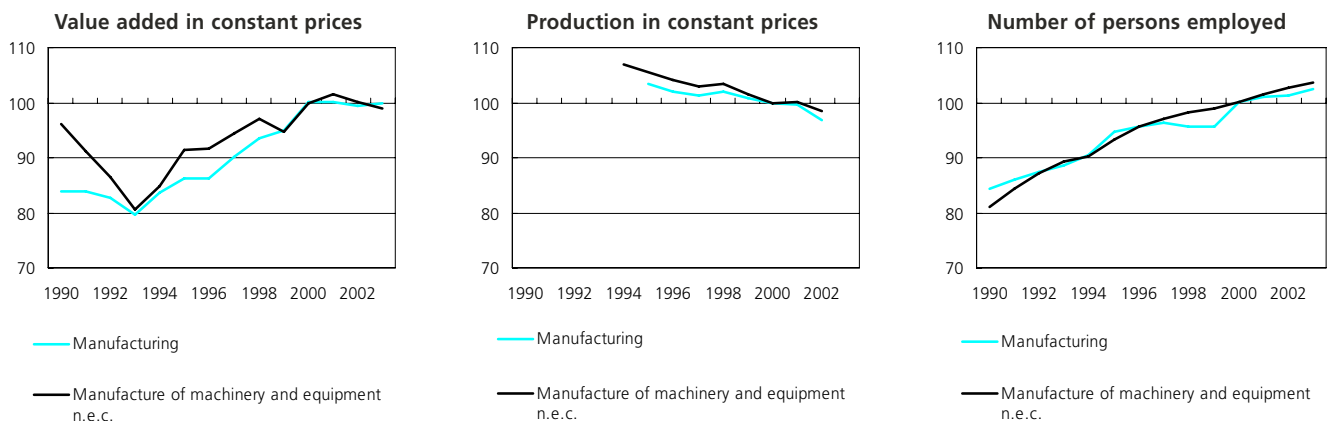
A breakdown by size-class reveals that approximately one half (49.3 %) of the value added in the EU-25's machinery and equipment manufacturing sector was generated by large enterprises (with 250 or more persons employed), a smaller proportion than the manufacturing average (54.9 %). The situation was reversed for medium-sized enterprises (with between 50 and 249 persons employed) which generated 27.4 % of value added in machinery and equipment manufacturing compared to 22.0 % in manufacturing as a whole. In employment terms, for the EU-15, a slightly different situation was observed, with both medium-sized and large enterprises accounting for a greater share of employment in the machinery and equipment manufacturing sector than was the case for manufacturing as a whole, with micro enterprises accounting for a notably lower share.

Figure 10.1
Manufacture of machinery and equipment n.e.c. (NACE Division 29)
Share of value added at factor cost, EU-25, 2001



Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 10.2
Manufacture of machinery and equipment n.e.c. (NACE Division 29)
Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Table 10.2

Manufacture of machinery and equipment n.e.c. (NACE Division 29)

Value added at factor cost and persons employed, by enterprise size-class, 2001 (% of total)

	Micro enterprises		Small enterprises		Medium-sized enterprises		Large enterprises	
	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed
EU-25	6.2	:	17.1	:	27.4	:	49.3	:
EU-15	6.3	8.7	17.2	20.5	27.2	27.6	49.3	43.2

Source: Eurostat, Structural Business Statistics (theme4/sbs/sizclass).

LABOUR AND PRODUCTIVITY

According to the labour force survey, men made up 82.0 % of employment in the EU-15's machinery and equipment manufacturing sector in 2002, a higher share than the manufacturing average (71.7 %). This pattern was observed in all Member States ⁽³⁾, with Portugal recording the largest difference between male employment in this sector (81.5 %) and the manufacturing average (56.1 %). The proportion of full-time employment in the machinery and equipment sector of the EU-15 was slightly higher (at 95.1 %) than the corresponding figure for manufacturing as a whole (92.4 %). This was the case in almost all Member States ⁽⁴⁾, with Latvia and Malta the only exception.

SBS data show that in 2001 the apparent labour productivity of the EU-15's machinery and equipment manufacturing sector was EUR 51 800 per person employed and, as such, close to the manufacturing average. In the same period, average personnel costs in the EU-15 constituted EUR 39 500 per employee (manufacturing, EUR 35 700). These relatively high average personnel costs contributed to a wage adjusted labour productivity ratio of 131.1 % in the EU-15 in 2001, some 12.4 percentage points below the manufacturing average. In fact, in none of the NACE groups that make up the EU-15's machinery and equipment manufacturing sector was the wage adjusted labour productivity ratio above the manufacturing average in 2001.

⁽³⁾ Estonia and Poland, not available.⁽⁴⁾ Estonia, Austria and Poland, not available.

Table 10.3

Manufacture of machinery and equipment n.e.c. (NACE Division 29)

Labour force characteristics, 2002

	Share of men		Share of full-time		Share of employees	
	Value (%)	Index (manufacturing=100)	Value (%)	Index (manufacturing=100)	Value (%)	Index (manufacturing=100)
EU-25	:	:	:	:	:	:
EU-15	82.0	114.4	95.1	102.9	93.8	102.1
BE	81.3	109.3	94.5	103.7	96.6	101.9
CZ	78.1	126.8	98.8	101.3	96.2	103.9
DK	75.3	110.1	95.7	103.2	97.2	100.6
DE	82.8	115.4	94.1	104.9	96.4	101.1
EE	:	:	:	:	:	:
EL	86.3	121.7	99.3	101.3	79.8	108.9
ES	84.6	113.9	98.2	101.4	89.0	100.6
FR	80.8	114.2	95.7	101.3	96.0	101.2
IE	76.1	110.0	97.2	103.6	87.5	95.2
IT	81.2	116.7	97.0	102.5	88.3	106.7
CY	72.6	115.4	100.0	107.1	:	:
LV	83.1	134.7	87.9	92.8	91.7	95.9
LT	69.2	135.4	100.0	105.4	100.0	103.8
LU	82.0	101.1	100.0	104.7	100.0	101.7
HU	82.9	138.9	99.9	102.3	91.4	97.9
MT	82.6	118.0	82.6	85.5	100.0	107.4
NL	87.8	113.8	86.5	115.3	95.4	99.2
AT	85.6	115.1	:	:	96.1	100.9
PL	:	:	:	:	:	:
PT	81.5	145.3	98.7	101.7	84.7	97.2
SI	70.7	117.0	96.8	100.2	94.2	100.5
SK	80.6	136.0	99.6	100.9	96.0	99.9
FI	85.5	121.5	98.3	103.0	92.6	99.0
SE	83.7	113.2	95.8	104.5	95.8	101.9
UK	78.8	105.3	93.4	101.3	95.7	100.6

Source: Eurostat, Labour Force Survey.

Table 10.4

Manufacture of machinery and equipment n.e.c. (NACE Division 29)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Manufacture of machinery and equipment n.e.c.	51.8	131.1	39.5
Machinery for the prod. & use of mech. power, excl. transport engines	55.9	133.9	41.7
Manufacture of other general purpose machinery	50.8	131.8	38.5
Manufacture of agricultural and forestry machinery	45.4	136.4	33.3
Manufacture of machine-tools	53.7	130.6	41.1
Manufacture of other special purpose machinery	51.4	128.4	40.0
Manufacture of weapons and ammunition	53.8	108.6	49.5
Manufacture of domestic appliances n.e.c.	48.3	135.4	35.7

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 10.5

Machinery and equipment n.e.c. (CPA Division 29)
External trade, EU-25, 2002 (EUR million)

	Exports	Imports	Trade balance	Cover ratio (%)
Machinery and equipment n.e.c.	124 747	57 360	67 386	217.5
Machinery for the prod. & use of mech. power, excl. transport engines	29 153	17 081	12 072	170.7
Other general purpose machinery	28 508	11 838	16 670	240.8
Agricultural and forestry machinery	4 547	1 627	2 920	279.5
Machine-tools	10 827	8 075	2 753	134.1
Other special purpose machinery	43 989	12 739	31 250	345.3
Weapons and ammunition	823	382	441	215.4
Domestic appliances n.e.c.	6 866	5 613	1 253	122.3

Source: Eurostat, Comext.

EXTERNAL TRADE

In 2002, the EU-25 exported EUR 124.7 billion of machinery and equipment (CPA Division 29) while imports were valued at EUR 57.4 billion. This led to an external trade surplus of EUR 67.4 billion, the largest of any CPA division for manufactured goods. All of the CPA groups within the division recorded trade surpluses, the largest being other special purpose machinery (CPA Group 29.5) with a surplus of EUR 31.3 billion. The EU-25 also recorded trade surpluses in excess of EUR 10 billion in both power machinery (CPA Group 29.1) and other general purpose machinery (CPA Group 29.2). These three CPA groups collectively accounted for 81.5 % of exports of all machinery and equipment and 72.6 % of imports.

Just over one fifth of the EU-25's exports of machinery and equipment in 2002 were destined for the United States (21.5 %), while China accounted for an 8.1 % share. The United States also dominated the EU-25's imports with a 30.9 % share of the total, followed at some distance by Japan and Switzerland with 16.6 % and 15.6 % respectively.

Unsurprisingly, given its dominance of the machinery and manufacturing sector in the EU, Germany was the largest exporter of machinery and equipment in 2002, accounting for 32.6 % of (intra- and extra-EU combined) exports by the EU-25's Member States. Italy (18.4 %), France (10.0 %) and the United Kingdom (8.7 %) followed in the ranking. Italy was, however, the most specialised in export terms, generating 20.4 % of all of its exports of manufactured goods within this area, a significantly higher share than the next most specialised countries, Germany (15.6 %) and Slovenia (14.9 %). This CPA division contributed the largest share of manufactured exports of any CPA division of manufactured goods in Italy, Sweden and Slovenia, and the second highest share in the Czech Republic, Germany and Austria.

When analysing the external trade balance, all 10 new Member States (except Slovenia) showed an external trade deficit (intra- and extra-EU combined) for machinery and equipment; the majority of the EU-15 Member States reported surpluses. Cyprus, the Czech Republic and Poland had particularly high imports of these products, relative to their imports of all manufactured goods, with Cyprus and the Czech Republic recording their highest levels of imports in this CPA division, as was also the case in Estonia.

10.1: 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.

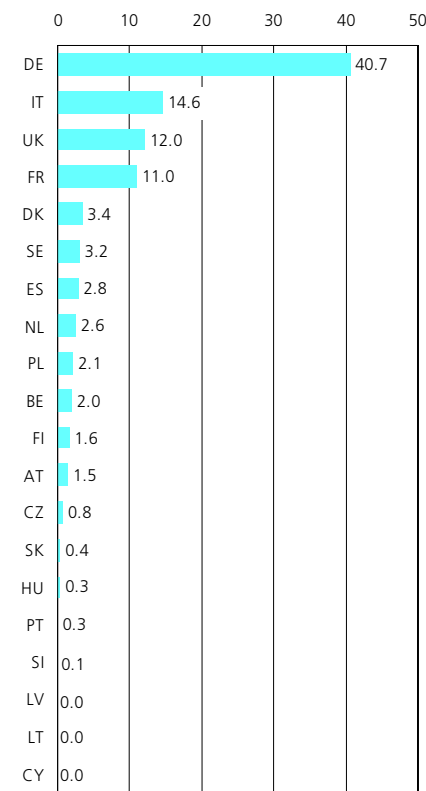
STRUCTURAL PROFILE

Value added of EUR 34.4 billion was generated in the EU-25's power machinery manufacturing sector in 2001, equivalent to 2.2 % of total manufacturing value added and to 20.5 % of machinery and equipment manufacturing. The sector employed 675 700 persons in the EU-25 ⁽⁵⁾, 591 900 of which were in the EU-15. For the EU-15 this was equivalent to 2.1 % of the total number of persons employed in manufacturing and 19.0 % of those employed in the manufacture of machinery and equipment.

Among the activities making up the EU-15's power machinery manufacturing sector the manufacture of pumps and compressors (NACE Class 29.12) contributed the highest proportion of value added in 2001, with a 31.1 % share. The manufacture of bearings, gears, gearing and driving elements (NACE Class 29.14) and the manufacture of taps and valves (NACE Class 29.13) accounted for 27.2 % and 25.4 % respectively. The manufacture of engines and turbines (NACE Class 29.11) was the smallest subsector, with a 16.3 % contribution.

⁽⁵⁾ Estonia and Malta, 2000; Slovenia, number of employees.

Figure 10.3
Manufacture of machinery for the production and use of mechanical power, except aircraft, vehicle and cycle engines (NACE Group 29.1)
Share of EU-25 value added, 2001 (%) (1)



(1) Estonia, Greece, Ireland, Luxembourg and Malta, not available.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Germany had by far the largest power machinery manufacturing sector, accounting for 40.7 % of the EU-25's value added in 2001. Italy, the United Kingdom and France followed, but collectively they contributed less than Germany alone. Denmark and Germany ⁽⁶⁾ were the most specialised Member States in the manufacture of power machinery relative to manufacturing as a whole, as they generated respectively 4.5 % and 3.3 % of their manufacturing value added in this sector.

The working day adjusted production index for the manufacture of power machinery in the EU-25 showed a similar development to that for machinery and equipment manufacturing as a whole, albeit with more pronounced movements. There was strong growth from a low in 1993 through until 1995, but in 1996 output contracted by 1.1 % (in contrast to the slowdown experienced in machinery and equipment manufacturing). Growth was modest in 1997, and stronger in 1998, before another contraction in 1999 (-4.2 %), bringing the index below its 1995 level. Strong growth in 2000 (4.7 %) reversed the decline of 1999 but was followed by three years of more moderate rates of change.

Between 1991 and 2003 the development of domestic output prices for power machinery manufacturing was nearly identical to that observed for machinery and equipment manufacturing in general. In the 10 years to 2003 the average increase was 1.7 % per annum, just 0.2 percentage points above the machinery and equipment average.

⁽⁶⁾ Estonia and Malta, 2000; Ireland, 1999; Greece and Luxembourg, not available.

Table 10.6

Selected power machinery products (CPA Group 29.1), EU-15

	Prodcom code	Latest year for production	Production value (EUR million)
Marine propulsion compression-ignition internal combustion piston engines (diesel or semi-diesel) (excluding power of > 200 kW but <= 1000 kW)	29.11.13.11, 29.11.13.13 and 29.11.13.19	2001 (1)	1 525.1
Industrial use compression-ignition internal combustion piston engines (diesel or semi-diesel) (excluding power of > 200 kW but <= 300 kW)	29.11.13.31 to 29.11.13.53, 29.11.13.57 to 29.11.13.75	2000	3 705.2
Hydraulic turbines and water wheels; Gas turbines (excluding turbojets and turboprops)	29.11.22.00 and 29.11.23.00	2000	2 295.0
Parts for steam turbines, other vapour turbines and hydraulic turbines and water wheels (including regulators)	29.11.31.00 and 29.11.32.00	2000 (2)	709.5
Ball bearings	29.14.10.30	2001	2 527.3
Iron or steel roller chain of a kind used for cycles and motor cycles; iron or steel articulated link chain	29.14.21.30 and 29.14.21.55	2000 (2)	373.5
Cranks and crankshafts; cardan shafts; other shafts	29.14.22.30 to 29.14.22.55	2000	868.8
Bearing housings, plain shaft bearings	29.14.23.30 and 29.14.23.50	2000	992.1
Gearboxes and other speed changers for machinery and land/sea vehicles excluding gears and gearing	29.14.24.50	2000	2 027.0
Flywheels and pulleys (including pulley blocks)	29.14.25.00	2001	385.8
Clutches and shaft couplings (including universal joints)	29.14.26.30	2001	851.3
Balls, needles and rollers for ball or roller bearings	29.14.31.30	2001	543.8
Parts of transmission, cam & crankshafts, cranks, plain shaft bearings, gears, ball/roller screws, gearboxes, torque converters, flywheels, pulleys, clutches, shaft couplings, universal joints	29.14.33.50	2001	1 870.7

(1) 2000 for one heading in the aggregate.

(2) 1999 for one heading in the aggregate.

Source: Eurostat, European production and market statistics (Comext).

Table 10.7

Manufacture of machinery for the production and use of mechanical power, except aircraft, vehicle and cycle engines (NACE Group 29.1)

Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Machinery for the prod. & use of mech. power, excl. transport engines	55.9	133.9	41.7
Manufacture of engines and turbines, except transport engines	65.0	137.8	47.2
Manufacture of pumps and compressors	55.1	133.9	41.1
Manufacture of taps and valves	54.4	137.6	39.6
Manufacture of bearings, gears, gearing and driving elements	53.6	128.5	41.7

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

LABOUR AND PRODUCTIVITY

The apparent labour productivity of power machinery manufacturing in the EU-15 was EUR 55 900 per person employed in 2001 and average personnel costs per employee were EUR 41 700; in both cases these figures were above the machinery and equipment manufacturing averages. The resulting wage adjusted labour productivity ratio was 133.9 %, which was just above the average for machinery and equipment manufacturing. The manufacture of engines and turbines, and of

taps and valves (NACE Classes 29.11 and 29.13), both recorded higher wage adjusted labour productivity ratios of 137.8 % and 137.6 % respectively. Lithuania was the only Member State ⁽⁷⁾ in which the wage adjusted labour productivity in the manufacture of power machinery was less than 100 %, mainly due to a very low value added in the pumps and compressors manufacturing subsector.

⁽⁷⁾ Estonia, Ireland, Cyprus and Malta, 2000; Greece, Luxembourg and Slovenia, not available.

EXTERNAL TRADE

In 2002 the EU-25 exported EUR 29.2 billion worth of power machinery (CPA Group 29.1), while in the same year EUR 17.1 billion worth of these products were imported. Among the four CPA classes making up power machinery, a trade surplus was registered for all classes, the highest being for pumps and compressors (CPA Class 29.12). Around one quarter of the EU-25's exports of power machinery were destined for the United States in 2002. Switzerland and China were the next most important destinations, each with a 4.9 % share. In terms of imports of power machinery, 42.0 % of the EU-25's imports came from the United States in 2002 and a further 19.8 % from Japan.

As in the majority of machinery and equipment CPA groups, Germany had the highest intra- and extra-EU external trade surplus for power machinery, followed by Italy. The highest trade deficits were registered for Spain, Poland and Hungary, where deficits were between EUR 1.2 billion and EUR 0.9 billion in 2002.

Table 10.8**Machinery for the production and use of mechanical power, except aircraft, vehicle and cycle engines (CPA Group 29.1)
External trade, EU-25, 2002**

	Exports		Imports		Trade balance (EUR million)
	Value (EUR million)	Share of total (%)	Value (EUR million)	Share of total (%)	
Machinery for the prod. & use of mech. power, excl. transport engines	29 153	100.0	17 081	100.0	12 072
Engines and turbines except aircraft, vehicle and cycle engines	8 099	27.8	5 522	32.3	2 578
Pumps and compressors	10 147	34.8	5 205	30.5	4 942
Taps and valves	5 924	20.3	2 926	17.1	2 998
Bearings, gears, gearing and driving elements	4 982	17.1	3 429	20.1	1 554

Source: Eurostat, Comext.

**10.2: INDUSTRIAL PROCESSING
MACHINERY**

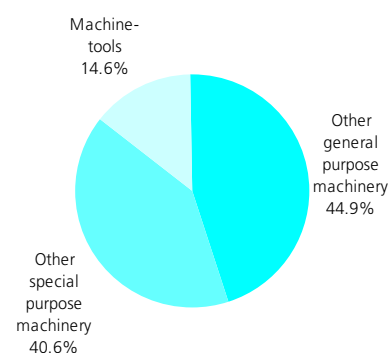
The manufacture of industrial processing machinery is made up of the manufacture of general purpose machinery, machine-tools, and special purpose machinery, covering NACE Groups 29.2, 29.4 and 29.5.

General purpose machinery (for example, 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 for specific sectors of the economy, generally in mining, manufacturing or construction. A large part of the output of machine-tools manufacturing is used within the various engineering sectors covered in Chapters 10, 11 and 12 of this publication.

STRUCTURAL PROFILE

In 2001, the manufacture of industrial processing machinery generated EUR 109.9 million of value added, equivalent to 7.2 % of the manufacturing total and 65.6 % of the machinery and equipment manufacturing total. The contribution of the 10 new Member States to the EU-25 total was 3.4 %, lower than in manufacturing (5.6 %). In the EU-25's manufacture of industrial processing machinery there were 2.4 million persons employed in 2001⁽⁸⁾, of which 2.1 million were found in the EU-15. This sector contributed 7.3 % of EU-15 manufacturing employment and 66.3 % of EU-15 machinery and equipment manufacturing employment.

Among the three NACE groups making up the manufacture of industrial processing machinery, the highest contribution, in value added terms, was made by the other general purpose machinery subsector (NACE Group 29.2) with a 44.9 % share, followed closely by other special purpose machinery (NACE Group 29.5) with a 40.6 % share; the manufacture of machine-tools (NACE Group 29.4) was the smallest of the three subsectors with a 14.6 % share.

Figure 10.4
**Industrial processing machinery
(NACE Groups 29.2, 29.4 and 29.5)
Share of value added at factor cost,
EU-25, 2001**

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

⁽⁸⁾ Estonia, not available; Latvia and Lithuania, 2000; Slovenia, number of employees.

Germany's share of EU-25 value added in the manufacture of industrial processing machinery was 38.1 % in 2001, more than double the share of Italy (17.5 %) which had the second largest contribution. Germany was the largest manufacturer in each of the three subsectors, most notably in the manufacture of machine-tools where its value added was greater than all of the other 24 Member States collectively.

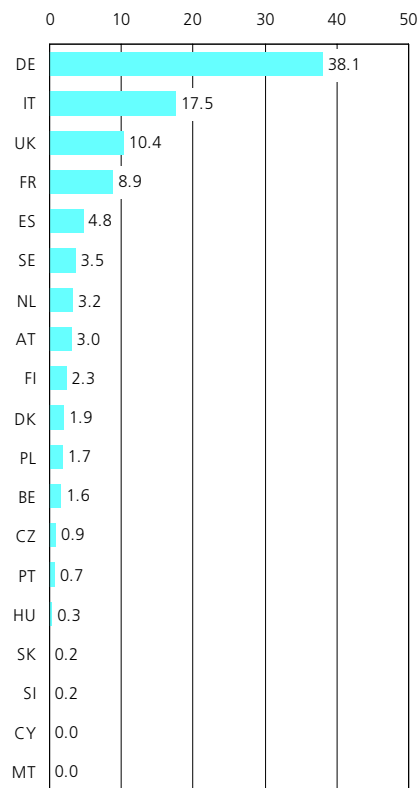
The manufacture of general purpose machinery was the largest of all manufacturing NACE groups in value added terms in Italy, while it was the fourth largest manufacturing NACE group in Denmark and Sweden. Germany, Sweden and the Czech Republic were highly specialised in the manufacture of machine-tools, as machine-tools accounted for 2.0 % of all manufacturing value added in Germany and 1.6 % in both Sweden and the Czech Republic. Finland, Austria and Germany showed high specialisation in the manufacture of other special purpose machinery ⁽⁹⁾, which accounted for between 5.0 % and 4.0 % of national manufacturing value added. In Austria, the manufacture of other special purpose machinery was the largest manufacturing group in value added terms, while in Finland and Germany it was the third largest manufacturing group.

The EU-25 production indices for the three NACE groups that make up the manufacture of industrial processing machinery showed a generally similar progression in the period between 1993 and 2003. A period of growth started in 1994 and continued through until 2001 interrupted in two of the three groups by a contraction in output in 1999. Over this period average growth ranged from 4.6 % per annum for the manufacturing of machine-tools to just over 2.4 % per annum in the two other groups. In 2002 and 2003 the production indices for all three of the NACE groups fell, most strongly in machine-tool manufacturing.

The domestic output price index for each of these three groups followed a very similar course to that of machinery and equipment manufacturing as a whole: all three saw year on year price rises throughout the 1990s and through to 2003.

⁽⁹⁾ Greece and Latvia, not available; Ireland, 2000.

Figure 10.5
Industrial processing machinery
(NACE Groups 29.2, 29.4 and 29.5)
Share of EU-25 value added, 2001 (%) (1)



(1) Estonia, Greece, Ireland, Latvia, Lithuania, Luxembourg, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

LABOUR AND PRODUCTIVITY

In the manufacture of industrial processing machinery, apparent labour productivity in the EU-15 was EUR 51 400 per person employed in 2001, and as such it was just below the machinery and equipment manufacturing average (EUR 51 800). Apparent labour productivity was highest in the machine-tools manufacturing subsector (EUR 53 700), and lowest in the manufacture of other general purpose machinery (EUR 50 800). Average personnel costs amounted to 39 500 per employee in the EU-15, the same as the machinery and equipment manufacturing average. Again machine-tool manufacturing recorded the highest level among the three subsectors.

In the manufacture of industrial processing machinery the wage adjusted labour productivity ratio for the EU-15 was 130.2 % in 2001, less than one percentage point below the machinery and equipment manufacturing average, but 13.3 percentage points lower than the total manufacturing average. All three of the subsectors recorded values for this ratio within a close range, the highest being 131.8 % for the manufacture of other general purpose machinery and the lowest being 128.4 % for the manufacture of other special purpose machinery.

Table 10.9

Selected industrial processing machinery (CPA Groups 29.2 and 29.5), EU-15

	Prodcom code	Latest year for production	Production value (EUR million)
Self-propelled fork-lift trucks (and similar)	29.22.15.13 to 29.22.15.33	2001 (1)	4 430.0
Pneumatic elevators and conveyors; belt and bucket typed continuous-action elevators and conveyors for goods or materials; roller conveyors for goods or materials	29.22.17.10 to 29.22.17.95	2001 (2)	5 283.6
Lifting machinery (including feeding equipment for blast furnaces, forging manipulators)	29.22.18.70	2001	2 344.3
Refrigerating or freezing equipment (excluding absorption heat pumps)	29.23.13.35 to 29.23.13.73, 29.23.13.90	2001 (1)	5 477.9
Fans (excluding table, floor, wall, window, ceiling or roof fans with a self-contained electric motor of an output <= 125 W)	29.23.20.30 to 29.23.20.70	2001 (2)	2 099.2
Machinery and apparatus for filtering and purifying beverages or water; machinery and apparatus for solid-liquid separation/ purification excluding for water & beverages, centrifuges & centrifugal dryers, oil/petrol-filters for internal combustion engines	29.24.12.30 to 29.24.12.70	2001 (2)	3 420.6
Machinery for packing or wrapping (excluding for filling, closing, sealing, capsuling or labeling bottles, cans, boxes, bags or other containers)	29.24.21.70	1999	3 788.5
Spray guns and similar appliances; steam or sand blasting machines and similar jet-projecting machines (excluding fire extinguishers); other mechanical appliances for projecting, dispersing or spraying	29.24.24.30 to 29.24.24.70	2001	3 025.1
Wheeled loaders, crawler shovel loaders, front-end loaders	29.52.25.50	2001	1 763.1
Self-propelled bulldozers, excavators	29.52.26.00 and 29.52.27.30	2000	4 191.3
Industrial machinery for the preparation or manufacture of food or drink (excluding industrial bakery machinery; industrial machinery for the preparation of fruits, nuts or vegetable (excluding for use in milling or for working dried leguminous vegetables))	29.53.16.15, 29.53.16.50 to 29.53.16.70	2001 (1)	2 722.2
Machinery for making pulp of fibrous cellulosic material; machinery of making or finishing paper or paperboard	29.55.11.13 to 29.55.11.17	2001 (2)	2 557.0
Reel fed letterpress printing machinery; flexographic printing machinery; letterpress printing machinery & other printing machinery including ink-jet printing machines excluding offset printing machinery, reel fed letterpress, flexographic, gravure printing machinery	29.56.14.10, 29.56.14.30 and 29.56.14.90	2001 (3)	1 602.3
Industrial robots for multiple uses (excluding robots designed to perform a specific function (e.g. lifting, handling, loading or unloading))	29.56.25.75	2001	1 753.7

(1) 1999 or 2000 for two or more headings in the aggregate.

(2) 2000 for one or more headings in the aggregate.

(3) 1999 for one heading in the aggregate.

Source: Eurostat, European production and market statistics (Comext).

Table 10.10

Industrial processing machinery (NACE Groups 29.2, 29.4 and 29.5)

Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Industrial processing machinery	51.4	130.2	39.5
Manufacture of other general purpose machinery	50.8	131.8	38.5
Manufacture of machine-tools	53.7	130.6	41.1
Manufacture of other special purpose machinery	51.4	128.4	40.0

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

EXTERNAL TRADE

EU-25 exports of industrial processing machinery (CPA Groups 29.2, 29.4 and 29.5) were valued at EUR 83.3 billion in 2002, while imports amounted to EUR 32.7 billion. More than half of the EU-25's exports in 2002 were of other special purpose machinery (CPA Group 29.5), while other general purpose machinery (CPA Group 29.2) and machine-tools (CPA Group 29.4) accounted for 34.2 % and 13.0 % respectively. In terms of imports, other special purpose machinery was the largest category with 39.0 % of all imports of industrial processing machinery, only just ahead of other general purpose machinery (36.3 %). For all three product groups the EU-25 recorded a trade surplus in 2002.

The main destinations for the EU-25's exports of industrial processing machinery were the United States, China and Switzerland, receiving together 35.6 % of exports. For all three CPA groups the United States was the largest destination and China the second largest, while for other special purpose machinery Turkey and Russia pushed Switzerland into fifth place, whereas it was the third largest destination for the manufacture of other general purpose machinery and machine tools.

Germany and Italy recorded the highest trade surpluses in 2002 (intra- and extra-EU combined) for industrial processing equipment, while Spain and Poland recorded the highest trade deficits. All of the 10 new Member States recorded trade deficits for each of the three CPA groups within industrial processing equipment, except for the Czech Republic (which recorded a surplus for other general purpose machinery).

Italy, Germany and Sweden showed the highest export specialisation in industrial processing machinery (extra- and intra-EU combined) compared to all manufactured goods. The share of this machinery in exports of manufactured goods was 12.2 % in Italy, 10.0 % in Germany and 9.7 % in Austria, whereas the average for the 25 Member States was 7.0 %.

In 2002, other general purpose machinery was the second largest CPA group of manufactured goods in export terms for Italy. In a similar fashion, other special purpose machinery was the largest CPA group of manufactured goods in export terms for Italy, the second largest for Germany and Austria, and the third largest for Finland. In terms of imports the Czech Republic and Slovakia recorded the highest share of industrial processing machinery imports (extra- and intra-EU combined) in imports of manufactured goods, namely 7.7 % and 7.6 % in 2002. Estonia, Latvia, Poland and Finland also recorded shares higher than 7 %, compared to the average for the 25 Member States of 5.0 %.

Table 10.11

Other general purpose machinery; machine-tools; other special purpose machinery (CPA Groups 29.2, 29.4 and 29.5)
External trade, EU-25, 2002

	Exports		Imports		Trade balance (EUR million)
	Value (EUR million)	Share of total (%)	Value (EUR million)	Share of total (%)	
Other general and special purpose machinery; machine-tools	83 324	100.0	32 652	100.0	50 672
Other general purpose machinery	28 508	34.2	11 838	36.3	16 670
Machine-tools	10 827	13.0	8 075	24.7	2 753
Other special purpose machinery	43 989	52.8	12 739	39.0	31 250

Source: Eurostat, Comext.

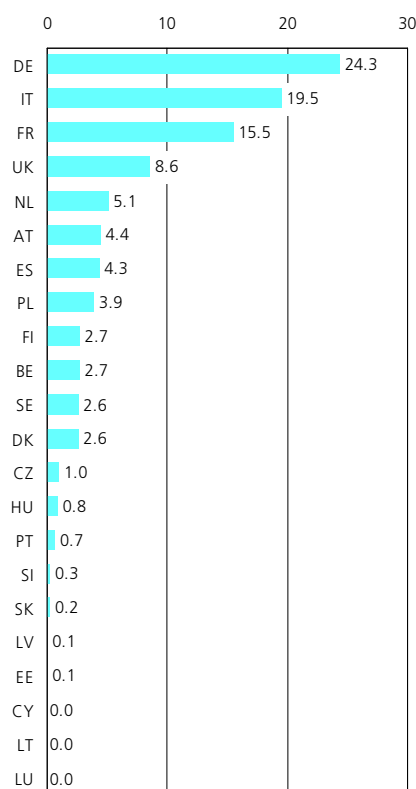
10.3: AGRICULTURAL MACHINES AND TRACTORS

NACE Group 29.3 covers the manufacture of agricultural tractors and other agricultural and forestry machinery. This NACE group does not cover the manufacture of agricultural hand tools.

Improvements in agricultural machinery and tractors have come through greater performance and higher quality, combined with attention for environmental impact. Demand is also influenced by the size of agricultural holdings and the incidence of sharing of equipment: Table 10.12 gives an overview of the number of combine harvesters and tractors used in agriculture in 2000.

Figure 10.6

Manufacture of agricultural and forestry machinery (NACE Group 29.3) Share of EU-25 value added, 2001 (%) (1)



(1) Greece, Ireland and Malta, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

STRUCTURAL PROFILE

The EU-25 generated a value added of EUR 7.9 billion through the manufacture of agricultural machines and tractors in 2001, equivalent to 0.5 % of manufacturing value added and 4.7 % of machinery and equipment manufacturing value added. The contribution of the 10 new Member States to the EU-25 total in the manufacture of agricultural and

Table 10.12

Main indicators for agricultural use, 2000

	Proportion of tractor holdings that exclusively own tractors (%)	Number of combine harvesters belonging exclusively to a farm holding	Number of tractors belonging exclusively to a farm holding	Average size of farm holdings (hectares)
BE	95.3	4 190	92 410	22.6
CZ	:	:	:	:
DK	:	23 460	129 500	45.7
DE	:	:	:	36.3
EE	:	:	:	:
EL	33.8	2 790	218 990	4.4
ES	49.5	23 900	642 910	20.3
FR	71.5	85 300	1 249 600	42.0
IE	64.1	4 470	160 080	31.4
IT	52.6	25 070	1 264 060	6.1
CY	:	:	:	:
LV	:	:	:	:
LT	:	:	:	:
LU	97.7	720	7 260	45.4
HU	:	:	:	:
MT	:	:	:	:
NL	100.0	6 680	149 530	20.0
AT	91.4	13 790	326 580	17.0
PL	:	:	:	:
PT	37.6	4 200	168 500	9.3
SI	99.0	3 120	108 170	5.6
SK	:	:	:	:
FI	82.7	34 010	171 550	27.3
SE	:	35 820	172 130	37.7
UK (1)	:	41 450	486 230	67.7

(1) Number of combine harvesters and tractors belonging exclusively to a farm holding, 1995.
Source: Eurostat, Management and practices (theme5/eurofarm).

forestry machinery was 6.3 %, and as such was a higher proportion than the manufacturing average (5.6 %) and the machinery and equipment manufacturing average (3.8 %).

In employment terms there were an estimated 209 100 persons employed in the EU-25 ⁽¹⁰⁾ and 163 400 in the EU-15, which was equivalent to a 0.6 % share of EU-15 manufacturing employment.

In 2001, one fifth (20.5 %) of the value added in the manufacture of agricultural and forestry machinery in the EU-15 was generated by the manufacture of agricultural tractors (NACE Class 29.31), with the manufacture of other agricultural and forestry machinery (NACE Class 29.32) responsible for the rest. The share of the manufacture of agricultural tractors in the sector's employment was even less, at 17.2 %.

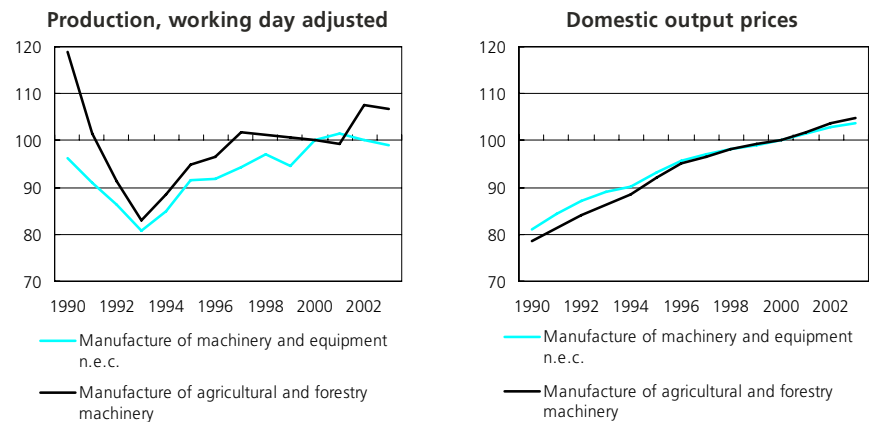
⁽¹⁰⁾ Malta, not available; Slovenia, number of employees.

Almost one quarter of the value added in the EU-25's manufacture of agricultural and forestry machinery was generated by Germany (24.3 %) in 2001, and although this was Germany's second lowest share of EU-25 value added among the NACE groups of machinery and equipment manufacturing, it was still larger than that of any other Member State. Austria was highly specialised in the manufacture of agricultural and forestry machinery ⁽¹¹⁾: as this sector accounted for 1.0 % of manufacturing value added in Austria, double the EU-25 average, ahead of Denmark and Italy (both 0.8 %).

⁽¹¹⁾ Greece and Malta, not available; Ireland, 2000.

From a low point in 1993, the working day adjusted production index for the manufacture of agricultural and forestry machinery increased until 1997 at an average rate of 5.3 % per annum. Beginning in 1998 a steady but modest contraction in output was recorded for four consecutive years, all less than -1 % and averaging -0.6 % per annum. This period of modest contractions was followed by strong growth of 8.4 % in 2002, before a return to a modest, negative rate of change (-0.9 %) in 2003. The output price index increased steadily throughout the 1990s and through to 2003, in a similar manner to the index for machinery and equipment manufacturing as a whole. In the 10 years to 2003 it increased on average by 2.0 % per annum, half a percentage point above the average for machinery and equipment manufacturing.

Figure 10.7
Manufacture of agricultural and forestry machinery (NACE Group 29.3)
Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Table 10.13
Selected agricultural and forestry machines (CPA Group 29.3), EU-15

	Prodcom code	Latest year for production	Production value (EUR million)
New agricultural and forestry tractors, wheeled, of an engine power <= 18 kW (excluding pedestrian-controlled tractors)	29.31.21.30	2001	86.1
New agricultural and forestry tractors, wheeled, of an engine power > 18 kW but <= 37 kW (excluding pedestrian-controlled tractors)	29.31.21.50	2000	148.9
New agricultural and forestry tractors, wheeled, of an engine power > 37 kW but <= 59 kW (excluding pedestrian-controlled tractors)	29.31.22.00	1999	1 116.2
New agricultural and forestry tractors, wheeled, of an engine power > 75 kW but <= 90 kW (excluding pedestrian-controlled tractors)	29.31.23.50	2000	930.3
Distributors for mineral or chemical fertilizer for soil preparation; manure spreaders and fertilizer distributors	29.32.14.30 and 29.32.14.50	2001 (1)	215.0
Agricultural forestry machinery, n.e.c.; lawn or sports-ground rollers	29.32.15.00	2001	459.2
Electric mowers for lawns, parks, golf courses or sports grounds	29.32.20.10	1999	257.6
Mowers designed to be hauled or carried by a tractor, with cutting device rotating in a horizontal plane; Mowers designed to be carried or hauled by a tractor; (excluding those with motors, for lawns, parks, golf courses or sports grounds, those designed to be hauled or carried by a tractor)	29.32.31.53 to 29.32.31.70	2001 (1)	406.6
Turners, side delivery rakes, and tedders; haymaking machinery	29.32.32.30 and 29.32.32.50	2001 (1)	241.4
Pick-up balers	29.32.33.30	2000	292.3
Forage harvesters, self propelled	29.32.34.75	2001	220.6
Sprayers and powder distributors designed to be mounted on or drawn by agricultural tractors (excluding watering appliances)	29.32.40.50	2001	281.1
Machines for cleaning, sorting or grading eggs, fruit or other agricultural produce	29.32.61.00	2001	404.3
Milking machines	29.32.62.00	2001	218.9
Poultry incubators and brooders; poultry-keeping machinery	29.32.63.53 and 29.32.63.55	2000	232.2
Forestry machinery	29.32.65.30	2001	331.7

(1) 2000 for one heading in the aggregate.

Source: Eurostat, European production and market statistics (Comext).

LABOUR AND PRODUCTIVITY

In the EU-15's agricultural and forestry machinery manufacturing sector apparent labour productivity was EUR 45 400 per person employed in 2001, although the small agricultural tractor manufacturing subsector recorded a figure of EUR 54 000 per person employed, which was above the manufacturing average. Only in Italy ⁽¹²⁾ did the apparent labour productivity for the whole agricultural and forestry machinery manufacturing sector exceed the national manufacturing average.

Average personnel costs amounted to EUR 27 300 per employee in the EU-25's agricultural and forestry machinery manufacturing sector, and EUR 33 300 per employee in the EU-15. In 2001, Belgium, Cyprus (2000), Italy and Portugal were the only Member States ⁽¹³⁾ where average personnel costs were higher in this sector than their respective manufacturing averages.

The wage adjusted labour productivity ratio for the EU-15's agricultural and forestry machinery manufacturing sector was 136.4 %, and as such this sector had the highest level for this indicator among the seven NACE groups that make up machinery and equipment manufacturing. This ratio was lower in the agricultural tractors manufacturing subsector at 132.1 %, but this was still above the machinery and equipment manufacturing average.

⁽¹²⁾ Greece, Malta and Slovenia, not available; Ireland, 2000.
⁽¹³⁾ Greece, not available, Ireland, 2000.

EXTERNAL TRADE

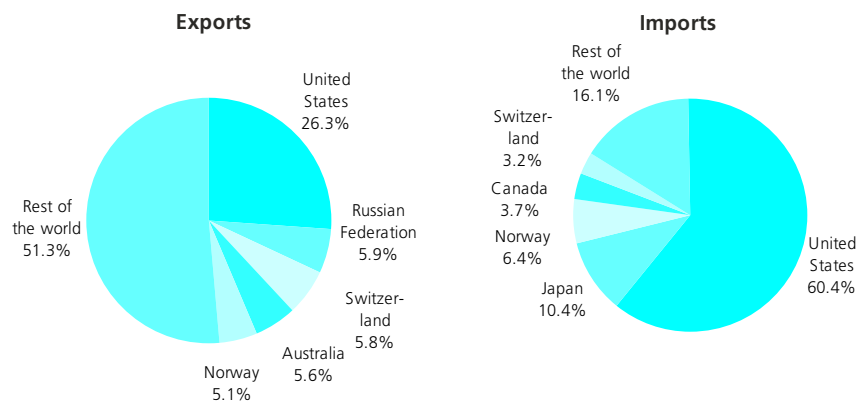
In 2002, the EU-25 exported EUR 4.5 billion of agricultural and forestry machinery (CPA Group 29.3), while it imported EUR 1.6 billion of this machinery. Other agricultural and forestry machinery (CPA Class 29.32) accounted for 58.2 % of these exports and 66.6 % of total imports.

More than one quarter (26.3 %) of the EU-25's exports of agricultural and forestry machinery were destined for the United States in 2002, while a group of six countries (Russia, Switzerland, Australia, Norway, Japan and Canada) each accounted for between 4.5 % and 6.0 % of the EU-25's exports. The United States was the origin of 60.4 % of the EU-25's imports of agricultural and forestry machinery, the fourth highest proportion for the United States among all of the CPA groups of manufactured goods.

Germany and Italy had the highest (intra- and extra- EU combined) external trade surplus among the Member States, valued in 2002 at EUR 2.3 billion and EUR 2.1 billion. In contrast, France reported the highest deficit, at EUR 882.7 million.

Italy and Finland both reported a 1.0 % share for agricultural and forestry machinery in exports of manufactured goods (intra- and extra- EU combined), the highest share among the Member States, compared with an average for the 25 Member States of 0.6 %. In Latvia, Denmark and Estonia agricultural and forestry machinery accounted for around 1 % of all imports of manufactured goods, approximately double the average for the 25 Member States.

Figure 10.8
Agricultural and forestry machinery (CPA Group 29.3)
Share in extra-EU trade, 2002



Source: Eurostat, Comext.

10.4: 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.

Among the activities covered by the machinery and equipment manufacturing sector, the manufacture of domestic appliances n.e.c. (NACE Group 29.7) is the only one for which households are the main customers.

STRUCTURAL PROFILE

Manufacturers of domestic appliances in the EU-25 generated EUR 12.4 billion value added in 2001, equivalent to 0.8 % of the manufacturing total and 7.4 % of the machinery and equipment manufacturing total. The contribution of the 10 new Member States to the EU-25's value added in this sector (5.4 %) was close to the manufacturing average (5.6 %). There were 293 000 persons employed in the EU-25's domestic appliances sector (14) and 242 200 in the EU-15, which was equivalent to 0.9 % of total EU-15 manufacturing employment.

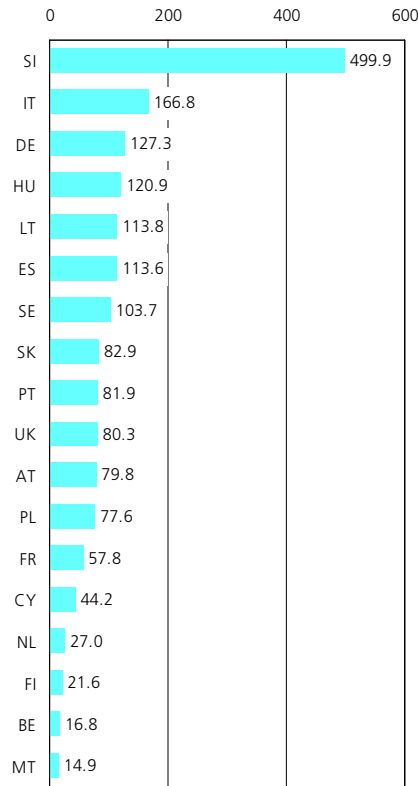
Electric domestic appliances manufacturing (NACE Class 29.71) dominated this sector with an 88.4 % share of value added and an 87.1 % share of persons employed in the EU-15, with non-electric domestic appliances manufacturing (NACE Class 29.72) the smaller of the two subsectors.

Germany accounted for 34.2 % of the EU-25's value added, followed by Italy and the United Kingdom with 22.0 % and 12.0 % respectively. Slovenia generated 4.0 % of its manufacturing value added in this sector in 2001, the highest share of any of the Member States (15), more than double the share of the next most specialised country (Italy, 1.3 %). This was the second most specialised manufacturing NACE group in Slovenia.

(14) Estonia, not available; Latvia, 2002; Slovenia, number of employees.

(15) The Czech Republic and Ireland, 2000; Latvia, 1999; Denmark, Estonia, Greece and Luxembourg, not available.

Figure 10.9 Manufacture of domestic appliances n.e.c. (NACE Group 29.7) Value added specialisation ratio relative to total manufacturing, 2001 (EU-25=100) (1)

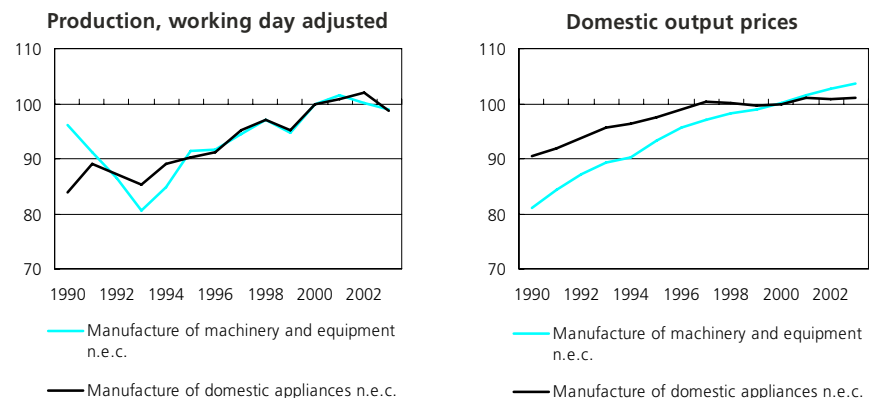


(1) The Czech Republic, Denmark, Estonia, Greece, Ireland, Latvia and Luxembourg, not available. Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

The development of the EU-25 working day adjusted production index for domestic appliances manufacturing differed from that for machinery and equipment manufacturing. The decline in output prior to 1993 was shorter and less severe, and the recovery in 1994 and 1995 was less strong. From the mid-1990s until 2001 the development of the production index for domestic appliances manufacturing followed fairly closely that of machinery and equipment manufacturing as a whole. However, while output for machinery and equipment manufacturing contracted (-1.3 %) in 2002, it continued to expand (1.1 %) for the manufacture of domestic appliances. In 2003 however, a stronger contraction (-3.0 %) was experienced in domestic appliance manufacturing.

Domestic output prices for domestic appliance manufacturing grew on average between 1993 and 2003 by 0.6 % per annum, considerably less strongly than the machinery and equipment manufacturing average of 1.5 %. Between 1997 and 2000 there was very little change in prices, and in two of these three years the output price index fell slightly. A fall in the index was also recorded in 2002.

Figure 10.10 Manufacture of domestic appliances n.e.c. (NACE Group 29.7) Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Table 10.14
Selected domestic appliances (CPA Group 29.7), EU-15

	Prodcom code	Latest year for production	Production value (EUR million)
Combined refrigerators-freezers, with separate external doors	29.71.11.10	2000	1 114.4
Household-type refrigerators (including compression-type, electrical absorption-type) (excluding built-in)	29.71.11.33	2000	1 587.6
Household dishwashing machines	29.71.12.00	2000	2 122.4
Fully-automatic washing machines of a dry linen capacity <= 10 kg (including machines which both wash and dry)	29.71.13.30	2000	4 247.2
Domestic vacuum cleaners with a self-contained electric motor for a voltage >= 110 V	29.71.21.13	2000	1 426.4
Domestic microwave ovens	29.71.27.00	2000	848.8
Domestic electric cookers (including combines gas-electric appliances), hobs cooking-plates and ovens	29.71.28.10 to 29.71.28.35, 29.71.28.70 and 29.71.28.90	2000 (1)	3 731.1
Non-electric instantaneous or storage water heaters	29.72.14.00	2000	1 123.8

(1) 2000 for one heading in the aggregate.

Source: Eurostat, European production and market statistics (Comext).

LABOUR AND PRODUCTIVITY

In domestic appliances manufacturing apparent labour productivity in 2001 was EUR 48 300 per person employed in the EU-15, and as such below the manufacturing average (EUR 51 200). This ratio was lower in the manufacture of non-electrical domestic appliances, where it was EUR 43 300. Average personnel costs in the domestic appliances manufacturing sector were identical with those in manufacturing, namely EUR 35 700 per employee, and hence below the average for machinery and equipment manufacturing. Again the non-electrical part of domestic appliance manufacturing recorded lower levels for this indicator. The low average personnel costs resulted in a wage adjusted labour productivity ratio (135.4 %) that was higher than the average for machinery and equipment manufacturing (131.1 %).

EXTERNAL TRADE

EU-25 exports of domestic appliances (CPA Group 29.7) were valued at EUR 6.9 billion in 2002, some EUR 1.3 billion more than imports. The vast majority (90.1 %) of the EU-25's exports were composed of electric domestic appliances (CPA Class 29.71), as was the case for imports (91.7 %).

As with most CPA groups of manufactured goods, the United States was the main destination for EU-25 exports of domestic appliances, with a 19.4 % share in 2002. This was however less than the United States average for manufactured goods (27.3 %). The destinations for the EU-25's exports of these goods were widespread, as no other country registered a share exceeding 10 %.

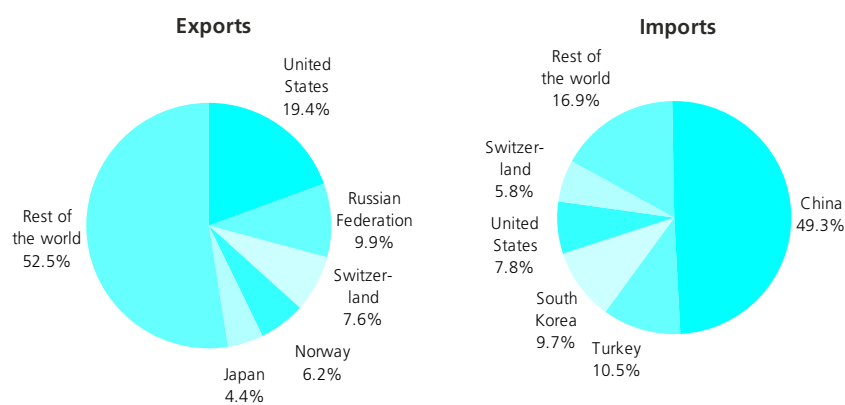
China was the main origin of EU-25 imports, supplying close to half (49.3 %) of the total in 2002. This was the fourth highest proportion of EU-25 imports supplied by China among the CPA groups of manufactured goods. Turkey (10.5 %), South Korea (9.7 %) and the United States (7.8 %) were the next most important sources of imports.

Italy registered by far the highest external trade surplus (intra- and extra-EU combined) in domestic appliances in 2002, valued at EUR 5.6 billion. Germany had the next highest surplus, with less than half of this value (EUR 2.4 billion). Only four other Member States reported a surplus in domestic appliances, with the largest deficits recorded by the United Kingdom (EUR -2.7 billion) and France (EUR -1.2 billion).

Unsurprisingly, Slovenia was the most specialised in the export of domestic appliances. As a proportion of its exports of all manufactured goods, domestic appliances accounted for 6.6 %, the third highest share of any CPA group of manufactured goods in this country in 2002. Italy registered the next highest share of domestic appliances in exports of manufactured goods (2.7 %).

In Cyprus, Finland, Greece and Latvia, domestic appliances represented between 1.6 % and 1.5 % of total imports of manufactured goods, the highest shares among the Member States.

Figure 10.11
Domestic appliances n.e.c. (CPA Group 29.7)
Share in extra-EU trade, 2002



Source: Eurostat, Comext.

Table 10.15

Manufacture of machinery for the production and use of mechanical power, except aircraft, vehicle and cycle engines (NACE Group 29.1)
Main indicators, 2001

	BE	CZ	DK	DE	EE (1)	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	2 075	814	2 635	32 848	3	:	2 832	11 275	391	17 030	14	31	23	:
Value added at factor cost (EUR million) (2)	703	260	1 153	13 984	2	:	971	3 792	157	5 036	4	11	7	:
Purchases of goods and services (EUR million)	1 535	725	0	22 412	2	:	2 135	8 724	239	12 752	11	22	15	:
Gross investment in tangible goods (EUR million)	65	76	136	1 472	0	:	117	484	26	783	1	2	2	:
Number of persons employed (thousands)	8	25	22	238	0	:	22	73	3	97	0	2	3	:
App. labour productivity (EUR thous./pers. emp.) (2)	92.4	10.6	52.5	58.8	5.6	:	44.5	52.2	56.9	52.1	24.2	7.0	2.3	:
Average personnel costs (EUR thous./employee) (3)	49.9	7.7	37.9	46.8	4.4	:	29.5	39.0	32.7	33.8	17.0	3.6	5.6	:
Wage adjusted labour productivity (%) (3)	185.2	137.7	138.5	125.5	126.4	:	150.8	133.9	173.9	154.4	144.8	195.0	41.5	:
Gross operating rate (%) (2)	14.7	7.8	11.9	8.0	9.5	:	11.1	7.7	19.1	11.2	10.4	18.5	-40.4	:
	HU	MT (1)	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	274	9	2 747	1 067	1 154	271	99	382	2 004	2 833	10 921	151	441	:
Value added at factor cost (EUR million)	94	4	886	513	736	90	31	135	539	1 085	4 132	49	188	:
Purchases of goods and services (EUR million)	226	4	2 087	676	614	196	69	268	1 587	2 265	7 481	112	330	:
Gross investment in tangible goods (EUR million)	22	0	57	65	61	20	14	57	52	97	440	12	38	:
Number of persons employed (thousands)	9	0	16	8	30	4	:	13	9	18	74	12	40	:
App. labour productivity (EUR thous./pers. emp.)	11.0	25.4	55.4	64.1	24.3	25.6	:	10.3	59.0	59.6	55.6	3.9	4.7	:
Average personnel costs (EUR thous./employee)	8.1	11.1	39.7	42.0	9.5	15.1	13.6	5.1	40.9	42.7	44.2	3.1	3.2	:
Wage adjusted labour productivity (%)	135.7	229.9	139.4	152.8	255.8	169.0	:	201.6	144.2	139.5	125.8	127.7	147.6	:
Gross operating rate (%)	7.9	32.7	9.4	15.2	34.4	13.5	5.0	17.4	8.2	9.7	7.8	9.1	15.1	:

(1) 2000.

(2) Ireland, 2000.

(3) Ireland and Cyprus, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 10.16

Manufacture of industrial processing machinery (NACE Groups 29.2, 29.4 and 29.5)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV (1)	LT	LU
Production (EUR million)	5 530	3 254	5 560	109 269	:	:	13 993	30 170	1 012	61 442	37	58	:	:
Value added at factor cost (EUR million) (2)	1 727	1 025	2 103	41 898	:	:	5 255	9 779	414	19 292	15	27	:	:
Purchases of goods and services (EUR million)	4 368	2 367	0	71 468	:	:	9 542	22 816	721	44 349	26	33	:	:
Gross investment in tangible goods (EUR million)	208	184	193	3 180	:	:	500	750	31	1 768	3	4	:	:
Number of persons employed (thousands)	31	102	41	750	:	:	133	199	8	404	1	4	:	:
App. labour productivity (EUR thous./pers. emp.) (2)	56.0	10.0	51.2	55.9	:	:	39.5	49.1	49.7	47.8	25.3	6.4	:	:
Average personnel costs (EUR thous./employee) (3)	43.6	7.5	40.8	45.9	:	:	28.8	39.6	28.4	32.4	14.8	3.5	:	:
Wage adjusted labour productivity (%) (3)	128.6	133.8	125.5	121.8	:	:	137.2	124.1	175.3	147.4	148.6	185.7	:	:
Gross operating rate (%) (2)	7.2	8.9	8.1	7.0	:	:	11.3	6.0	16.4	12.7	13.9	22.1	:	:
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	919	26	10 846	8 624	3 501	1 939	533	569	7 989	11 317	28 619	305	639	:
Value added at factor cost (EUR million)	351	11	3 551	3 340	1 900	757	166	183	2 550	3 893	11 394	84	270	:
Purchases of goods and services (EUR million)	794	14	8 402	5 803	1 783	1 251	387	414	5 634	8 503	18 908	252	479	:
Gross investment in tangible goods (EUR million) (4)	67	1	419	329	154	168	31	48	139	359	811	24	43	:
Number of persons employed (thousands)	32	0	68	57	124	33	:	29	45	69	220	34	70	:
App. labour productivity (EUR thous./pers. emp.)	10.9	33.7	52.4	58.8	15.3	22.6	:	6.4	56.5	56.3	51.7	2.4	3.9	:
Average personnel costs (EUR thous./employee)	7.6	13.5	40.2	42.4	8.2	16.1	13.8	5.2	40.6	41.8	37.0	2.2	2.7	:
Wage adjusted labour productivity (%)	142.8	248.7	130.3	138.8	186.6	141.0	:	122.0	139.2	134.7	139.8	111.9	140.8	:
Gross operating rate (%)	9.5	26.6	7.7	10.7	25.1	12.2	5.0	5.6	9.2	8.7	11.3	3.8	12.8	:

(1) 2000.

(2) Ireland, 2000.

(3) Ireland and Cyprus, 2000.

(4) The Netherlands, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 10.17

Manufacture of agricultural and forestry machinery (NACE Group 29.3)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million) (1)	710	190	587	6 991	21	:	1 005	3 751	92	6 238	7	13	8	1
Value added at factor cost (EUR million) (2)	216	75	206	1 927	7	:	344	1 225	29	1 546	3	8	3	0
Purchases of goods and services (EUR million)	664	169	0	5 516	24	:	926	4 300	67	5 237	4	7	5	0
Gross investment in tangible goods (EUR million)	21	17	29	149	1	:	39	115	3	199	0	2	0	:
Number of persons employed (thousands)	4	11	5	39	1	:	11	30	1	34	0	1	1	0
App. labour productivity (EUR thous./pers. emp.) (2)	57.3	6.8	41.1	48.9	7.3	:	31.0	40.3	36.9	46.0	22.5	7.0	2.8	18.0
Average personnel costs (EUR thous./employee) (3)	47.6	6.1	34.6	38.6	4.7	:	21.8	31.6	24.7	29.9	17.6	2.7	2.6	36.3
Wage adjusted labour productivity (%) (3)	120.5	111.3	118.7	126.6	156.8	:	142.6	127.4	149.5	153.9	108.8	259.0	109.5	49.5
Gross operating rate (%) (4)	6.6	4.7	7.1	6.9	8.9	:	10.0	6.2	10.3	11.2	17.2	38.9	3.6	3.4
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	252	:	1 358	1 055	651	127	65	47	792	646	2 760	19	123	:
Value added at factor cost (EUR million)	65	:	406	348	308	53	20	14	218	208	681	7	35	:
Purchases of goods and services (EUR million)	204	:	1 069	863	440	88	51	43	698	637	2 758	17	98	:
Gross investment in tangible goods (EUR million)	25	:	34	47	25	7	2	3	18	17	93	3	5	:
Number of persons employed (thousands)	7	:	8	7	19	3	:	3	4	4	12	3	14	:
App. labour productivity (EUR thous./pers. emp.)	8.8	:	50.2	50.6	16.0	17.7	:	4.1	51.2	49.9	54.8	1.9	2.5	:
Average personnel costs (EUR thous./employee)	6.8	:	34.7	35.3	6.8	13.2	11.3	5.0	35.2	39.0	36.8	1.8	2.3	:
Wage adjusted labour productivity (%)	129.6	:	144.6	143.1	235.3	133.8	:	82.0	145.5	127.8	148.7	105.7	107.1	:
Gross operating rate (%) (4)	5.6	:	9.2	9.7	27.9	11.4	3.0	-5.0	8.6	6.9	7.3	2.8	-0.1	:

(1) The Czech Republic, 2000.

(2) Ireland, 2000.

(3) Ireland and Cyprus, 2000.

(4) Ireland and Romania, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 10.18

Manufacture of domestic appliances n.e.c. (NACE Group 29.7)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV (1)	LT	LU
Production (EUR million)	159	266	:	11 058	:	:	3 323	3 609	304	10 934	8	0	60	:
Value added at factor cost (EUR million) (2)	60	70	:	4 225	:	:	952	963	101	2 723	3	0	13	:
Purchases of goods and services (EUR million)	149	215	:	9 476	:	:	2 818	3 920	171	8 580	5	0	48	:
Gross investment in tangible goods (EUR million)	4	15	:	408	:	:	168	140	20	422	0	0	4	:
Number of persons employed (thousands)	1	8	:	69	:	:	23	25	3	59	0	0	2	:
App. labour productivity (EUR thous./pers. emp.) (2)	43.6	8.1	:	61.3	:	:	40.7	39.1	39.8	46.1	20.1	1.1	5.4	:
Average personnel costs (EUR thous./employee) (3)	33.9	6.3	:	47.8	:	:	28.6	30.5	23.8	30.7	13.9	1.0	4.5	:
Wage adjusted labour productivity (%) (4)	128.7	144.9	:	128.3	:	:	142.7	128.3	167.4	150.2	127.0	107.0	120.4	:
Gross operating rate (%) (5)	7.8	8.0	:	6.9	:	:	7.8	4.4	16.5	8.5	13.3	24.7	3.7	:
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	485	4	348	560	699	443	799	196	159	1 145	4 116	36	167	:
Value added at factor cost (EUR million)	113	1	118	230	282	118	162	26	54	348	1 480	6	58	:
Purchases of goods and services (EUR million)	450	3	252	370	610	401	634	186	111	1 073	2 992	33	138	:
Gross investment in tangible goods (EUR million) (6)	22	0	7	28	51	22	80	7	2	28	178	4	28	:
Number of persons employed (thousands)	10	0	2	4	15	4	:	4	1	9	34	3	11	:
App. labour productivity (EUR thous./pers. emp.)	10.9	22.1	50.4	51.9	18.2	26.4	:	6.4	42.2	38.9	43.9	1.9	5.5	:
Average personnel costs (EUR thous./employee)	6.6	10.7	32.7	36.9	8.5	14.9	13.2	4.8	30.2	36.8	32.6	1.9	2.5	:
Wage adjusted labour productivity (%)	164.7	205.4	154.0	140.9	214.5	177.1	:	133.5	139.5	105.6	134.4	99.5	217.9	:
Gross operating rate (%) (5)	7.9	11.7	10.9	11.4	18.6	9.9	3.4	3.1	9.6	1.4	8.7	0.4	12.6	:

(1) 1999.

(2) The Czech Republic and Ireland, 2000.

(3) Ireland and Cyprus, 2000.

(4) The Czech Republic, Ireland and Cyprus, 2000.

(5) Ireland and Romania, 2000.

(6) The United Kingdom, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Electrical machinery and optical equipment



This sector covers a large and diverse range of activities, from the manufacture of very specialised capital machinery and equipment (for example, precision instruments, computers, transmission equipment), through intermediate goods (for example, electronic components and batteries) to consumer goods (for instance, televisions, telephones, cameras and watches). Thus, several of the activities covered in this chapter are interconnected; for instance, the electronic components sector provides a vital input to other sectors. Competition in this sector comes mainly from South-East Asia. Furthermore, decreasing margins for goods with high equipment rates in households oblige enterprises to continuously launch new products, with new designs often based on new technology. Examples include the recent developments in markets for digital cameras and flat-panel TVs.

In August 2003, the European Commission approved a proposal for a directive on the eco-design of energy-using products ⁽¹⁾, such as electrical and electronic devices or heating equipment. The aim of the directive is to facilitate the free movement of goods and to enhance product quality and environmental protection. Progress has also been made on a Commission proposal for a directive ⁽²⁾ to harmonise Member States rules on measuring instruments, such as water, gas, and electricity meters, petrol pumps, taxi meters, and exhaust gas meters.

⁽¹⁾ COM(2003) 453.

⁽²⁾ COM(2000) 566.

This chapter covers NACE Divisions 30 to 33, collectively referred to as the manufacture of electrical machinery and optical equipment. These activities include the manufacture of computers, office machinery, electrical machinery and equipment, electronic components, audiovisual and communication equipment, and 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.

STRUCTURAL PROFILE

In 2001, value added in the EU-25's electrical machinery and optical equipment sector (NACE Subsection DL) was EUR 182.4 billion, or 11.9 % of the manufacturing total, the third highest contribution of all NACE subsections to the manufacturing total. The number of persons employed ⁽³⁾ in the electrical machinery and optical equipment sector was 3.9 million in the EU-25 (again in 2001). In the EU-15, the electrical machinery and optical equipment sector contributed around 11.6 % of all manufacturing employment, slightly less than its share of value added.

⁽³⁾ Slovenia, number of employees.

Table 11.1
Manufacture of electrical and optical equipment (NACE Subsection DL)
Structural profile, 2001

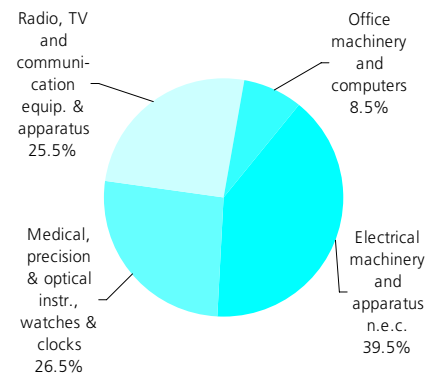
Rank	Largest value added (EUR billion)	Highest value added specialisation relative to manufacturing (EU-25=100)	Largest number of persons employed (thousands) (1)	Main EU-25 trading partners: origin of imports, 2002 (EUR billion)	Main EU-25 trading partners: destination of exports, 2002 (EUR billion)
1	Germany (55.4)	Malta (259)	Germany (1 052.2)	United States (50.1)	United States (38.9)
2	France (27.8)	Finland (230)	France (518.9)	China (33.9)	Switzerland (10.7)
3	United Kingdom (25.4)	Ireland (210)	United Kingdom (474.5)	Japan (28.4)	Japan (7.8)
4	Italy (19.2)	Hungary (132)	Italy (453.2)	Taiwan (15.6)	China (7.6)
5	Finland (8.5)	Germany (113)	Czech Republic (185.1)	Malaysia (10.8)	Russian Federation (6.0)

(1) Slovenia, not available.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Among the four NACE divisions that compose this sector, the manufacture of electrical machinery and apparatus (NACE Division 31) was the largest, with 39.5 % of sectoral value added in the EU-25 and 42.2 % of employment in the EU-15. Optical and instrument engineering (NACE Division 33) generated 26.5 % of the sector's value added in the EU-25, just ahead of the manufacture of radio, television and communication equipment (NACE Division 32, 25.5 %). The smallest contribution came from the manufacture of office machinery and computers (NACE Division 30), which generated 8.5 % of the sector's value added.

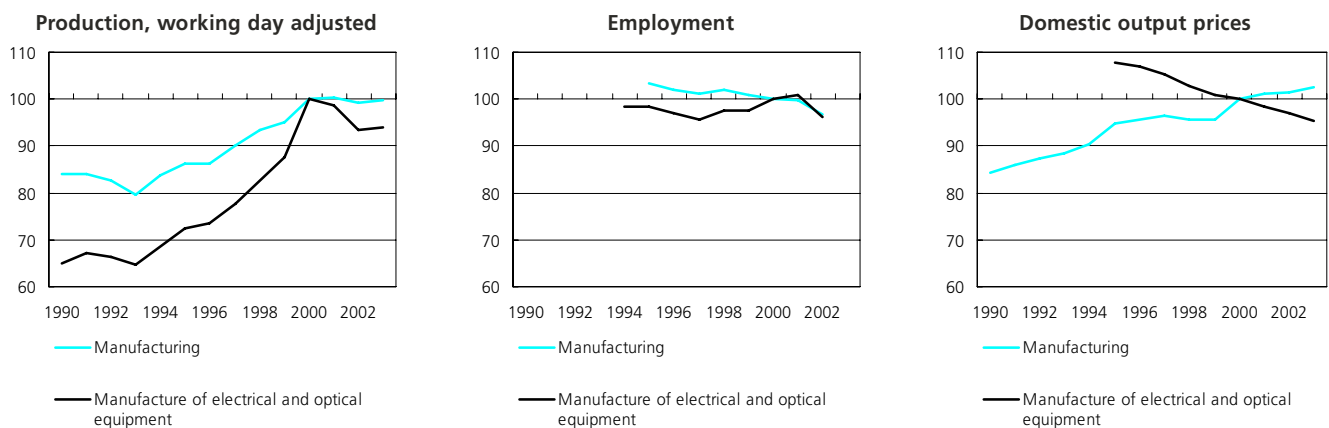
In 2001, Germany generated EUR 55.4 billion of value added in the electrical machinery and optical equipment sector, the largest value among the Member States and roughly twice as much as in France (EUR 27.8 billion), where the second highest level of output was registered. Output in the electrical machinery and optical equipment sector was relatively high in Germany and France (compared with the EU-25 average), although Malta, Finland, Ireland, and to a lesser extent Hungary, were the most highly specialised countries in these activities; the least specialised Member States for the manufacture of electrical machinery and optical equipment were Cyprus, Latvia, Luxembourg and Greece. In Malta, Poland and Finland, the manufacture of electrical machinery and optical equipment was the largest of all manufacturing NACE subsections in value added terms.

Figure 11.1
Manufacture of electrical and optical equipment (NACE Subsection DL)
Share of value added at factor cost, EU-25, 2001



Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 11.2
Manufacture of electrical and optical equipment (NACE Subsection DL)
Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Table 11.2

Manufacture of electrical and optical equipment (NACE Subsection DL)**Value added at factor cost and persons employed, by enterprise size-class, 2001 (% of total)**

	Micro enterprises		Small enterprises		Medium-sized enterprises		Large enterprises	
	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed
EU-25	5.9	:	11.8	:	18.3	:	63.9	:
EU-15	6.0	9.0	11.9	15.4	18.2	19.9	63.9	55.7

Source: Eurostat, Structural Business Statistics (theme4/sbs/sizclass).

The electrical machinery and optical equipment sector had a relatively high number of large enterprises (with 250 and more persons employed). Large enterprises generated close to two thirds (63.9 %) of the total value added in the EU-25's electrical machinery and optical equipment sector, which was 9.1 percentage points more than for the whole of manufacturing. Micro (less than 10 persons employed), small (10 to 49 persons employed) and medium-sized enterprises (from 50 to 249 persons employed) each generated lower shares of total value added in electrical machinery and optical equipment sector than they did for the whole of the manufacturing sector. This situation was repeated for three of the four NACE divisions that make up the electrical machinery and optical equipment sector, the exception being optical and instrument engineering (NACE Division 33), where SMEs had a higher than average share of total value added.

Annual short-term statistics show that the evolution of output within the electrical machinery and optical equipment sector grew at a faster pace than the manufacturing average between 1993 and 2000, only to contract at a quicker pace thereafter. The level of production grew at an average rate of 6.4 % per annum in EU-25 electrical machinery and optical equipment manufacturing between 1993 and 2000, compared with a 3.3 % average for manufacturing as a whole. In 2001 however, while the production index for manufacturing was relatively unchanged (0.2 % growth) compared with the year before, electrical machinery and optical equipment manufacturing output contracted by 1.4 %. This was followed in 2002 by a fall of 5.3 %, compared with a reduction of 0.9 % for the whole of the manufacturing sector. There were modest signs of a recovery in 2003, as the production index rose by 0.7 % within electrical machinery and optical equipment manufacturing, compared with growth of 0.6 % for manufacturing as a whole.

The output price index for electrical machinery and optical equipment manufacturing fell every year between 1996 (the beginning of the series) and 2003 in the EU-25, by 1.5 % per annum on average. Over the same period, no other NACE subsection recorded a negative price evolution. Among the activities that compose electrical machinery and optical equipment manufacturing, two different pictures emerge in terms of price developments. The computer and office machinery (NACE Division 30) and the radio, television and communication manufacturing sector (NACE Division 32) both reported uninterrupted falling prices over the period considered, averaging 9.0 % and 3.5 % per annum respectively. The two other NACE divisions, electrical machinery and apparatus (NACE Division 31) and optical and instrument engineering (NACE Division 33) recorded modest price increases for most years, averaging 0.4 % and 1.0 % per annum respectively.

Unlike the production index, where growth was experienced from 1994 onwards, the employment index did not show any signs of expansion in this activity until 1998, when it grew by 2.0 % in the EU-25. There was no significant change in 1999 (-0.1 %), while 2000 (2.5 %) and 2001 (1.0 %) continued the general upward trend. However, a 4.7 % reduction in the number of persons employed in 2002 brought employment levels back down to only just above their 1997 level. Employment growth in electrical machinery and optical equipment manufacturing between 1997 and 2001, which averaged 1.3 % per annum, was in contrast to the overall picture for manufacturing in the EU-25, where there was only one year of employment growth during the period considered, while the number of persons employed fell, on average, by 0.4 % per annum.

LABOUR AND PRODUCTIVITY

Employment characteristics for electrical machinery and optical equipment manufacturing tended to be rather similar to those observed for manufacturing as a whole. Indeed, according to LFS data, in 2002, men represented 68.8 % of the persons employed in the EU-15 in this sector, just 2.9 percentage points less than the proportion observed in manufacturing (71.7 %). Among the Member States ⁽⁴⁾, the proportion of men employed in this sector in Greece was more than 10 percentage points above the national average for manufacturing, while the opposite situation was observed in the Czech Republic, Ireland, Malta, Portugal, Slovenia and Slovakia. Among the four NACE divisions that compose electrical machinery and optical equipment manufacturing, male employment rates were rather similar.

In the EU-15, 92.9 % of the persons employed in the electrical machinery and optical equipment sector worked full-time in 2002, a rate that was close to the manufacturing average (92.4 %). Again there was little difference between full-time employment rates recorded in the four NACE divisions that make up this sector.

A somewhat higher proportion of employees made up the electrical machinery and optical equipment workforce in 2002 (94.5 %) than the EU-15 manufacturing average (91.9 %). This pattern was repeated in every Member State ⁽⁵⁾, except for Italy. Optical and instrument engineering had a notably lower proportion of paid employees (90.8 %), while the three other NACE divisions within this sector recorded paid employee rates of between 95 and 97 %.

⁽⁴⁾ Estonia, Cyprus, Latvia, Luxembourg and Poland, not available.

⁽⁵⁾ Cyprus, Latvia and Poland, not available.

Table 11.3
Manufacture of electrical and optical equipment (NACE Subsection DL)
Labour force characteristics, 2002

	Share of men		Share of full-time		Share of employees	
	Value (%)	Index (manufacturing=100)	Value (%)	Index (manufacturing=100)	Value (%)	Index (manufacturing=100)
EU-25	:	:	:	:	:	:
EU-15	68.8	95.9	92.9	100.6	94.5	102.9
BE	69.4	93.3	87.6	96.2	97.8	103.2
CZ	50.2	81.5	98.3	100.8	95.3	102.9
DK	62.2	90.9	96.8	104.4	96.9	100.4
DE	68.6	95.6	90.2	100.5	96.0	100.7
EE	:	:	96.1	99.4	100.0	103.5
EL	81.2	114.5	97.8	99.8	74.9	102.2
ES	70.9	95.4	97.5	100.6	92.0	104.1
FR	66.0	93.3	94.4	100.0	97.7	103.0
IE	58.4	84.4	95.6	101.9	96.8	105.3
IT	69.3	99.6	95.2	100.5	81.0	97.9
CY	:	:	100.0	107.1	:	:
LV	:	:	:	:	:	:
LT	51.3	100.5	96.9	102.1	100.0	103.8
LU	:	:	97.6	102.1	100.0	101.7
HU	51.6	86.5	99.0	101.4	96.7	103.6
MT	53.8	76.9	99.1	102.6	99.1	106.4
NL	77.1	100.0	79.9	106.5	96.6	100.5
AT	69.0	92.8	:	:	97.1	102.0
PL	:	:	:	:	:	:
PT	45.2	80.6	99.5	102.5	98.1	112.5
SI	50.2	83.1	96.3	99.6	97.6	104.0
SK	42.6	71.9	99.5	100.8	98.5	102.5
FI	64.5	91.8	96.2	100.8	99.0	105.9
SE	64.4	87.1	94.8	103.4	98.0	104.2
UK	73.4	98.1	95.0	103.0	97.3	102.3

Source: Eurostat, Labour Force Survey.

Apparent labour productivity was EUR 52 900 per person employed in the EU-15's electrical machinery and optical equipment sector in 2001 (EUR 1 700 above the manufacturing average), which was the fifth highest of the 14 manufacturing subsections. Among the four NACE divisions that compose the electrical machinery and optical equipment sector, the manufacture of office machinery and computers (NACE Division 30) had clearly the highest level of apparent labour productivity (EUR 76 100 per person employed), while the other three divisions recorded levels that were closer to EUR 50 000 per person employed.

Average personnel costs in the electrical machinery and optical equipment sector were EUR 36 300 per employee in the EU-25 in 2001 (EUR 41 500 in the EU-15), which was EUR 5 400 above the EU-25 manufacturing average, and as such the fourth highest average personnel costs across all manufacturing subsections.

The wage adjusted labour productivity ratio shows that value added was equivalent to 127.5 % of personnel costs in EU-15's electrical machinery and optical equipment manufacturing sector in 2001. This was the lowest value recorded for all manufacturing subsections, while the overall manufacturing average was 143.5 %. However, office machinery and computer manufacturing, as well as optical and instrument engineering, had wage adjusted labour productivity ratios that were close to the manufacturing average.

Among the Member States ⁽⁶⁾, the wage adjusted labour productivity ratio was high in the electrical machinery and optical equipment sector in Finland and Malta, considerably above national manufacturing averages. Poland and Latvia also recorded high wage adjusted labour productivity in this sector, although the ratios for both of these countries were more in line with the manufacturing averages of both countries.

⁽⁶⁾ Greece, Ireland and Slovenia, not available.

Table 11.4
Manufacture of electrical and optical equipment (NACE Subsection DL)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Manufacture of electrical and optical equipment	52.9	127.5	41.5
Office machinery and computers	76.1	148.3	51.3
Electrical machinery and apparatus n.e.c.	48.8	124.1	39.3
Radio, television and communication equipment and apparatus	54.6	118.4	46.1
Medical, precision and optical instruments, watches and clocks	52.4	137.4	38.2

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

EXTERNAL TRADE

The EU-25 recorded a trade deficit for electrical and optical equipment (CPA Subsection DL) equal to EUR 52.2 billion in 2002. Exports were valued at EUR 155.6 billion (18.6 % of all manufactured exports) and imports at EUR 207.8 billion (28.4 % of manufactured imports). Radio, television and communication equipment and apparatus (CPA Division 32) represented the largest export and import market with around one third of electrical and optical equipment exports and imports.

Among the Member States, Germany was the largest trader of electrical and optical equipment in 2002 (EUR 109.6 billion of exports and EUR 102.5 billion of imports, intra- and extra-EU combined). Malta's exports were very specialised in these products, as electrical machinery and optical equipment accounted for 60.5 % of its total manufactured exports, by far the largest share among the Member States. Latvia registered the lowest export specialisation in these goods, as electrical and optical equipment accounted for 4.5 % of

manufactured exports. The most specialised importers were Ireland, Hungary, Malta and Ireland, where these goods accounted for more than one third of all the manufactured imports. The largest EU-25 trading partners were the United States (25.0 % of exports and 24.1 % of imports in 2002), China (4.9 % and 16.3 %), Switzerland (6.9 % and 5.0 %) and Japan (5.0 % and 13.7 %).

Table 11.5
Electrical and optical equipment (CPA Subsection DL)
External trade, EU-25, 2002 (EUR million)

	Exports	Imports	Trade balance	Cover ratio (%)
Electrical and optical equipment	155 581	207 825	-52 244	74.9
Office machinery and computers	25 890	63 618	-37 728	40.7
Electrical machinery and apparatus n.e.c.	37 050	31 950	5 100	116.0
Radio, television and communication equipment and apparatus	50 755	73 635	-22 880	68.9
Medical, precision and optical instruments; watches and clocks	41 886	38 623	3 264	108.4

Source: Eurostat, Comext.

11.1: INSTRUMENT ENGINEERING

The manufacture of medical, precision and optical instruments (NACE Division 33) includes activities related to the manufacture of instruments, as well as the manufacture of industrial process control equipment, watches and clocks. Photographic equipment is covered, but not photochemical products, flashbulbs or television cameras. Together these activities are referred to as instrument engineering in this subchapter.

According to the European Commission ⁽⁷⁾, the importance of medical devices within national health budgets has generally increased and in some countries it exceeds that of pharmaceutical products. The legislative framework influencing these products is the medical devices directive ⁽⁸⁾ that has recently been the subject of an assessment by the European Commission in order to set up an action programme, aiming to improve the implementation of the directive.

Growth in the digital camera market has had an impact on the optical instruments and photographic equipment sector (NACE Group 33.4), with technology improvements and competition resulting in better quality images and lower prices.

⁽⁷⁾ European Commission press release, DN: IP/03/934, 2 July 2003.

⁽⁸⁾ Council Directive (93/42/EEC) of 14 June 1993 concerning medical devices.

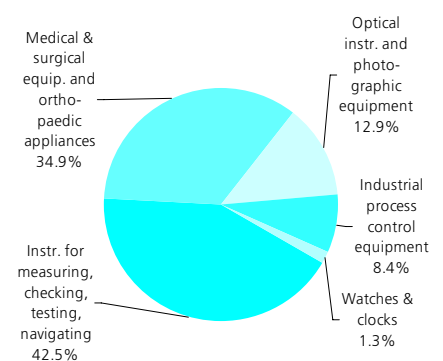
STRUCTURAL PROFILE

Value added for instrument engineering was EUR 48.4 billion in the EU-25 in 2001, more than one quarter of the electrical machinery and optical equipment total. In the EU-15 added value was EUR 46.7 billion, which made this sector the second largest of the four NACE divisions that are covered within this chapter. The number of persons employed in the EU-25 ⁽⁹⁾ was 995 700 and in the EU-15 it was 892 300, and as such this sector's share of electrical machinery and optical equipment employment was higher than its value added share.

In 2001, among the five NACE groups that compose NACE Division 33, the largest activity was the manufacture of instruments (NACE Group 33.2) which generated 42.5 % of the sector's value added in the EU-25 and employed 36.8 % of the sector's workforce in the EU-15. The smallest group was the watches and clocks subsector, which accounted for 1.3 % of sectoral value added.

⁽⁹⁾ Poland, number of employees, 2000; Slovenia, number of employees.

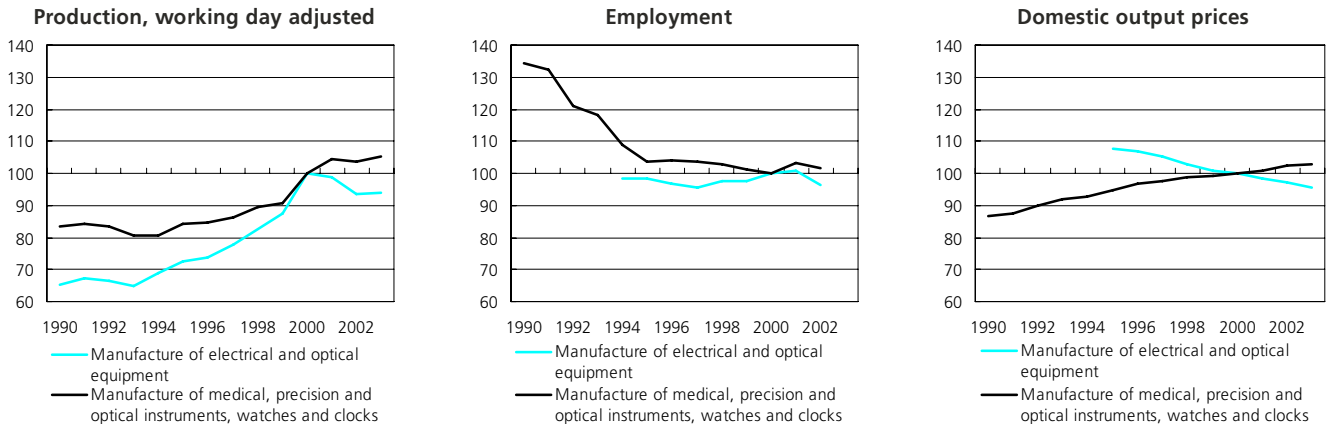
Figure 11.3
Manufacture of medical, precision and optical instruments, watches and clocks (NACE Division 33)
Share of value added at factor cost, EU-25, 2001



Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 11.4

Manufacture of medical, precision and optical instruments, watches and clocks (NACE Division 33)
Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/eht).

Among the Member States ⁽¹⁰⁾, Germany registered the highest value added (EUR 15.9 billion) in 2001 and accounted for almost one third of the EU-25's value added in the instrument engineering sector. The United Kingdom (17.8 %) and France (16.1 %) accounted respectively for the second and the third largest shares of value added, followed by Italy (10.2 %). However, in terms of value added specialisation relative to manufacturing, Ireland, Denmark and Malta were the most specialised Member States, all generating 4 % or more of their manufacturing value added in the instrument engineering sector.

Annual short-term statistics show that the production index for instrument engineering has followed a fairly typical evolution for a manufacturing activity over the last 10 years. Its average growth (3.2 % per annum) between 1993 and 2000 was slower than electrical machinery and optical equipment manufacturing (6.4 % per annum) as a whole, but almost identical to the manufacturing average. However, instrument engineering maintained a positive evolution for output through to 2003, at an average rate of 1.7 % per annum, despite a slight fall in production in 2002 (-0.7 %). This was in contrast to a stable situation for the whole of manufacturing, and a contraction in output in the other parts of electrical machinery and optical equipment manufacturing.

Unlike for some of the other activities in electrical machinery and optical equipment manufacturing, the output price index of instrument engineering followed an upward progression, with a 1.1 % annual average increase during the 10 years to 2003. This basic pattern was observed in each of the groups ⁽¹¹⁾ that make up instrument engineering.

The EU-25's employment index for instrument engineering declined strongly in the first half of the 1990s, by 5.0 % per annum on average between 1990 and 1995. Two years of little change (+/- 0.3 %) were followed by three consecutive years of further reductions for employment, around -1 % per year, such that by 2000 the index was around 25 % lower than it had been 10 years earlier. In 2001 the employment index increased by 3.4 %, by far its highest growth rate in more than 10 years, although this expansion was short lived, as the index fell again by 1.6 % in 2002.

⁽¹¹⁾ NACE Group 33.3, not available.

⁽¹⁰⁾ The Netherlands and Poland, not available.

Table 11.6

Selected products of medical, precision and optical instruments, watches and clocks (CPA Division 33), EU-15

	PRODCOM code	Latest year for production	Production value (EUR million)
Apparatus based on the use of X-rays (including radiography and radiotherapy apparatus)	33.10.11.15 and 33.10.11.19	2001	3 103.8
Electro-diagnostic, apparatus (excluding electro-cardiographs) n.e.c.	33.10.12.30	2001	1 891.2
Ultraviolet or infrared apparatus used in medical, surgical, dental or veterinary sciences	33.10.12.50	1999	117.2
Dental drill engines, whether or not combined on a single base with other dental equipment; instruments and appliances used in dental sciences	33.10.13.30 and 33.10.13.50	2001	848.6
Syringes, with or without needles, tubular metal needles, needles for sutures, used in medical, surgical, dental or veterinary sciences	33.10.15.11 to 33.10.15.15	2001 (1)	837.9
Renal dialysis equipment; diathermic apparatus (including ultrasonic); transfusion apparatus (excluding special blood storage glass bottles)	33.10.15.53 to 33.10.15.63	2000 (2)	1 367.2
Orthopaedic appliances, splints and other fracture appliances	33.10.17.39	1999	944.9
Individual artificial teeth (including metal posts for fixing) and dental fittings	33.10.17.53 to 33.10.17.59	2000	1 990.8
Appliances for overcoming deafness and pacemakers for stimulating heart muscles (excluding parts and accessories)	33.10.18.33 and 33.10.18.50	2001 (1)	1 461.9
Medical, surgical or veterinary furniture, and parts thereof (excluding tables and seats specialised for X-ray purposes)	33.10.20.50	2001	1 105.0
Instruments and appliances for aeronautical or space navigation and for navigation (including for marine or river navigation) (excluding compasses)	33.20.11.55 and 33.20.11.59	2001 (1)	1 816.9
Radar apparatus; radio remote control apparatus (including for ships, pilotless aircraft, rockets, missiles, toys, and model ships or aircraft, for machines, for the detonation of mines)	33.20.20.30 and 33.20.20.70	2001	2 886.6
Electronic and non-electronic instruments and apparatus, for measuring or checking voltage, current, resistance or power, without a recording device (including multimeters, voltmeters)	33.20.43.10 to 33.20.43.59	2001 (1)	575.0
Instruments and apparatus, for telecommunications	33.20.44.00	2001	1 555.2
Instruments and apparatus, for measuring or checking electric gains (excluding multimeters, voltmeters)	33.20.45.30 to 33.20.45.59	2001 (2)	682.6
Flow meters (excluding supply meters, hydrometric paddle-wheels)	33.20.52.35 and 33.20.52.55	2001	617.3
Electronic pressure gauges, sensors, indicators and transmitters	33.20.52.71	2000	363.1
Instruments and apparatus for measuring variables of liquids/gases (including heat meters; excluding for measuring pressure/flow/level of liquids)	33.20.52.83 and 33.20.52.89	2001	908.9
Electronic gas or smoke analysers	33.20.53.13	2001	440.0
Spectrometers, spectrophotometers etc., using optical radiations; exposure meters; instruments and apparatus using optical radiations, n.e.c.	33.20.53.30 to 33.20.53.50	2001	1 688.7
Gas, liquid (excluding pumps) and electricity (excluding voltmeters, ammeters, wattmeters and the like) supply or production meters (including calibrated)	33.20.63.30 to 33.20.63.70	2001	1 241.7
Test benches	33.20.65.20	2000	658.1
Optical instruments and appliances for measuring or checking n.e.c.	33.20.65.40	2000	379.8
Electronic instruments, appliances and machines for measuring or checking geometrical quantities (including comparators, coordinate measuring machines (CMMs)) and other electronic instruments, appliances etc., for measuring or checking	33.20.65.50 and 33.20.65.70	2001	2 590.2
Thermostats; manostats; hydraulic or pneumatic automatic regulating or controlling instruments and apparatus; instruments and apparatus, regulating or controlling n.e.c.	33.20.70.15 to 33.20.70.90	2001	4 305.6
Contact lenses	33.40.11.30	2001	807.1
Unmounted spectacle lenses for the correction of vision	33.40.11.55 to 33.40.11.70	2001 (2)	1 795.2
Sunglasses; spectacles, goggles and the like, corrective, protective or other	33.40.12.50 and 33.40.12.90	2000	1 304.6
Image conductor cables; optical fibres, optical fibre bundles and cables (excluding image conductor cables, optical fibre cables made up of individually sheathed fibres)	33.40.21.15 and 33.40.21.19	2001 (1)	834.0
Prisms, mirrors and other optical elements n.e.c.; mounted lenses, prisms, mirrors etc. n.e.c.; mounted objective lenses (excluding for cameras, projectors or photographic enlargers or reducers); mounted filters	33.40.21.53 to 33.40.21.90	2001 (1)	786.8
Telescopic sights for fitting to arms; periscopes; telescopes etc.; lasers (excluding laser diodes, machines and appliances incorporating lasers)	33.40.23.10 and 33.40.23.30	2000 (2)	466.8
Mechanical display battery/accumulator powered wrist-watches, incorporating or not stop-watch facility excluding with case of precious metal/metal clad with precious metal	33.50.12.13	2001	185.5
Clock or watch springs (including hair-springs); clock or watch dials; other watch or clock parts	33.50.28.10, 33.50.28.50 and 33.50.28.70	2000 (2)	177.2

(1) 2000 for one or more headings in the aggregate.

(2) 1999 for one or more headings in the aggregate.

Source: Eurostat, European production and market statistics (Comext).

Table 11.7

Manufacture of medical, precision and optical instruments, watches and clocks (NACE Division 33)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Manufacture of medical, precision and optical instruments, watches and clocks	52.4	137.4	38.2
Manufacture of medical and surgical equipment and orthopaedic appliances	45.3	143.7	31.5
Instr. & appl. for measuring, checking, testing, navigating and other purposes	60.1	135.3	44.5
Manufacture of industrial process control equipment	51.7	118.5	43.6
Manufacture of optical instruments and photographic equipment	54.8	151.9	36.1
Manufacture of watches and clocks	40.8	127.8	31.9

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 11.8

Medical, precision and optical instruments; watches and clocks (CPA Division 33)
External trade, EU-25, 2002

	Exports		Imports		Trade balance (EUR million)
	Value (EUR million)	Share of total (%)	Value (EUR million)	Share of total (%)	
Medical, precision and optical instruments; watches and clocks	41 886	100.0	38 623	100.0	3 264
Medical and surgical equipment and orthopaedic appliances	15 946	38.1	13 711	35.5	2 235
Instr. & appl. for measuring, checking, testing, navigating & other purposes	17 405	41.6	14 684	38.0	2 721
Optical instruments and photographic equipment	6 870	16.4	5 904	15.3	966
Watches and clocks	1 639	3.9	4 313	11.2	-2 674

Source: Eurostat, Comext.

LABOUR AND PRODUCTIVITY

Apparent labour productivity was EUR 52 400 per person employed in the EU-15 within the instrument engineering sector and average personnel costs were EUR 35 000 per employee in the EU-25 and EUR 38 200 in the EU-15. Both of these ratios were below the averages recorded for the whole of the electrical machinery and optical equipment sector, particularly average personnel costs. The resulting wage adjusted labour productivity of 137.4 % in the EU-15 was the second highest of the four NACE divisions within the electrical machinery and optical equipment sector. Optical instruments and photographic equipment manufacturing (NACE Group 33.4) recorded the highest wage adjusted labour productivity within the instrument engineering sector, while industrial process control equipment (NACE Group 33.3) recorded the lowest ratio. Latvia had the highest wage adjusted labour productivity of the Member States ⁽¹²⁾ in the instrument engineering sector in 2001, as value added covered personnel costs three times over, while in Lithuania value added did not even cover personnel costs.

⁽¹²⁾ Greece, Ireland, the Netherlands and Poland, not available.

EXTERNAL TRADE

EU-25 exports to non-Community countries of instruments, watches and clocks (CPA Division 33) were worth EUR 41.9 billion in 2002, while imports of the same goods were valued at EUR 38.6 billion; these figures represented approximately 5 % of manufactured imports and exports. The EU-25 ran a trade surplus of EUR 3.3 billion for instruments, watches and clocks, in contrast to a trade deficit for all electrical machinery and optical equipment goods. All of the CPA groups that compose Division 33 also registered a trade surplus, except for watches and clocks (CPA Group 33.5). The largest group in terms of total exports and imports was measuring instruments (CPA Group 33.2) which accounted for 41.6 % of exports and 38.0 % of imports of instruments, watches and clocks.

Germany recorded the highest value of exports and imports (intra- and extra-EU) of instruments, watches and clocks in 2002, valued at EUR 26.8 billion and EUR 16.0 billion respectively. Nonetheless, relatively to the EU-25, the Netherlands was the most specialised exporter and importer of instruments, watches and clocks, while Ireland, Denmark, Germany and the United Kingdom were also relatively specialised in exports of these goods. In terms of imports, Sweden was the second most specialised Member State. The main EU-25 trading partners were the United States, Switzerland and Japan. Instruments, watches and clocks were the products where the United States accounted for its highest share of EU-25 trade among the four CPA divisions within electrical and optical equipment. The EU's imports of these goods were extremely concentrated, as 81.8 % of imports came from the four largest sources, compared with 51.8 % for all manufactured goods.

11.2: COMPUTER AND OFFICE EQUIPMENT

This subchapter covers the manufacture of office machinery, computers and peripherals, such as printers and terminals (NACE Division 30). The manufacture of electronic games is classified under toys and is covered within Subchapter 13.2.

One of the most notable developments in this sector has been manufacturers' use of the Internet to sell their products directly, avoiding the costs of sales networks. The computer and office equipment sector is characterised by a highly competitive environment, mainly coming from South-East Asia. Among the new products launched by manufacturers in the last few years, flat computer screens have started to replace more traditional computer screens.

STRUCTURAL PROFILE

In 2001, the EU-25's computer and office equipment sector generated EUR 15.4 billion of value added, the smallest share (8.5 %) of value added among the four NACE divisions that make up the electrical machinery and optical equipment sector. Enlargement added EUR 485.3 million to sectoral value added, as the EU-15 level was EUR 14.9 billion. The number of persons employed in the EU-25's (13) computer and office equipment sector was 225 000 in 2001, which was also the lowest value among the four NACE divisions. In the EU-15, employment levels were 196 300 persons, or 6.0 % of the electrical machinery and optical equipment total.

(13) Latvia, 2002; Slovenia, number of employees.

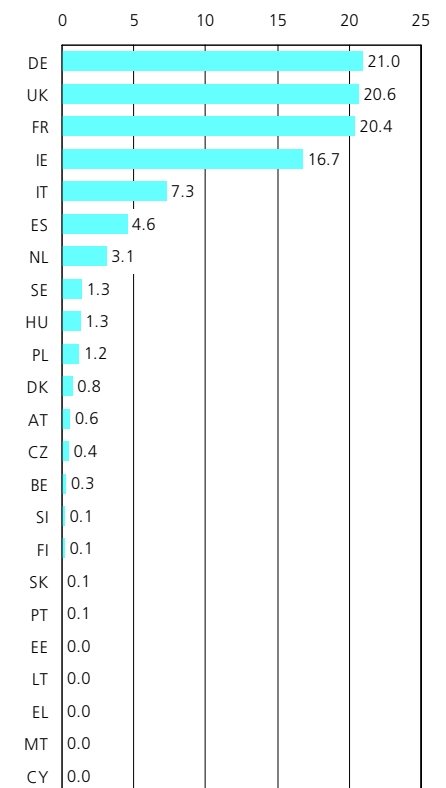
No single Member State dominated computer and office equipment manufacturing, as the three largest Member States (14), Germany, the United Kingdom and France, each generated just over one fifth of EU-25 value added in 2001. Ireland was clearly the most specialised in this sector, accounting for almost 16.7 % of the EU-25's value added. This may, in part, be due to Ireland being an entrance point into the EU for many enterprises from the United States, as Irish affiliates import and then re-export made up American products. The EUR 2.6 billion of value added in Ireland represented 7.6 % of Irish manufacturing value added. Hungary, France and the United Kingdom were the only other Member States (15) to generate a higher proportion of their manufacturing value added in the computer and office equipment sector than the EU-25 average.

An analysis of short-term indices shows that the EU-25's working day adjusted index of production grew rapidly from its low in 1993 up until 2000, averaging 11.7 % per annum. This was far ahead of the electrical machinery and optical equipment manufacturing average of 6.4 % during the same period, and was the strongest growth rate of any manufacturing division over the period considered. After 2000, the production index for the computer and office equipment sector decreased through until 2003, with an average decline of 7.5 % per annum, heavily influenced by a sharp contraction of 18.1 % in 2002.

(14) Cyprus, Latvia and Luxembourg, not available.

(15) Cyprus, Latvia, Malta and Luxembourg, not available.

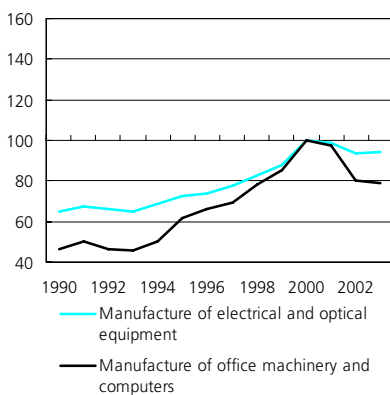
Figure 11.5
Manufacture of office machinery and computers (NACE Division 30)
Share of EU-25 value added, 2001 (%) (1)



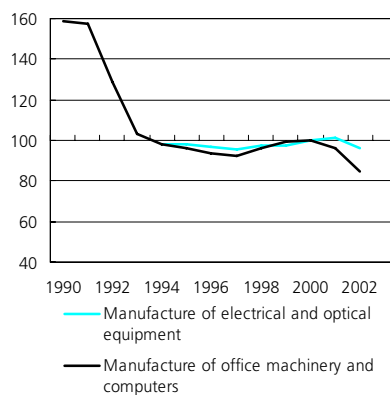
(1) Latvia and Luxembourg, not available.
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 11.6
Manufacture of office machinery and computers (NACE Division 30)
Main indicators, EU-25 (2000=100)

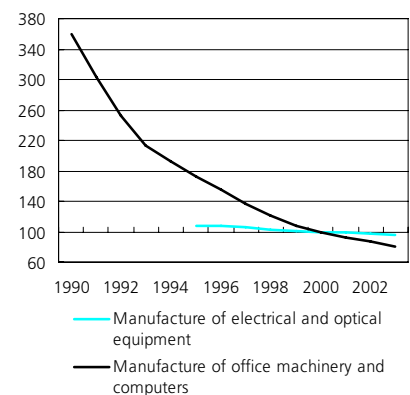
Production, working day adjusted



Employment



Domestic output prices (1)



(1) Note that the scale for this graph is different.
Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Four periods can be observed concerning the development of the EU-25's employment index since 1991: a rapid reduction in the number of persons employed in 1992 and 1993 of close to 20 % per annum; a more moderate fall from 1994 to 1997, averaging -2.6 % per annum; a similar increase of 2.6 % per annum until 2000; followed by further contractions in employment (3.7 % in 2001 and 12.3 % in 2002).

As already noted earlier in this chapter, the output price index for computer and office equipment manufacturing is atypical in that its basic trend is downwards, in contrast to an upward trend observed in nearly all other manufacturing divisions. In the 10 years to 2003, the EU-25's output price index for computer and office equipment fell, on average, by 9.2 % per annum, compared with growth of 1.5 % per annum for the whole of manufacturing.

Table 11.9 shows the market size for a range of IT products, according to EITO. All of these products have seen a contraction in their markets (in value terms) between 2000 and 2002, ranging from 3 % for copiers to 29 % for workstations. In volume terms, among the selected items shown in Table 11.10, the number of servers and LAN cards that were sold increased by more than 8 % between 2000 and 2002, whereas the volume of PCs, PC printers, and particularly workstations that were sold fell during the same period.

LABOUR AND PRODUCTIVITY

Apparent labour productivity in EU-15's computer and office equipment sector was EUR 76 100 per person employed, which was higher than in the other divisions of electrical machinery and optical equipment manufacturing. Equally, the computer and office equipment sector reported higher than average personnel costs per employee, at EUR 45 900 in the EU-25 and EUR 51 300 in the EU-15, which was the third highest across manufacturing NACE divisions. In the EU-15, wage adjusted labour productivity was 148.3 %, some 4.8 percentage points higher than the manufacturing average. Ireland (2000), Latvia (1999), Poland, Austria, and Lithuania all reported high wage adjusted labour productivity ratios ⁽¹⁶⁾.

⁽¹⁶⁾ Greece, Cyprus, Luxembourg and Slovenia, not available.

Table 11.9

Value of the IT hardware market for selected items, ranked by 2002/2000 rate of change, EU-25 (EUR million) (1)

	2000	2001	2002
Copiers	5 678	5 628	5 493
LAN hardware	10 485	9 844	9 994
Server systems	23 684	22 791	21 223
PCs	49 928	45 580	43 057
Workstations	1 216	1 086	868

(1) Excluding Cyprus and Malta.
Source: EITO, 2003.

Table 11.10

Unit shipments of IT hardware, ranked by 2002/2000 rate of change, EU-25 (thousands) (1)

	2000	2001	2002
Servers	1 331	1 414	1 445
LAN cards	17 732	18 196	19 154
Copiers	1 513	1 532	1 523
PCs	29 918	28 273	28 762
PC printers	23 076	22 642	22 162
Workstations	113	106	86

(1) Excluding Cyprus and Malta.
Source: EITO, 2003.

Table 11.11

Selected products of office machinery and computers (CPA Division 30), EU-15

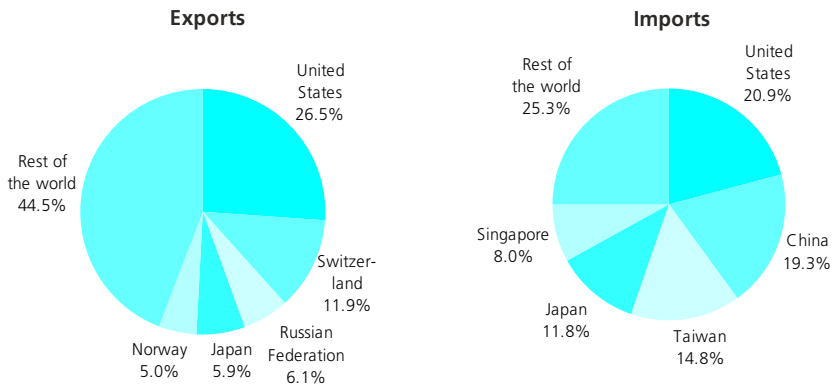
	PRODCOM code	Latest year for production	Production value (EUR million)
Calculating machines; postage-franking machines, ticket-issuing machines and similar machines incorporating a calculating device	30.01.13.20 and 30.01.13.70	2000	368.8
Electrostatic photocopiers	30.01.21.70	2001	1 192.5
Addressing machines and address plate embossing machines, mailing machines	30.01.23.50	2000	375.6
Other office machines n.e.c.	30.01.23.90	1999	858.1
Analogue or hybrid automatic data processing machines	30.02.11.00	2000	126.0
Desk top PCs	30.02.13.00	2001	4 044.3
Digital data processing machines: presented in the form of systems	30.02.14.00	2001	11 334.7
Printers	30.02.16.30	2001	1 775.9
Storage units (excluding central storage units, disk storage units and magnetic tape storage units)	30.02.17.90	2001	387.9

Source: Eurostat, European production and market statistics (Comext).

EXTERNAL TRADE

The EU-25's external trade balance for office machinery and computers (CPA Division 30) was in deficit by EUR 37.7 billion in 2002, resulting from EUR 63.6 billion of imports and EUR 25.9 billion of exports with non-Community countries. The Netherlands was the largest exporter (EUR 28.3 billion, intra- and extra-EU exports combined) and Germany the largest importer (EUR 29.4 billion). The Netherlands, Ireland, Hungary, the Czech Republic and Luxembourg were the only countries to register a trade surplus for computer and office equipment, while Germany and France registered the largest trade deficits. The main EU-25 export partners were the United States, Switzerland, Russia and Japan. The main import partners were the United States, followed by nine Asian countries that collectively supplied nearly three quarters of the EU's imports, headed by China, Taiwan and Japan.

Figure 11.7
Office machinery and computers (CPA Division 30)
Share in extra-EU trade, 2002



Source: Eurostat, Comext.

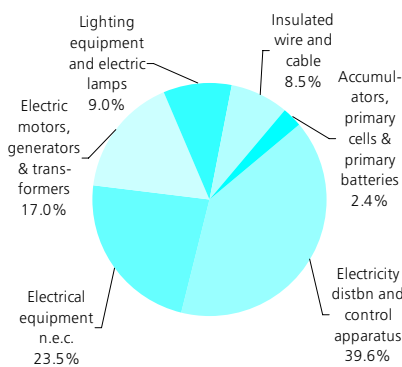
11.3: MANUFACTURE OF ELECTRICAL MACHINERY AND EQUIPMENT

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, not being used as a conductor of electricity, is not included in this division.

This sector gathers products that are generally classified as intermediate products or, in the case of motors, generators and transformers, as capital goods. A small share of production is, however, also destined for the household market, for example the after-sales market for car batteries or lighting equipment.

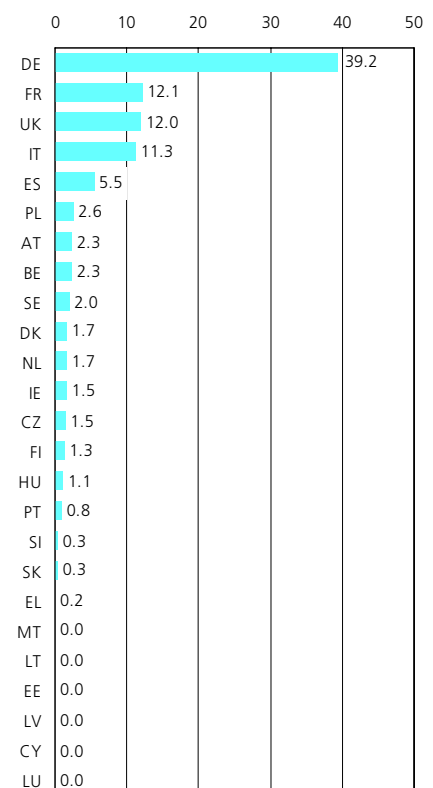
With respect to the legislative framework impacting on this sector, in December 2002 the European Commission proposed (17) a simplification of the electromagnetic compatibility directive (EMC) (18). This directive aims to ensure that the simultaneous use of different electrical and electronic devices does not cause interference, and the proposal aims to simplify the regulatory procedures for manufacturers, while increasing information and documentation on products in order to provide additional means of control for inspection authorities. See also the proposal for a directive concerning end-of-life batteries briefly presented in Chapter 13.

Figure 11.8
Manufacture of electrical machinery and apparatus n.e.c. (NACE Division 31)
Share of value added at factor cost, EU-25, 2001



Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 11.9
Manufacture of electrical machinery and apparatus n.e.c. (NACE Division 31)
Share of EU-25 value added, 2001 (%)

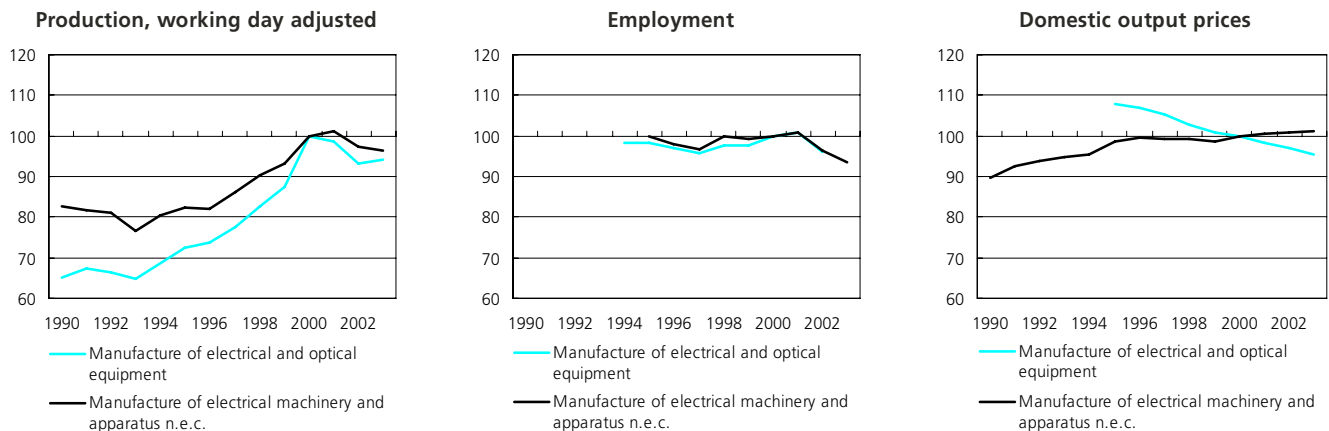


Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

(17) COM(2002) 759.

(18) Council Directive (89/336/EEC) of 3 May 1989 concerning the approximation of the laws of the Member States relating to electromagnetic compatibility.

Figure 11.10

Manufacture of electrical machinery and apparatus n.e.c. (NACE Division 31)
Main indicators, EU-25 (2000=100)


Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

STRUCTURAL PROFILE

Electrical machinery and equipment manufacturing (NACE Division 31) contributed 39.5 % of the value added generated in the EU-25's electrical machinery and optical equipment sector (NACE Subsection DL). The level of value added reached EUR 72.0 billion in the EU-25 in 2001, and EUR 67.7 billion in the EU-15. As such, this was the largest NACE division covered by this chapter. The contribution of the 10 new Member States to EU-25 value added was also larger in this division (6.0 %) than in any of the others covered in this chapter, mainly due to a very high contribution from the 10 new Member States (over 10 %) within the manufacture of wire, cable, accumulators, batteries, lamps and lighting equipment (NACE Groups 31.3 to 31.5). In employment terms, the electrical machinery and equipment sector contributed a higher share (EU-15, 42.2 %) of the electrical machinery and optical equipment workforce than its corresponding share of value added, with a total of 1.7 million persons employed ⁽¹⁹⁾ in the EU-25.

Among the six NACE groups that make up the electrical machinery and equipment sector, the manufacture of electricity distribution and control apparatus (NACE Group 31.2) was the largest subsector with 39.6 % of the EU-25's value added in 2001. The second largest activity, with a 23.5 % share, was the manufacture of other electrical equipment (NACE Group 31.6), followed by the manufacture of electric motors, generators and transformers (NACE Group 31.1, 17.0 %).

⁽¹⁹⁾ Slovenia, number of employees.

Germany accounted for 39.2 % of the EU-25's value added in the electrical machinery and equipment sector, its highest national contribution across the four divisions covered by this chapter; this could be attributed, in part, to the relatively large size of the electricity distribution and control apparatus subsector (NACE Group 31.2), which was Germany's most specialised manufacturing NACE group in 2001. France, the United Kingdom and Italy each accounted for between 11 and 12 % of the EU-25's value added and were all relatively unspecialised in the manufacture of electrical machinery and equipment, relative to manufacturing as a whole. The Czech Republic was the only Member State more specialised in this sector than Germany, while Hungary, Slovakia and Slovenia were also relatively specialised, all generating more than 5 % of their manufacturing value added in this sector. The manufacture of lighting equipment and electric lamps (NACE Group 31.5) was the manufacturing NACE group in which Hungary was most specialised in 2001.

Annual short-term statistics show that the EU-25's working day adjusted index of production for electrical machinery and equipment had a similar evolution to manufacturing as a whole over the period 1993–2000. Annual average growth for electrical machinery and equipment in the EU-25 over this period was 3.9 %, which was 0.6 percentage points higher than the manufacturing average. Electrical machinery and equipment manufacturing continued to grow (by 1.3 %) in 2001, whereas there was little growth in manufacturing as a whole (0.2 %) and the production index for electrical machinery and optical equipment manufacturing fell by 0.9 %. In 2002, output within electrical machinery and equipment

manufacturing also contracted (-4.0 %), but not as strongly as the average for electrical machinery and optical equipment manufacturing (-5.3 %). However, in 2003, while output in electrical machinery and optical equipment increased by 0.7 %, production of electrical machinery and equipment continued to contract (-0.9 %).

The EU-25's output price index for electrical machinery and equipment grew on average by 1.7 % per annum between 1990 and 1996, which was followed by a period of falling prices, averaging -0.3 % from 1997 to 1999. Since then prices rose again for four consecutive years at an annual average rate of 0.7 %. In many ways this pattern is similar to that displayed for the whole of manufacturing, except that the period of falling prices started earlier and lasted longer in the second half of the 1990s within the electrical machinery and equipment sector, while recent price increases have been less pronounced.

The employment index for EU-25 electrical machinery and equipment followed a similar evolution to that for electrical machinery and optical equipment from the mid-1990s onwards (the start of the time-series). Having grown by 0.7 % and 0.8 % in 2000 and 2001, the number of persons employed in EU-25 electrical machinery and equipment manufacturing was reduced by 4.3 % in 2002 and by a further 3.2 % in 2003.

Table 11.12

Selected products of electrical machinery and apparatus (CPA Division 31), EU-15

	PRODCOM code	Latest year for production	Production value (EUR million)
DC motors and generators of an output > 37.5 W but <= 750 W (excl. starter motors for internal combustion engines)	31.10.10.30	2000	1 546.2
Single-phase AC motors	31.10.22.30 and 31.10.22.50	2001	1 484.0
Multi-phase AC motors of an output > 0.75 kW	31.10.24.03 to 31.10.25.90	2001 (1)	2 648.2
Alternators of an output > 75 kVA	31.10.26.30 to 31.10.26.70	2000	1 169.6
Generating sets with compression-ignition internal combustion piston engines, of an output > 7.5 kVA but <= 750 kVA	31.10.31.15 to 31.10.31.50	2001 (2)	1 216.4
Generating sets including turbo-generators, generating sets for welding equipment without heads/appliances excluding with compression	31.10.32.33 to 31.10.32.50	2001 (2)	3 868.7
Liquid dielectric transformers	31.10.41.30 to 31.10.41.70	2001 (2)	1 506.4
Measuring transformers having a power handling capacity <= 16 kVA (including for voltage measurement)	31.10.42.33 and 31.10.42.53	2001 (2)	425.0
Inverters	31.10.50.53 and 31.10.50.55	2001	2 427.5
Inductors (excluding induction coils, deflection coils for cathode-ray tubes, for discharge lamps and tubes)	31.10.50.80	2001	1 075.5
Automatic circuit breakers for a voltage <= 1 kV	31.20.22.30 and 31.20.22.50	2001	2 746.2
Relays and contactors for a voltage > 60 V but <= 1 kV	31.20.24.50	2001	1 668.6
Plugs and sockets for coaxial cables and printed circuits for a voltage <= 1 kV	31.20.27.10 and 31.20.27.30	2000	1 405.4
Connections and contact elements for wires and cables for a voltage <= 1 kV	31.20.27.70	2001	2 287.8
Numerical control panels with built-in automatic data-processing machine for a voltage <= 1 kV and other bases for electric control, distribution of electricity, voltage <= 1 kV (excluding programmable memory controllers for a voltage <= 1 kV)	31.20.31.30 and 31.20.31.70	2001	6 507.4
Numerical control panels, voltage > 1 kV	31.20.32.03 and 31.20.32.05	2001 (2)	1 580.0
Insulated winding wire lacquered or enamelled (including anodised)	31.30.11.30 and 31.30.11.50	2000	1 466.6
Insulated coaxial cables and other coaxial electric conductors for data and control purposes whether or not fitted with connectors	31.30.12.00	2001	1 154.7
Insulated electric conductors whether or not fitted with connectors, for a voltage > 80 V but <= 1 kV	31.30.13.70	1999	4 357.7
Insulated electric conductors for voltage > 1 kV excluding winding wire, coaxial cable and other coaxial electric conductors, ignition and other wiring sets used in vehicles, aircraft, ships	31.30.14.00	2001	2 322.6
Optical fibre cables made up of individually sheathed fibres whether or not assembled with electric conductors or fitted with connectors	31.30.15.00	2001	3 707.9
Lead-acid accumulators for starting piston engines, of a weight > 5 kg, working with liquid electrolyte	31.40.21.50	2000	1 415.2
Illuminated signs, illuminated name-plates and the like (including road signs)	31.50.24.00	2001	1 304.4
Electrical lighting or visual signalling equipment for motor vehicles (excluding electric filament or discharge lamps, sealed beam lamp units, ultraviolet, infrared and arc lamps)	31.61.23.30	2001	2 708.7

(1) 1999 or 2000 for one or more headings in the aggregate.

(2) 2000 for one or more headings in the aggregate.

Source: Eurostat, European production and market statistics (Comext).

Table 11.13

Manufacture of electrical machinery and apparatus n.e.c. (NACE Division 31)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Manufacture of electrical machinery and apparatus n.e.c.	48.8	124.1	39.3
Manufacture of electric motors, generators and transformers	49.8	130.6	38.1
Manufacture of electricity distribution and control apparatus	52.9	115.2	45.9
Manufacture of insulated wire and cable	48.8	135.2	36.1
Manufacture of accumulators, primary cells and primary batteries	44.1	119.5	36.9
Manufacture of lighting equipment and electric lamps	44.3	136.5	32.5
Manufacture of electrical equipment n.e.c.	44.2	130.8	33.8

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 11.14

Electrical machinery and apparatus n.e.c. (CPA Division 31)
External trade, EU-25, 2002

	Exports		Imports		Trade balance (EUR million)
	Value (EUR million)	Share of total (%)	Value (EUR million)	Share of total (%)	
Electrical machinery and apparatus n.e.c.	37 050	100.0	31 950	100.0	5 100
Electric motors, generators and transformers	10 675	28.8	7 264	22.7	3 410
Electricity distribution and control apparatus	11 806	31.9	6 666	20.9	5 140
Insulated wire and cable	2 956	8.0	2 679	8.4	277
Accumulators, primary cells and primary batteries	1 209	3.3	2 174	6.8	-965
Lighting equipment and electric lamps	2 926	7.9	2 979	9.3	-53
Electrical equipment n.e.c.	7 479	20.2	10 188	31.9	-2 709

Source: Eurostat, Comext.

LABOUR AND PRODUCTIVITY

Apparent labour productivity per person employed and average personnel costs per employee in the manufacture of electrical machinery and equipment were the lowest of all the four NACE divisions covered by this chapter in 2001. EU-15 apparent labour productivity was EUR 48 800 per person employed and average personnel costs were EUR 39 300 per employee (EUR 33 400 per employee in the EU-25). A majority of the Member States reported their lowest apparent labour productivity ratios within the electrical machinery and equipment sector, when compared with the three other divisions covered by the chapter, while this was not the case for average personnel costs.

Wage adjusted labour productivity provides an indication of the ratio of value added to personnel costs, after adjusting the latter for the ratio of persons employed to paid employees. Electrical machinery and equipment had a ratio of 124.1 % in the EU-15, nearly 20 percentage points below the manufacturing average. The relatively low level of wage adjusted labour productivity was present in all of the six groups that make up this sector, but was particularly low in the manufacture of electricity distribution and control apparatus subsector (NACE

Group 31.2) and the manufacture of accumulators and batteries (Group 31.4). Among Member States, wage adjusted labour productivity was particularly low in Luxembourg and Sweden (where it was below 100 % in both countries), indicating that value added did not cover adjusted personnel costs.

EXTERNAL TRADE

The EU-25's exports to non-Community countries of electrical machinery and apparatus (CPA Division 31) was valued at EUR 37.1 billion, which was EUR 5.1 billion above the value of imports. Exports of these goods accounted for 23.8 % of the EU-25's exports of electrical and optical equipment (CPA Subsection DL) and 15.4 % of imports. Among the CPA groups within electrical machinery and apparatus, electricity distribution and control apparatus (CPA Group 31.2) contributed the highest share of exports (31.9 %) and electrical equipment n.e.c. (CPA Group 31.6) the highest share of imports (31.9 %).

Germany was the largest trader (intra- and extra-EU trade combined) of electrical machinery and apparatus among the Member States, with EUR 31.9 billion of exports and EUR 23.5 billion of imports. However, Hungary and the Czech Republic were the most highly specialised exporters of these goods, relative to all manufactured goods, with specialisation ratios relative to the EU-25 above 200 %. The most highly specialised Member States for imports of these goods was Estonia, also with a specialisation ratio above 200 %.

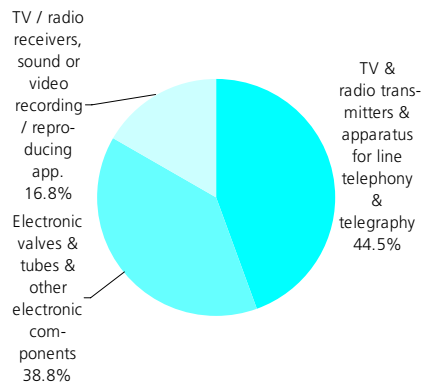
The main destinations for the EU-25's exports of electrical machinery and equipment were the United States, China and Switzerland; 2002 marked the first time that exports to China from the EU-25 exceeded those to Switzerland. In terms of imports, China also moved up the ranking, taking the top spot from the United States (second) as the most important supplier to the EU-25, with Japan and Switzerland following in the ranking.

11.4: MANUFACTURE OF RADIO, TELEVISION AND COMMUNICATION EQUIPMENT

This subchapter covers the manufacture of electronic components (active, passive and printed circuit boards (PCBs)) (NACE Group 32.1). The activities that are classified under NACE Group 32.2 include the manufacture of television cameras, transmission apparatus for radio and TV, telephonic switching apparatus (including LANs and modems), telephones, fax machines and teleprinters. Note that Chapters 23 and 24 provide information on information, communication and media services that make use of this equipment. 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. The manufacture of pre-recorded and unrecorded media is not included.

Electronic components manufacturing (NACE Group 32.1) produces intermediate products and is therefore highly dependent on the demand of other downstream sectors. For instance, the demand of chips closely depends on the demand for PCs, mobile phones, consumer and automotive electronics. In the manufacture of telecommunication equipment (NACE Group 32.2), a recent innovation has seen the development of mobile phones with multimedia messaging services (MMS) that permit digital pictures to be transmitted and displayed on the handset's screen; the infrastructure to support these services is, however, not yet completely available within the EU. For consumer electronics (NACE Group 32.3), some of the more notable recent innovations include flat-panel TVs, as well as DVD players and DVD recorders. DVD players have been one of the major success stories of this activity in recent years, and are the object of a battle to define DVD formats, reminiscent of the video cassette standards battle, won by VHS in the 1980s.

Figure 11.11 Manufacture of radio, television and communication equipment and apparatus (NACE Division 32) Share of value added at factor cost, EU-25, 2001



Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

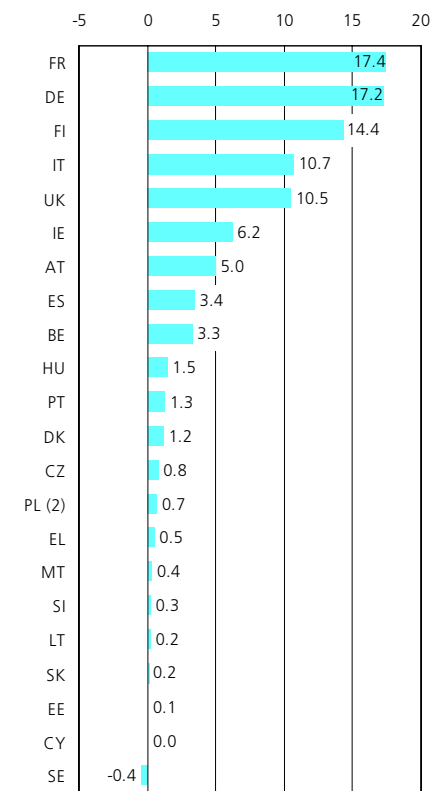
STRUCTURAL PROFILE

Value added in the manufacture of radio, television and communication equipment sector (NACE Division 32) was EUR 46.6 billion in the EU-25 in 2001 (EUR 43.9 billion in the EU-15). This sector represented slightly more than one quarter of value added generated in the whole of the electrical machinery and optical equipment sector (NACE Subsection DL). Employment in the EU-25's radio, television and communication equipment manufacturing sector was equal to 950 700 persons ⁽²⁰⁾ in 2001, and 809 800 persons in the EU-15.

The manufacture of telecommunications equipment (NACE Group 32.2) was the largest subsector (at the group level) covered by this subchapter, with 44.5 % of the EU-25's radio, television and communication equipment sector's value added. The manufacture of electronic components (NACE Group 32.1) was slightly smaller, with a 38.8 % share, while the manufacture of television and radio equipment (NACE Group 32.3) was the smallest group, with a 16.8 % share.

⁽²⁰⁾ Latvia, 2002; Poland, number of employees, 2000; Slovenia, number of employees.

Figure 11.12 Manufacture of radio, television and communication equipment and apparatus (NACE Division 32) Share of EU-25 value added, 2001 (%) (1)



(1) Latvia, Luxembourg and the Netherlands, not available.

(2) 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

No Member State ⁽²¹⁾ dominated the EU-25's value added in the radio, television and communication equipment sector: Germany and France each accounted for just over 17 % of added value in 2001, Finland for 14.4 %, and Italy and the United Kingdom for 10.7 % and 10.5 %. Malta and Finland showed high value added specialisation ⁽²²⁾ relative to manufacturing, as did Ireland to a lesser extent. Electronic components manufacturing (NACE Group 32.1) was the second most specialised manufacturing NACE group in Malta.

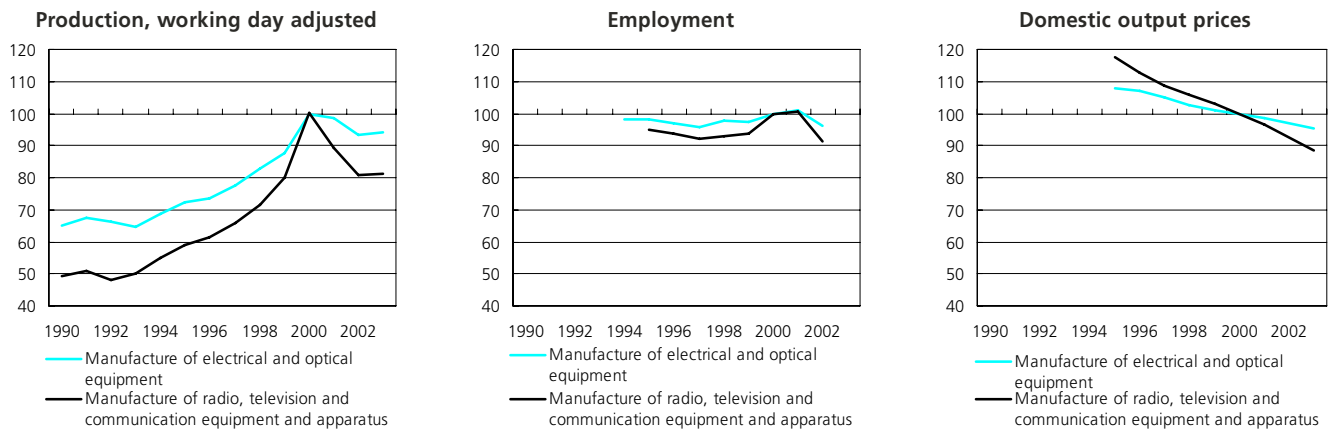
⁽²¹⁾ Latvia, Luxembourg, the Netherlands and Poland, not available.

⁽²²⁾ Cyprus, Latvia, Luxembourg, the Netherlands and Poland, not available.

Figure 11.13

Manufacture of radio, television and communication equipment and apparatus (NACE Division 32)

Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Spain and Sweden were the least specialised Member States in this sector in terms of value added. The Swedish position, however, is unusual in that there was negative value added in this activity in 2001, and an analysis of employment shows that this activity provided employment for 6.6 % of the Swedish manufacturing workforce, compared with an EU-15 average of 2.9 %. Swedish value added data for the year before (2000) support the view that this country was, in fact, one of the EU's most specialised countries in this activity.

According to annual short-term statistics, the EU-25's production index for the manufacture of radio, television and communication equipment grew, on average, by 10.4 % per annum between 1993 (a low point in production) and 2000, when output peaked. This was the second highest level of growth over this period among all of the manufacturing divisions, behind office equipment and computer manufacturing (NACE Division 30, 11.7 %). The highest year-on-year growth rate during this period was 25.2 % in 2000, which was immediately followed by two year-on-year contractions of around 10 %. In 2003, the EU-25's output of radio, television and communication equipment stabilised, with growth of 0.9 %. An analysis of the three NACE groups that make up radio, television and communication equipment manufacturing shows that both the manufacture of electronic components and the manufacture of telecommunications equipment contributed to the high growth rates that were witnessed between 1993 and 2000, recording average growth of 15.8 % and 10.0 % per annum respectively. Both of these activities then recorded a fall in production in 2001 and 2002, with per annum reductions averaging 5.8 % for the manufacture of electronic components and 13.5 % for the manufacture of telecommunications equipment. In 2003 the

evolution of output in these two activities parted, as electronic components manufacturing recovered strongly, growing by 11.3 %, while the manufacture of telecommunications equipment managed to stabilise output, as the production index fell by 0.6 %. The remaining part of the activity, namely the manufacture of television and radio equipment, recorded average growth of 3.2 % per annum between 1995 (first available year) and 2000. However, unlike the two other groups, output in television and radio equipment manufacturing continued to grow until 2001, before falling by 8.5 % in 2002 and a further 5.7 % in 2003.

A number of Member States were particularly hard hit by the decline in activity in the manufacture of radio, television and communication equipment in 2001 and 2002, notably Ireland and the United Kingdom, who both reported a contraction in output of more than 20 % in both of these years. Despite this overall negative picture in the EU, several countries continued to report an expansion in output during these two years, notably Slovakia, where the production index increased by 53.0 % in 2001 and by 26.3 % in 2002. Annual indices for the production index for 2003 are available for 15 of the 25 Member States (at the time of writing). These show an improvement in all countries (either a diminished reduction or stronger growth) than in 2003 in each country, with the exception of Poland and Estonia.

The EU-25's employment index for the manufacture of radio, television and communication equipment is available from 1995, after which it followed a downward path for two years. Between 1997 and 2001 employment grew by 2.2 % per annum on average, but in 2002 it fell by 9.2 %, the second largest contraction in employment among manufacturing NACE divisions that year.

Along with the manufacture of office machinery and computers (NACE Division 30), radio, television and communication equipment was the only EU-25 manufacturing division to record a general decline in output prices. Since the series began in 1995, eight consecutive years of falling prices were recorded, ranging from -2.7 % to -4.3 %, the largest reductions having been recorded in 2002 and 2003. All three groups within radio, television and communication equipment manufacturing have recorded a general fall in their respective output price indices between 1995 and 2003, with the weakest price reductions in television and radio equipment manufacturing.

Table 11.15 provides information for selected items on the market value for telecommunications hardware. The only market that experienced a rise in value between 2000 and 2002 was that of packet switching and routing equipment, where turnover increased by 5 % overall during these two years. In contrast, the market for cellular/mobile radio infrastructure products decreased by nearly one third (-31 %) in terms of sales.

Table 11.15
Value of the communications hardware market for selected items, ranked by 2002/2000 rate of change, EU-25 (EUR million) (1)

	2000	2001	2002
Packet switching and routing equipment	3 665	3 744	3 836
PBX & key systems, circuit switching equipment	10 137	9 277	8 469
Mobile telephone sets	19 951	18 184	16 491
Cellular mobile radio infrastructure	14 279	12 332	9 855

(1) EU-25, excluding Cyprus and Malta.
Source: EITO, 2003.

Table 11.16

Selected products of electronic values, tubes and other electronic components (CPA Division 32), EU-15

	PRODCOM code	Latest year for production	Production value (EUR million)
Fixed aluminium capacitors; fixed multilayer ceramic capacitors; fixed metallised paper or plastic capacitors	32.10.12.50, 32.10.12.75 and 32.10.12.77	2001 (1)	1 152.5
Variable resistors (including rheostats, potentiometers and trimmers)	32.10.20.55 to 32.10.20.70	2001 (2)	420.8
Bare multilayer printed circuit boards	32.10.30.50	2001	3 211.8
Passive networks (including networks of resistors and/or capacitors) (excluding resistor chip arrays, capacitor chip arrays, boards containing active components, hybrids)	32.10.30.90	2001	1 266.1
Colour TV tubes; television camera tubes, image converters and intensifiers and other photo-cathode tubes	32.10.41.35 and 32.10.41.50	2000	2 721.7
Magnetrons, klystrons, microwave tubes, valves and tubes	32.10.42.00	2000	291.3
Semiconductor	32.10.51.55 and 32.10.51.57	2000	725.6
Semiconductor devices	32.10.52.37 and 32.10.52.50	2001 (1)	535.7
Digital MOS integrated circuits (ICs): wafers and chips	32.10.60.15 and 32.10.60.17	2000	5 980.4
Digital MOS integrated circuits (ICs), DRAM (including modules)	32.10.60.25 and 32.10.60.27	2000	1 655.3
Digital MOS integrated circuits (ICs), EEPROMS and flash EEPROMS (CPUs and MPUs)	32.10.60.65 and 32.10.60.70	2000	906.1
Other digital MOS integrated circuits (ICs) (including MPR, MCU, ASIC, standard logic, PLD and other logic)	32.10.60.93	2001	4 473.8
Linear (analogue) integrated circuits (ICs)	32.10.60.95	2001	2 215.3
Hybrid integrated circuits (excluding circuits consisting solely of passive elements)	32.10.60.97	2001	651.7
Electronic microassemblies (excluding circuits consisting solely of passive elements, assemblies formed by mounting one or more discrete components on a support)	32.10.60.99	2000	2 223.7
Radio/TV transmission apparatus	32.20.11.50 and 32.20.11.70	2001	36 359.7
Telephonic or telegraphic switching apparatus (excluding relays and switching equipment such as selectors for automatic telephone exchangers); telephonic/telegraphic apparatus for carrier-current line systems n.e.c.; electrical telephonic and telegraphic apparatus n.e.c.; facsimile machines	32.20.20.40 to 32.20.20.75	2001 (3)	20 355.3
Colour television projection equipment and videoprojectors	32.30.20.20	2000	461.3
Colour televisions with a video recorder or player	32.30.20.30	2000	321.2
Colour television receivers with integral tube (excluding television projection equipment, apparatus with a video recorder or player, video monitors)	32.30.20.50	2001	4 995.4
Tuner blocks for CTV/VCR and cable TV receiver units (colour video tuners) (excluding those which isolate high-frequency television signals)	32.30.20.75	2000	1 024.2
Video cassette recorders for magnetic tape of width <=1.3cm and with a tape speed <=50mm per second excluding those combined with television, or a built-in television camera	32.30.33.39	1999	643.7
Loudspeakers (including speaker drive units, frames or cabinets mainly designed for mounting loudspeakers)	32.30.42.37 and 32.30.42.39	2001	1 211.8

(1) 2000 for one or more headings in the aggregate.

(2) 1999 for one or more headings in the aggregate.

(3) 1999 or 2000 for one or more headings in the aggregate.

Source: Eurostat, Eurostat, European production and market statistics (Comext).

Table 11.17

Manufacture of radio, television and communication equipment and apparatus (NACE Division 32)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Manufacture of radio, television and communication equipment and apparatus	54.6	118.4	46.1
Manufacture of electronic valves and tubes and other electronic components	58.3	145.5	40.0
TV & radio transmitters & apparatus for line telephony & line telegraphy	55.0	102.0	54.0
TV & radio receivers, sound or video recording or reproducing app.	46.5	117.7	39.5

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

LABOUR AND PRODUCTIVITY

Apparent labour productivity in the radio, television and communication equipment sector was EUR 54 600 per person employed in the EU-15 and personnel costs per employee were EUR 46 100 (EUR 40 700 in the EU-25). Both of these values were above the manufacturing average, particularly the figure for average personnel costs. As a result, the wage adjusted labour productivity ratio for the radio, television and communication equipment sector was the lowest of the four NACE divisions covered within electrical machinery and optical equipment manufacturing. Indeed, this ratio was 118.4 % in the EU-15, compared with an average of 127.5 % for the whole of electrical machinery and optical equipment and 143.5 % for the manufacturing sector in general. The manufacture of telecommunications equipment had the lowest wage adjusted labour productivity ratio (102.0 %), and the manufacture of television and radio equipment the next lowest (117.7 %). The manufacture of electronic components recorded a ratio of 145.5 %, and was therefore the only group to report a higher wage adjusted labour productivity ratio than the manufacturing average.

Wage adjusted labour productivity in the radio, television and communication equipment sector was very high in Finland and Malta ⁽²³⁾, where value added was around three and a half to four times higher than personnel costs. However, in the United Kingdom and to a lesser extent in Germany, the radio, television and communication equipment sector generated less value added than was spent on personnel (adjusted for the ratio of persons employed to employees). Low ratios recorded by these two large Member States, as well as France, explain the low EU-15 ratios. It should be noted that this situation appears to be related to the particular stage of the economic cycle (see the analysis of the production index above), as EU-15 wage adjusted labour productivity ratio was 167.1 % in 2000, more than 40 % higher than it was in 2001, and above the manufacturing average.

⁽²³⁾ Greece, Ireland, Cyprus, Latvia, Luxembourg and Poland, not available; Sweden, negative due to negative value added.

Table 11.18

Radio, television and communication equipment and apparatus (CPA Division 32)
External trade, EU-25, 2002

	Exports		Imports		Trade balance (EUR million)
	Value (EUR million)	Share of total (%)	Value (EUR million)	Share of total (%)	
Radio, television and communication equipment and apparatus	50 755	100.0	73 635	100.0	-22 880
Electronic valves and tubes and other electronic components	20 297	40.0	33 901	46.0	-13 604
TV & radio transmitters; apparatus for line telephony & telegraphy	21 584	42.5	16 294	22.1	5 290
TV & radio receivers; sound or video recording or reproducing app.	8 874	17.5	23 440	31.8	-14 566

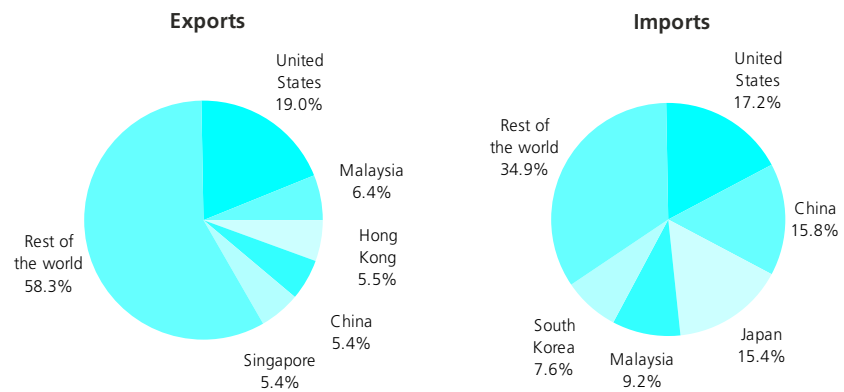
Source: Eurostat, Comext.

EXTERNAL TRADE

In 2002, the EU-25's exports of radio, television and communication equipment (CPA Division 32) to non-Community countries were EUR 50.8 billion, lower than the value of imports (EUR 73.6 billion). These products accounted for 32.6 % of the EU-25's exports of electrical and optical equipment (CPA Subsection DL) and for 35.4 % of its imports. The resulting trade deficit of EUR 22.9 billion was the third largest among the CPA divisions that make up total manufactured goods, behind office machinery and computers (CPA Division 30, EUR 37.7 billion) and wearing apparel and furs (CPA Division 18, EUR 27.1 billion).

Among the 3 CPA groups covered, television and radio transmitters and apparatus for line telephony and line telegraphy (CPA Group 32.2) accounted for the highest share (42.5 %) of exports, while communication equipment and electronic valves and tubes and other electronic components (CPA Group 32.1) accounted for 46.0 % of imports. Television and radio transmitters and apparatus for line telephony and line telegraphy (CPA Group 32.2) was the only one of the three CPA groups for which the EU-25 recorded a trade surplus in 2002, valued at EUR 5.3 billion; the trade deficits of the other two CPA groups were around EUR 14 billion each.

Figure 11.14

Radio, television and communication equipment and apparatus (CPA Division 32)
Share in extra-EU trade, 2002


Source: Eurostat, Comext.

Despite the relatively large trade deficit for the EU-25, eight Member States recorded a trade surplus (intra- and extra-EU trade combined) for radio, television and communication equipment, notably the United Kingdom and Finland, where surpluses were in excess of EUR 5 billion. The largest trade deficits were recorded by Italy, Spain and the Netherlands, all in excess of EUR 3.5 billion. Germany was the largest exporter (EUR 33.4 billion) and importer (EUR 33.5 billion) of radio, television and communication equipment, followed by the United Kingdom. However, relative to exports of all manufactured goods, Malta was by far the most specialised country, as exports of these goods accounted for 49.7 % of manufactured exports, compared with 19.9 % in Finland and 18.7 % in Hungary, the next most specialised countries. In terms of import specialisation, these goods represented 31.4 % of Malta's manufactured imports, 20.9 % of the total in Ireland, 17.7 % in Hungary and 13.1 % in Finland. The very high specialisation in Malta was due almost entirely to trade in communication equipment and electronic valves and tubes and other electronic components (CPA Group 32.1).

The EU-25 exported radio, television and communication equipment mainly to the United States (19.0 % of exports to non-Community countries), some South-East Asian countries (Malaysia, Hong Kong and Singapore, together 17.4 %), and China (5.4 %). The picture was slightly different for EU-25 imports of radio, television and communication equipment, as Japan (15.4 %) provided almost the same proportion of imports as China (15.8 %), although the United States remained the main trading partner (17.2 %). These top three origins of imports were followed by a quintet of South-East Asian countries (Malaysia, South Korea, Taiwan, Singapore and Philippines) who collectively provided one third of the EU-25's imports.

Table 11.19

Manufacture of office machinery and computers (NACE Division 30)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV (1)	LT	LU
Production (EUR million)	185	774	303	14 907	20	2	3 197	13 805	19 443	4 228	0	7	8	:
Value added at factor cost (EUR million)	47	65	119	3 235	3	0	703	3 149	2 582	1 122	0	2	3	:
Purchases of goods and services (EUR million)	149	724	0	13 410	30	:	3 494	13 837	16 015	3 465	0	13	8	:
Gross investment in tangible goods (EUR million)	8	76	4	268	0	:	267	285	151	347	0	0	0	:
Number of persons employed (thousands)	1	6	2	46	0	0	9	38	20	17	0	0	0	:
App. labour productivity (EUR thous./pers. emp.)	53.8	10.1	72.2	69.8	14.1	2.9	75.1	82.6	126.0	67.3	:	9.5	7.5	:
Average personnel costs (EUR thous./employee) (2)	44.2	6.4	44.5	54.3	8.8	:	48.0	68.5	30.6	33.3	:	2.8	3.2	:
Wage adjusted labour productivity (%) (2)	121.7	157.3	162.2	128.6	160.7	:	156.4	120.7	412.5	202.4	:	334.3	235.7	:
Gross operating rate (%) (2)	6.6	3.5	15.5	4.4	3.3	:	7.0	3.2	9.7	15.9	:	63.4	15.2	:
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	2 316	3	2 044	611	521	51	84	48	94	760	21 134	34	58	:
Value added at factor cost (EUR million)	198	0	479	86	182	11	22	12	21	207	3 181	8	12	:
Purchases of goods and services (EUR million)	2 170	3	1 741	605	512	40	122	44	97	597	19 829	34	123	:
Gross investment in tangible goods (EUR million) (3)	57	0	42	5	61	2	14	2	2	19	428	2	3	:
Number of persons employed (thousands)	13	0	9	1	6	0	:	2	0	4	48	3	2	:
App. labour productivity (EUR thous./pers. emp.)	15.0	21.5	55.2	85.6	32.1	32.4	:	6.7	43.2	47.4	66.5	2.7	5.5	:
Average personnel costs (EUR thous./employee)	7.0	17.3	41.9	33.6	11.5	19.4	16.5	5.4	34.9	43.9	53.2	2.3	2.1	:
Wage adjusted labour productivity (%)	215.3	124.3	131.5	254.3	278.0	166.8	:	123.6	123.9	107.8	124.9	118.0	259.3	:
Gross operating rate (%)	4.3	5.6	5.6	7.7	17.9	9.7	4.4	4.1	3.6	3.0	2.9	3.5	5.8	:

(1) 1999.

(2) Ireland, 2000.

(3) The Netherlands, 1999.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 11.20

Manufacture of electrical machinery and apparatus n.e.c. (NACE Division 31)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	4 428	3 623	4 404	84 255	90	617	13 342	27 989	2 434	29 045	38	69	109	45
Value added at factor cost (EUR million)	1 633	1 095	1 234	28 260	29	174	3 938	8 697	1 113	8 123	15	25	30	14
Purchases of goods and services (EUR million)	3 147	2 756	0	65 590	80	:	10 514	20 479	1 321	21 841	28	58	79	30
Gross investment in tangible goods (EUR million)	186	331	181	3 413	5	:	541	1 221	236	1 156	2	4	10	:
Number of persons employed (thousands)	26	112	24	530	3	5	95	171	15	210	1	3	4	0
App. labour productivity (EUR thous./pers. emp.)	62.2	9.8	51.8	53.3	11.0	36.7	41.4	50.8	72.9	38.7	25.8	8.8	7.1	32.4
Average personnel costs (EUR thous./employee) (1)	45.9	6.7	35.4	47.4	7.4	:	28.9	39.0	26.8	29.4	14.3	4.3	4.0	41.5
Wage adjusted labour productivity (%) (1)	135.4	146.8	146.1	112.5	149.6	:	143.5	130.3	271.8	131.6	166.6	204.0	179.2	78.2
Gross operating rate (%) (2)	9.7	12.1	9.3	3.5	8.8	:	9.0	7.1	27.8	9.4	14.8	17.0	12.5	-8.5
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	4 874	92	3 891	4 365	4 050	2 174	786	847	3 142	5 454	22 297	224	801	:
Value added at factor cost (EUR million)	774	33	1 197	1 634	1 871	605	224	223	972	1 475	8 637	54	279	:
Purchases of goods and services (EUR million)	4 387	60	3 213	3 213	2 606	1 657	555	671	2 328	4 279	15 644	209	592	:
Gross investment in tangible goods (EUR million) (3)	382	6	114	198	277	187	57	51	97	150	1 035	19	184	:
Number of persons employed (thousands)	72	1	23	29	90	34	:	32	17	43	165	18	58	:
App. labour productivity (EUR thous./pers. emp.)	10.7	24.4	52.4	56.8	20.8	17.7	:	6.9	56.7	33.9	52.3	3.0	4.8	:
Average personnel costs (EUR thous./employee)	7.6	15.8	37.2	40.8	8.4	14.7	14.0	4.5	37.6	35.3	38.4	2.2	2.6	:
Wage adjusted labour productivity (%)	140.5	154.4	141.0	139.1	248.3	120.6	:	151.3	150.8	96.2	136.0	136.7	184.1	:
Gross operating rate (%)	4.4	13.0	8.7	9.8	27.3	4.8	4.7	8.6	10.1	-0.7	9.8	6.8	16.4	:

(1) Ireland and Cyprus, 2000.

(2) Ireland, 2000.

(3) The Netherlands, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 11.21

Manufacture of electronic valves and tubes and other electronic components (NACE Group 32.1)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU (1)
Production (EUR million) (2)	954	407	313	14 160	41	:	1 452	16 229	3 406	5 369	0	5	135	0
Value added at factor cost (EUR million) (3)	368	207	121	3 746	11	:	569	4 117	2 284	1 929	0	3	59	0
Purchases of goods and services (EUR million) (2)	614	263	0	14 426	34	:	943	14 659	1 317	3 461	0	2	77	0
Gross investment in tangible goods (EUR million)	76	75	37	3 434	3	:	198	1 473	1 063	1 970	0	0	41	:
Number of persons employed (thousands)	5	19	2	72	2	:	13	81	8	35	0	0	4	0
App. labour productivity (EUR thous./pers. emp.) (3)	71.8	10.8	48.9	51.7	6.2	:	42.6	51.0	242.8	55.2	:	8.3	14.4	:
Average personnel costs (EUR thous./employee) (3)	47.9	5.8	34.8	46.3	5.2	:	28.5	41.4	34.0	31.8	:	2.8	7.0	:
Wage adjusted labour productivity (%) (3)	149.7	185.5	140.7	111.6	119.5	:	149.5	123.3	713.3	173.6	:	295.7	205.5	:
Gross operating rate (%) (4)	13.5	17.1	11.7	2.3	4.5	:	13.4	4.1	47.8	16.2	:	42.4	22.7	:
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE (1)	UK	BG	RO	TR
Production (EUR million)	727	1 131	617	2 183	147	994	166	205	554	1 064	6 445	36	59	:
Value added at factor cost (EUR million)	237	158	228	739	86	188	60	38	200	354	2 411	10	36	:
Purchases of goods and services (EUR million)	548	921	426	1 496	73	934	105	198	368	885	5 701	29	21	:
Gross investment in tangible goods (EUR million)	127	47	41	567	10	63	15	12	74	192	453	10	22	:
Number of persons employed (thousands)	21	3	6	11	6	7	:	5	5	6	38	3	6	:
App. labour productivity (EUR thous./pers. emp.)	11.3	54.3	38.6	69.3	14.6	28.6	:	7.0	41.3	58.3	62.8	3.6	5.7	:
Average personnel costs (EUR thous./employee)	7.6	15.7	27.5	45.0	6.8	18.0	12.0	4.8	31.1	43.2	45.0	2.5	3.0	:
Wage adjusted labour productivity (%)	148.9	345.3	140.3	154.1	215.1	158.8	:	144.6	132.7	134.8	139.6	141.5	192.5	:
Gross operating rate (%)	10.4	9.7	10.1	11.6	30.9	6.3	5.6	5.1	9.2	8.4	8.7	8.1	33.0	:

(1) 2000.

(2) The Czech Republic, 2000.

(3) Ireland, 2000.

(4) The Czech Republic and Ireland, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 11.22

Manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy (NACE Group 32.2)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU (1)
Production (EUR million)	2 512	555	704	11 278	:	:	2 426	19 148	2 676	9 470	0	9	25	0
Value added at factor cost (EUR million) (3)	643	116	153	2 712	:	:	717	3 636	536	2 790	0	3	9	0
Purchases of goods and services (EUR million)	1 914	548	0	14 685	:	:	1 827	15 859	2 725	6 827	0	8	29	0
Gross investment in tangible goods (EUR million)	47	24	29	497	:	:	67	585	94	737	0	1	1	:
Number of persons employed (thousands)	8	9	3	55	:	:	12	77	4	60	0	1	1	0
App. labour productivity (EUR thous./pers. emp.) (3)	82.3	13.3	52.9	49.2	:	:	59.1	47.0	116.0	46.4	22.1	5.8	17.2	:
Average personnel costs (EUR thous./employee) (4)	67.0	8.9	40.5	58.7	:	:	54.9	56.3	35.5	38.6	11.2	3.1	9.8	:
Wage adjusted labour productivity (%) (4)	123.0	150.2	130.7	83.8	:	:	107.7	83.5	327.2	120.3	145.1	186.5	175.9	:
Gross operating rate (%) (3)	5.1	7.4	5.1	-2.8	:	:	2.3	-3.6	22.1	9.4	28.9	14.9	10.7	:
	HU	MT	NL	AT	PL (2)	PT	SI	SK	FI	SE (2)	UK	BG	RO	TR
Production (EUR million)	432	9	174	3 670	980	970	191	111	16 924	19 061	13 372	104	219	:
Value added at factor cost (EUR million)	151	3	59	1 413	230	247	56	29	6 453	2 379	797	20	78	:
Purchases of goods and services (EUR million) (5)	367	7	121	2 943	861	837	190	82	19 096	17 027	19 009	100	165	:
Gross investment in tangible goods (EUR million)	26	0	4	147	29	21	8	5	1 388	510	767	3	13	:
Number of persons employed (thousands)	5	0	2	16	:	5	:	4	32	35	47	3	5	:
App. labour productivity (EUR thous./pers. emp.)	28.4	51.0	34.1	88.8	:	51.7	:	7.7	198.9	67.8	16.8	6.1	15.0	:
Average personnel costs (EUR thous./employee)	12.9	10.2	38.4	67.0	10.8	36.0	31.2	5.8	44.5	58.5	70.1	3.2	5.5	:
Wage adjusted labour productivity (%)	219.2	499.8	88.8	132.6	:	143.7	:	133.9	446.9	116.0	23.9	191.2	274.0	:
Gross operating rate (%)	16.2	22.9	8.7	7.9	11.5	7.2	1.2	6.1	20.7	1.7	-14.1	11.6	24.1	:

(1) 1999.

(2) 2000.

(3) Ireland, 2000.

(4) Ireland and Cyprus, 2000.

(5) The United Kingdom, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 11.23

Manufacture of television and radio receivers, sound or video recording or reproducing apparatus and associated goods (NACE Group 32.3)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV (1)	LT	LU
Production (EUR million)	2 033	:	936	6 020	:	:	2 131	1 822	229	1 149	:	3	70	:
Value added at factor cost (EUR million) (3)	512	69	291	1 555	:	:	309	360	60	269	:	0	21	:
Purchases of goods and services (EUR million)	1 546	:	0	7 305	:	:	2 620	1 593	153	1 048	:	3	52	:
Gross investment in tangible goods (EUR million)	79	20	60	361	:	:	44	47	4	31	:	0	5	:
Number of persons employed (thousands)	7	7	6	32	:	:	8	9	1	8	:	0	3	:
App. labour productivity (EUR thous./pers. emp.) (3)	77.4	9.5	48.6	48.6	:	:	38.7	40.1	61.2	34.6	:	0.5	6.6	:
Average personnel costs (EUR thous./employee) (3)	49.4	5.9	39.0	47.9	:	:	29.0	32.9	22.5	27.1	:	2.0	4.2	:
Wage adjusted labour productivity (%) (3)	156.8	160.5	124.7	101.3	:	:	133.6	122.1	272.0	127.6	:	26.4	158.3	:
Gross operating rate (%) (4)	9.3	3.7	6.4	0.5	:	:	2.8	3.4	17.8	5.7	:	-24.1	11.3	:
	HU	MT	NL	AT	PL (2)	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	3 236	16	:	737	1 269	1 055	75	30	190	754	6 354	4	16	:
Value added at factor cost (EUR million)	287	4	:	178	123	167	10	6	56	174	1 699	2	4	:
Purchases of goods and services (EUR million) (5)	3 206	12	:	590	1 355	865	66	23	140	587	6 173	3	18	:
Gross investment in tangible goods (EUR million)	101	0	:	24	52	41	1	1	6	22	171	1	0	:
Number of persons employed (thousands)	14	0	35	3	:	5	:	1	1	5	31	1	1	:
App. labour productivity (EUR thous./pers. emp.)	19.9	37.7	:	59.9	:	31.2	:	6.6	46.4	34.0	55.0	2.6	4.9	:
Average personnel costs (EUR thous./employee)	7.5	16.5	:	44.4	9.0	18.4	9.6	4.6	33.9	33.9	35.0	2.4	3.1	:
Wage adjusted labour productivity (%)	266.4	229.0	:	135.1	:	169.9	:	144.0	136.8	100.3	157.2	108.6	157.6	:
Gross operating rate (%)	5.1	14.4	:	6.3	0.2	6.6	2.6	5.9	7.8	0.4	8.3	6.1	8.9	:

(1) 1999.

(2) 2000.

(3) Ireland, 2000.

(4) Ireland, 2000; the Czech Republic, 1999.

(5) The United Kingdom, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 11.24

Manufacture of medical, precision and optical instruments, watches and clocks (NACE Division 33)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	1 148	1 003	2 583	34 943	57	57	3 196	20 742	3 526	13 863	9	20	79	164
Value added at factor cost (EUR million)	405	319	1 242	15 924	17	21	1 377	7 797	1 837	4 927	5	14	8	71
Purchases of goods and services (EUR million)	814	720	0	21 642	39	:	2 104	14 567	2 777	9 456	6	11	75	93
Gross investment in tangible goods (EUR million)	44	50	145	1 442	2	:	112	657	252	730	1	3	5	:
Number of persons employed (thousands)	9	32	16	316	2	1	34	143	18	124	0	1	4	2
App. labour productivity (EUR thous./pers. emp.)	47.2	10.0	76.7	50.3	7.0	26.8	40.7	54.7	100.5	39.8	19.7	11.0	2.1	42.7
Average personnel costs (EUR thous./employee) (2)	38.9	6.6	42.4	38.6	5.7	:	26.4	43.7	29.1	30.4	15.5	3.6	4.8	30.6
Wage adjusted labour productivity (%) (2)	121.4	150.1	181.1	130.5	123.3	:	154.5	125.1	344.9	131.0	118.8	303.7	43.3	139.8
Gross operating rate (%) (3)	10.7	12.6	21.6	11.1	5.9	:	18.1	8.0	36.1	14.9	15.2	49.0	-11.6	12.7
	HU	MT	NL	AT	PL (1)	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	395	68	:	1 402	1 200	372	343	183	1 978	3 896	20 356	45	146	:
Value added at factor cost (EUR million)	164	33	:	728	634	134	126	60	769	1 269	8 632	15	61	:
Purchases of goods and services (EUR million)	315	33	:	799	747	264	219	146	1 242	2 968	12 766	35	114	:
Gross investment in tangible goods (EUR million)	54	9	97	64	58	28	27	11	54	209	892	3	15	:
Number of persons employed (thousands)	14	1	26	16	:	7	:	6	12	24	145	7	12	:
App. labour productivity (EUR thous./pers. emp.)	11.3	26.1	:	45.2	:	20.2	:	9.7	63.1	52.4	59.7	2.3	5.0	:
Average personnel costs (EUR thous./employee)	7.5	14.3	:	33.7	8.2	14.9	14.1	6.0	39.2	47.2	40.3	1.9	2.7	:
Wage adjusted labour productivity (%)	151.6	182.7	:	134.0	:	136.2	:	161.8	161.1	111.1	148.0	122.2	187.4	:
Gross operating rate (%)	12.2	21.2	:	14.1	26.4	11.4	6.5	11.1	15.4	4.1	14.3	8.8	19.6	:

(1) 2000.

(2) Ireland and Cyprus, 2000.

(3) Ireland, 2000.

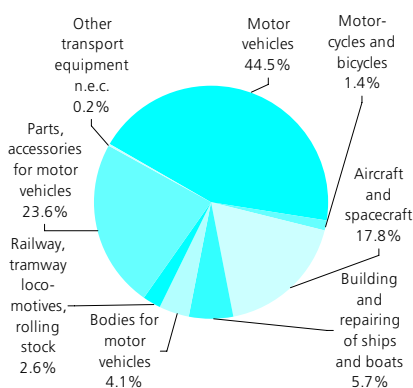
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Transport equipment



Transport equipment plays an important role in the European economy, as it provides the means for transporting individuals and goods over both short and long distances. Globalisation and international free trade have stimulated the demand for transporting goods, while improved living standards, increased personal mobility, and longer and more frequent holidays have fuelled the demand for passenger transport. The result has been an increase in the modal share of motor vehicles, as passenger cars are increasingly used for personal trips, while there has been an equally rapid expansion in the number of light and heavy goods vehicles used to transport goods.

Figure 12.1
Manufacture of transport equipment
(NACE Subsection DM)
Share of value added at factor cost,
EU-25, 2001



Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

STRUCTURAL PROFILE

Enterprises operating in the EU-25's transport equipment sector (NACE Subsection DM) generated EUR 168.6 billion of added value in 2001. As such, they accounted for 11.0 % of the EU-25's manufacturing value added total, while their equivalent share of EU-25 employment ⁽¹⁾ was 8.8 %.

The motor vehicles, trailers and semi-trailers subsector (NACE Division 34) accounted for almost three quarters (72.2 %) of value added in the EU-25's transport equipment sector in 2001. The manufacture of aircraft and spacecraft (NACE Group 35.3) was the largest of the other transport equipment subsectors, with a 17.8 % share, which was just over three times the contribution made by the building and repairing of ships and boats (NACE Group 35.1, 5.7 %). The manufacture of railway, tramway locomotives and rolling stock (NACE Group 35.2, 2.6 %) and the manufacture of motorcycles and bicycles (NACE Group 35.4, 1.4 %) accounted for relatively small shares.

⁽¹⁾ Slovenia, number of employees.

The manufacture of transport equipment is covered by two NACE divisions, the manufacture of motor vehicles (NACE Division 34), and the manufacture of all other types of transport equipment, namely, shipbuilding, railway rolling stock, aerospace, motorcycles and bicycles, and a residual category of other transport equipment - all classified within NACE Division 35. This chapter deals exclusively with the manufacture of equipment that is used for transporting either passengers or freight; for more details in relation to transport services, please refer to Chapter 20.

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.

Table 12.1

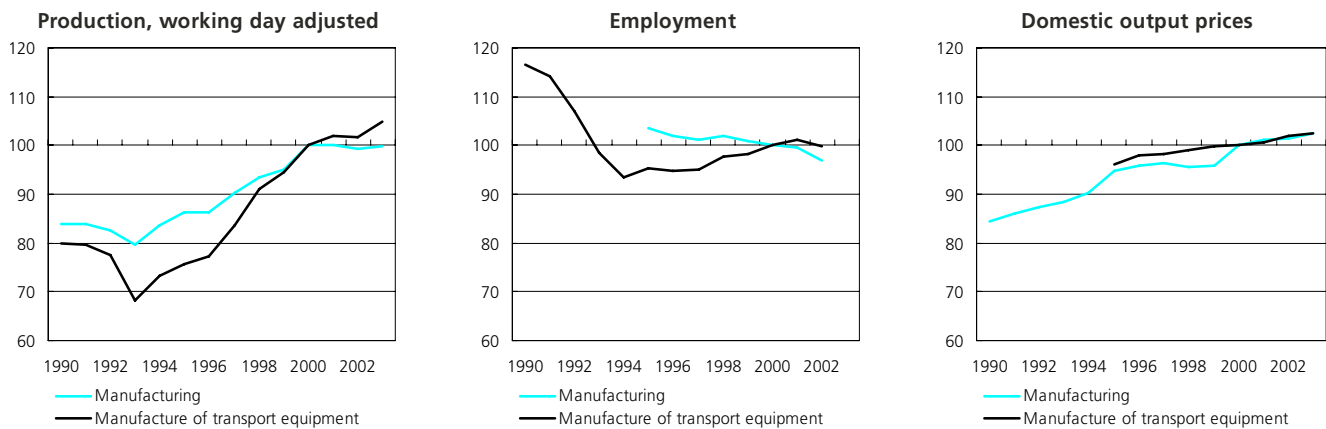
Manufacture of transport equipment (NACE Subsection DM)
Structural profile, 2001

Rank	Largest value added (EUR billion)	Highest value added specialisation relative to manufacturing (EU-25=100)	Largest number of persons employed (thousands) (1)	Main EU-25 trading partners: origin of imports, 2002 (EUR billion)	Main EU-25 trading partners: destination of exports, 2002 (EUR billion)
1	Germany (67.0)	Germany (148)	Germany (999.3)	United States (43.2)	United States (61.5)
2	United Kingdom (27.6)	Sweden (132)	France (414.2)	Japan (19.2)	Switzerland (8.4)
3	France (26.2)	Czech Republic (118)	United Kingdom (389.6)	South Korea (6.1)	Japan (7.2)
4	Italy (11.6)	France (115)	Italy (269.7)	Canada (4.0)	Canada (5.1)
5	Spain (9.5)	United Kingdom (110)	Spain (216.6)	Turkey (3.3)	China (5.0)

(1) Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 12.2

Manufacture of transport equipment (NACE Subsection DM)
Main indicators, EU-25 (2000=100)


Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Table 12.2

Manufacture of transport equipment (NACE Subsection DM)
Value added at factor cost and persons employed, by enterprise size-class, 2001 (% of total)

	Micro enterprises		Small enterprises		Medium-sized enterprises		Large enterprises	
	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed
EU-25	1.4	:	3.7	:	8.8	:	86.2	:
EU-15	1.4	2.4	3.7	5.7	8.5	11.2	86.5	80.8

Source: Eurostat, Structural Business Statistics (theme4/sbs/sizclass).

The 10 new Member States generated 4.4 % of the EU-25's value added in the transport equipment sector in 2001, compared with a 5.6 % share of all manufacturing value added. A closer analysis reveals that they were particularly specialised in the manufacture of railway, tramway locomotives and rolling stock (where their share of EU-25 value added rose to 12.4 %), as well as the building and repairing of ships and boats (10.6 %). In contrast, they were least specialised in the manufacture of aircraft and spacecraft (1.2 %).

The EU's transport equipment sector is dominated by enterprises from Germany. Indeed, transport equipment was the largest manufacturing NACE subsection in Germany (in terms of value added), with EUR 67.0 billion in 2001, 85.6 % of which came from the manufacture of motor vehicles (Division 34).

The manufacture of transport equipment was highly concentrated within the largest manufacturing economies, as Germany (39.7 % of EU-25 value added in 2001), the United Kingdom (16.4 %) and France (15.5 %) were the only countries to account for more than 10 % of total value added in this sector. As such, the three largest producers of transport equipment contributed a 71.7 % share of transport equipment value added compared with 55.2 % for manufacturing.

The transport equipment sector was also relatively important in the Czech Republic, Poland, Slovakia and Sweden, where it was the second largest manufacturing subsection (as measured by value added), while in France, Hungary and the United Kingdom, it was the third largest subsection. The high level of output in Germany distorts value added specialisation ratios, resulting in Germany (148.1 %), Sweden (132.0 %), the Czech Republic (118.0 %), France (115.3 %) and the United Kingdom (110.0 %) being the only Member States to report a specialisation in the manufacture of transport equipment in 2001. Some of the lowest specialisation ratios were reported in Denmark, Ireland, Cyprus, Latvia, Lithuania and Finland. In each of these countries, the contribution of the transport equipment sector to manufacturing value added was less than 40 % of the EU-25 average.

Large enterprises predominate in almost all transport equipment sectors. Indeed, the 88.0 % contribution of large enterprises to the EU-25's value added in the motor vehicles sector (NACE Division 34) was the second highest recorded across all manufacturing NACE divisions (the highest proportion being recorded for the manufacture of coke, refined petroleum products and nuclear fuel (NACE Division 23)), while the 81.4 % share in the other transport equipment sector (NACE Division 35) was the fourth highest proportion.

Having registered three successive negative rates from 1991 to 1993, there was annual growth of the index of production for motor vehicles (NACE Division 34) throughout the period 1994 to 2003 in the EU-25. In contrast, other transport equipment (NACE Division 35) saw output decline from 1991 through until 1995, after which there were six consecutive years of growth. In 2002 the production index for other transport equipment fell by 4.8 % (when manufacturing output fell by 0.9 %), rebounding in 2003 with growth of 4.5 % (compared with a manufacturing average of 0.6 %).

LABOUR AND PRODUCTIVITY

In keeping with most manufacturing sectors, the transport equipment sector is characterised by a high proportion of paid employees, some 98.1 % of the EU-15 workforce in 2002. There was also a relatively high propensity to employ on a full-time basis, as full-time employment rates averaged 96.5 % in the EU-15 in 2002, compared with a manufacturing average of 92.4 %. The full-time employment rate exceeded the manufacturing average in every Member State⁽²⁾, with the largest difference reported in the Netherlands where 91.9 % of

Table 12.3
Manufacture of transport equipment (NACE Subsection DM)
Labour force characteristics, 2002

	Share of men		Share of full-time		Share of employees	
	Value (%)	Index (manufacturing=100)	Value (%)	Index (manufacturing=100)	Value (%)	Index (manufacturing=100)
EU-25	:	:	:	:	:	:
EU-15	82.8	115.6	96.5	104.4	98.1	106.9
BE	90.9	122.3	97.1	106.6	99.7	105.2
CZ	68.8	111.6	98.4	100.9	98.1	106.0
DK	80.9	118.3	95.0	102.4	100.0	103.6
DE	81.1	113.1	95.9	106.9	98.9	103.7
EE	:	:	:	:	100.0	103.5
EL	92.4	130.3	99.6	101.6	91.4	124.6
ES	82.4	110.9	98.6	101.8	97.5	110.3
FR	81.1	114.7	96.7	102.4	98.9	104.2
IE	73.1	105.7	96.8	103.2	91.9	99.9
IT	83.3	119.8	96.3	101.7	96.0	116.1
CY	:	:	:	:	:	:
LV	78.2	126.7	100.0	105.6	100.0	104.6
LT	:	:	100.0	105.4	100.0	103.8
LU	:	:	:	:	:	:
HU	78.6	133.4	99.8	102.2	99.6	104.4
MT	96.7	138.1	100.0	103.5	95.2	102.2
NL	90.6	117.5	91.9	122.4	97.9	101.8
AT	:	:	:	:	:	:
PL	:	:	:	:	:	:
PT	68.8	122.7	98.9	102.0	95.5	109.5
SI	79.3	131.3	97.7	101.1	99.4	106.0
SK	72.8	122.9	99.6	100.9	98.9	103.0
FI	90.3	128.4	98.3	103.0	94.7	101.3
SE	80.5	107.8	95.8	104.5	97.8	104.0
UK	86.9	116.1	96.4	104.5	97.5	102.5

Source: Eurostat, Labour Force Survey.

the transport equipment workforce worked full-time, compared with an average of 75.1 % for the whole of Dutch manufacturing. The proportion of men in the total number of persons employed was 82.8 % in the EU-15's transport equipment sector in 2002, compared with a manufacturing average of 71.7 %. The proportion of men in the workforce was consistently above the manufacturing average in every country⁽³⁾, often by 10 to 20 percentage points, with the difference rising to more than 20 points in Malta, Greece and Finland.

Apparent labour productivity in the EU-15's transport equipment sector was EUR 61 000 per person employed in 2001, which was EUR 9 800 above the manufacturing average. Motor vehicles (NACE Group 34.1, EUR 68 500) and aircraft and spacecraft (NACE Group 35.3, EUR 85 000) clearly stood out as the two subsectors with the highest apparent labour productivity in 2001. Productivity in these two subsectors influenced the transport

equipment average, as a majority of the eight NACE groups that make up the transport equipment sector reported labour productivity ratios that were inferior to the manufacturing sector average.

Relatively high levels of apparent labour productivity were matched by equally high average personnel costs in 2001, which reached EUR 50 100 per employee in the EU-15 for the motor vehicles subsector (NACE Group 34.1) and EUR 53 300 per employee for aircraft and spacecraft. As a result, wage adjusted labour productivity was often relatively low, as the EU-15 manufacturing average of 143.5 % was surpassed only by the aircraft and spacecraft sector (159.5 %). The lowest EU-15 wage adjusted labour productivity ratio in the transport equipment sector was recorded for the manufacture of railway, tramway locomotives and rolling stock (NACE Group 35.2, 106.9 %).

⁽²⁾ Estonia, Cyprus, Luxembourg, Austria and Poland, not available.

⁽³⁾ Estonia, Cyprus, Lithuania, Luxembourg and Poland, not available.

Table 12.4

Manufacture of transport equipment (NACE Subsection DM)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Manufacture of transport equipment	61.0	136.7	44.7
Motor vehicles	68.5	136.7	50.1
Bodies for motor vehicles; trailers	40.2	124.8	32.2
Parts, accessories for motor vehicles	52.3	131.4	39.8
Building and repairing of ships and boats	42.7	126.7	33.7
Railway, tramway locomotives, rolling stock	44.2	106.9	41.3
Aircraft and spacecraft	85.0	159.5	53.3
Motorcycles and bicycles	41.0	133.5	30.7
Other transport equipment n.e.c.	41.7	133.3	31.3

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

EXTERNAL TRADE

EU-25 exports of transport equipment (CPA Subsection DM) were valued at EUR 156.9 billion in 2002, while imports were EUR 99.4 billion. As such, transport equipment accounted for 18.8 % of the EU-25's manufactured exports and 13.6 % of manufactured imports in 2001. This resulted in a trade surplus of EUR 57.5 billion, which was the second highest across all CPA subsections (behind machinery and equipment, NACE Subsection DK).

The largest trade surpluses were registered for motor vehicles (CPA Group 34.1, EUR 45.7 billion) and for motor vehicle parts and accessories (CPA Group 34.3, EUR 9.1 billion). There was a relatively small deficit of EUR 913.1 million for aircraft and spacecraft (CPA Group 35.3), while the largest deficit was recorded for motorcycles and bicycles (CPA Group 35.4), at EUR 3.1 billion.

Germany ran a trade surplus of EUR 79.7 billion for transport equipment products in 2002 (in terms of intra- and extra-EU trade). This figure was four times the size of the next largest trade surplus that was recorded in France (EUR 20.0 billion). The largest deficit was recorded in the United Kingdom (EUR -20.2 billion), followed by Italy (EUR -8.6 billion).

Table 12.5

Transport equipment (CPA Subsection DM)
External trade, EU-25, 2002 (EUR million)

	Exports	Imports	Trade balance	Cover ratio (%)
Transport equipment	156 932	99 401	57 531	157.9
Motor vehicles	71 650	25 910	45 740	276.5
Bodies (coachwork) for motor vehicles; trailers and semi-trailers	1 413	330	1 084	428.7
Parts and accessories for motor vehicles and their engines	20 928	11 827	9 101	177.0
Ships and boats	12 706	8 309	4 397	152.9
Railway and tramway locomotives and rolling-stock	1 949	706	1 243	276.2
Aircraft and spacecraft	46 692	47 605	-913	98.1
Motorcycles and bicycles	1 500	4 622	-3 121	32.5
Other transport equipment n.e.c.	95	94	1	100.7

Source: Eurostat, Comext.

12.1: MOTOR VEHICLES

Division 34 of the NACE classification covers the manufacture of motor vehicles, trailers and semi-trailers. It contains three NACE groups, the first two of which are included in 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 the motor vehicles sector.

The motor vehicles sector is one of the most often cited examples of a truly globalised industrial sector that applies modern management principles and just-in-time production techniques. Many vehicle producers have started to shift their production facilities to emerging markets and this explains some of the changes seen in the structure of manufacturing in central and eastern Europe. Buy-outs and green field developments by European manufacturers have led to Volkswagen producing under the Skoda badge in the Czech Republic and under the Audi badge in Hungary, while Fiat produces in Poland, Renault in Romania and PSA Peugeot Citroen plans plants in the Czech Republic and Slovakia. Manufacturers from non-Community countries have also invested in the region, for example Daewoo in Poland, and the recent announcement by Hyundai to build Kia cars in Slovakia. The main driving force behind the relocation of production is the cost of labour.

The European Commission is active in promoting the technical harmonisation of vehicles. The Commission has proposed to revamp the directive on the type-approval of vehicles, laying down new technical provisions for road safety in relation to vans, lorries, trailers, buses and coaches. The Commission has also adopted a draft directive ⁽⁴⁾ on the compulsory fitting of seat belts, extending this requirement to all vehicle categories. These proposed changes would affect nearly two million commercial vehicles every year.

⁽⁴⁾ COM (2003) 361.

Table 12.6

New passenger car registrations, by main manufacturers, Europe, 2003 (units) (1)

Group	Brand	Total volume	Market share (%)
BMW	BMW	511 063	3.6
	MINI	116 095	0.8
DAIMLER-CHRYSLER	CHRYSLER	56 673	0.4
	JEEP	35 750	0.3
	MERCEDES	717 031	5.0
	SMART	111 681	0.8
FIAT	ALFA ROMEO	159 583	1.1
	FIAT	794 498	5.6
	LANCIA	100 477	0.7
FORD	FORD	1 227 318	8.6
	JAGUAR	48 807	0.3
	LAND ROVER	71 122	0.5
	VOLVO	216 079	1.5
GENERAL MOTORS	OPEL	1 310 728	9.2
	SAAB	73 265	0.5
JAPANESE MANUFACTURERS	HONDA	192 122	1.4
	MAZDA	207 157	1.5
	MITSUBISHI	116 560	0.8
	NISSAN	398 855	2.8
	SUZUKI	147 035	1.0
	TOYOTA	678 091	4.8
KOREAN MANUFACTURERS	DAEWOO	115 795	0.8
	HYUNDAI	246 015	1.7
	KIA	107 057	0.8
MG ROVER	MG ROVER	135 784	1.0
PSA	CITROEN	909 160	6.4
	PEUGEOT	1 196 651	8.4
RENAULT	RENAULT	1 505 756	10.6
VOLKSWAGEN	AUDI	544 021	3.8
	SEAT	381 367	2.7
	SKODA	240 913	1.7
	VOLKSWAGEN	1 418 386	10.0

(1) EU-15, excluding Luxembourg, plus the Czech Republic, Hungary and Slovakia.
Source: ACEA.

STRUCTURAL PROFILE

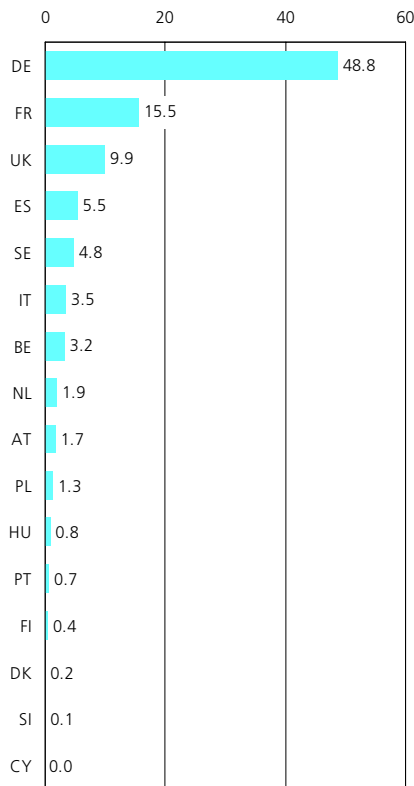
According to the European Automobile Manufacturers Association (ACEA), the number of new passenger car registrations in the EU-15 reached 15.9 million in 2003, compared with 14 million the year before. There were 961 300 new passenger car registrations in the new Member States ⁽⁵⁾. Table 12.6 shows a breakdown of vehicle registrations according to the vehicle manufacturer in 2003.

⁽⁵⁾ Cyprus and Malta, not available

Besides the rapid growth of the monospace market in recent years, another emerging trend is the switch in demand towards diesel engines (likely to have resulted from the significant price differentials that are observed in a number of Member States between the price of diesel and petrol). Diesel engines accounted for 23.1 % of new car registrations in the EU-15 in 1994, a share that had risen to 40.9 % by 2002. Diesel engines accounted for a majority of new car registrations in Austria, Belgium, France, Luxembourg and Spain in 2002.

Figure 12.3

**Motor vehicles
(NACE Groups 34.1 and 34.2)
Share of EU-25 value added, 2001 (%) (1)**



(1) The Czech Republic, Estonia, Greece, Ireland, Latvia, Lithuania, Luxembourg, Malta, Slovakia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

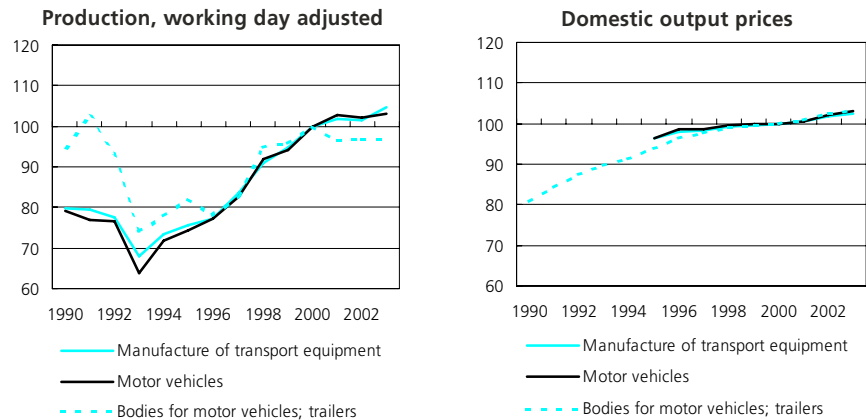
The motor vehicles sector (NACE Groups 34.1 and 34.2) generated EUR 82.0 billion of value added in 2001 within the EU-25, which was equivalent to 5.3 % of manufacturing value added or 48.6 % of transport equipment value added. The 10 new Member States contributed 3.6 % to the EU-25 total.

Almost half of the added value in the motor vehicles industry in 2001 was generated in Germany (48.8 %). The addition of France (15.5 %) and the United Kingdom (9.9 %) took the share of the three largest motor vehicle producers to 74.3 % of the EU-25's value added in 2001 (while their share of the number of employees was 66.7 %). In relative terms, Germany was also the most specialised manufacturer within the EU-25, with a value added specialisation ratio of 182.0 %. The only other countries ⁽⁶⁾ to be relatively specialised in the manufacture of motor vehicles were Sweden (177.8 %), France, Belgium and Hungary (all between 112 and 115 %).

⁽⁶⁾ The Czech Republic, Estonia, Greece, Ireland, Latvia, Lithuania, Luxembourg, Malta and Slovakia, not available.

Figure 12.4

**Motor vehicles (NACE Groups 34.1 and 34.2)
Main indicators, EU-25 (2000=100)**



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Motor vehicle manufacture is dominated by large enterprises, as these accounted for 93.1 % of the value added generated in this sector in 2001 in the EU-25, compared with a manufacturing average of 54.9 %.

From its low of 1993, the output of motor vehicles (NACE Group 34.1) in the EU-25 grew at an average rate of 4.9 % per annum through to 2003. The significant reduction in production in 1993 (-16.3 %) was followed by increasing output for every year through until 2002 (-0.6 %), after which a resumption of growth was registered (0.8 %). For the manufacture of bodies for motor vehicles, trailers and semi-trailers (NACE Group 34.2) the picture was somewhat different, as output fell by 20.6 % in 1993. A pattern of more modest growth was interrupted in 1996 (-4.6 %), as well as in 2001 (-3.6 %) and 2003 (-0.2 %).

Output prices for the EU-25 rose in each year from 1996 to 2003, with an annual average increase of 0.8 % for the manufacture of motor vehicles (NACE Group 34.1) and 1.2 % for the manufacture of bodies (coachwork) for motor vehicles / the manufacture of trailers and semi-trailers between 1995 and 2003. These price increases were higher than those recorded for the manufacture of parts and accessories for motor vehicles (NACE Group 34.3) where there was no change in output prices.

LABOUR AND PRODUCTIVITY

Apparent labour productivity in the EU-15's motor vehicles sector (NACE Groups 34.1 and 34.2) was EUR 64 700 per person employed in 2001. Differences between apparent labour productivity in this sector and national manufacturing averages were in excess of EUR 20 000 per person employed in Portugal and Sweden, rising to above EUR 40 000 in Hungary ⁽⁷⁾.

The wage adjusted labour productivity ratio for the motor vehicles sector in the EU-15 was modest at 135.5 %, compared with a manufacturing average of 143.5 %. This could be attributed to a relatively low ratio in Germany (124.4 %), where average personnel costs were particularly high (EUR 56 500 per employee). There were high ratios in Hungary (where value added covered personnel costs by 4.6 times), Poland (3.9 times) and Portugal (2.4 times) ⁽⁸⁾.

⁽⁷⁾ The Czech Republic, Estonia, Greece, Ireland, Latvia, Lithuania, Luxembourg, Malta, Slovenia and Slovakia, not available.

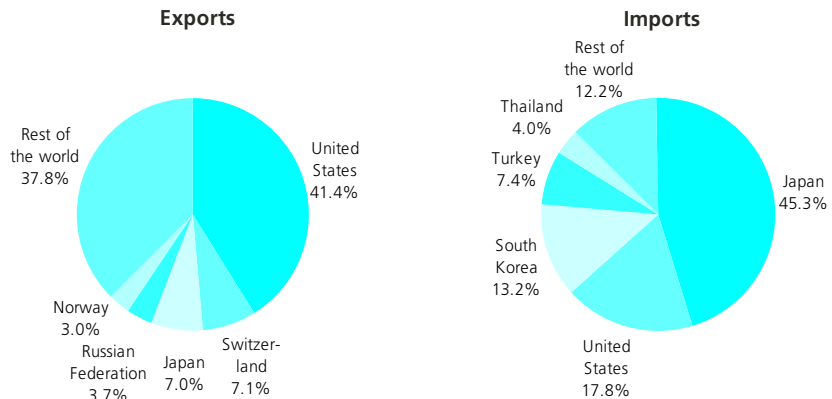
⁽⁸⁾ The Czech Republic, Estonia, Greece, Ireland, Cyprus, Latvia, Lithuania, Luxembourg, Malta, Slovenia and Slovakia, not available.

EXTERNAL TRADE

The EU-25 exported EUR 73.1 billion of motor vehicles and bodies (coachwork) for motor vehicles; trailers and semi-trailers (CPA Groups 34.1 and 34.2) to non-Community countries in 2002, while imports were valued at EUR 26.2 billion. Note that these figures include motor vehicles that have been produced in factories operating under American or Asian ownership.

The main export market for the EU-25 was the United States (41.4 %), followed by Japan and Switzerland, where just over 7 % of the EU-25's exports were destined. Japan was the main origin of EU-25 imports, accounting for 45.3 % of the total, ahead of the United States (17.8 %), South Korea (13.2 %) and Turkey (7.4 %), the latter hosting European, Asian and American manufacturers.

Figure 12.5 Motor vehicles; bodies (coachwork) for motor vehicles; trailers and semi-trailers (CPA Groups 34.1 and 34.2) Share in extra-EU trade, 2002



Source: Eurostat, Comext.

12.2: MOTOR VEHICLE PARTS AND ACCESSORIES

This subchapter covers the one remaining NACE group of Division 34, namely the manufacture of parts and accessories for motor vehicles and their engines (NACE Group 34.3). The data presented in this subchapter do not cover the manufacture of tyres (Chapter 6), batteries or electrical equipment that are used in motor vehicles (Chapter 11).

The parts and accessories sector has one of the main examples of a thriving e-commerce B2B marketplace, through online trading systems such as Covisint, that have increased the potential client and geographic base of many suppliers, while leading to efficiency gains through just-in-time delivery and manufacture.

Demand for vehicle parts and accessories is divided between original equipment (OE) that is supplied directly to motor vehicle manufacturers and demand from the after-market (AM) for spare parts and accessories for repairs and modifications to used vehicles. Despite the fact that there are an increasing number of vehicles on the road, AM demand for many products has declined as a result of quality improvements that have increased the average life of many products.

STRUCTURAL PROFILE

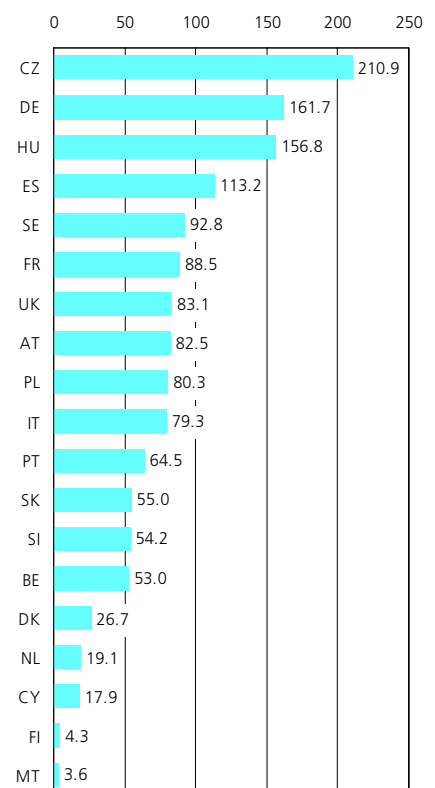
The EU-25's parts and accessories sector generated EUR 39.9 billion of value added in 2001 (94.1 % of which was derived in the EU-15), which was almost one third (32.7 %) of the total added value within the motor vehicles sector (Division 34).

Recent changes in the structure of the parts and accessories sector have been driven by the emergence of Delphi Automotive Systems and Visteon (spin-offs from General Motors and Ford), which seemingly stimulated merger activity among first- and second-tier suppliers. There has been a general reduction in the number of suppliers being used by vehicle manufacturers and this has resulted in parts and accessories manufacturers being increasingly contracted to produce complete units for a vehicle, and as a result taking over part of the R & D burden.

Germany was the most important manufacturer of parts and accessories in 2001, with EUR 17.3 billion of value added, or 43.4 % of the EU-25 total. The United Kingdom (12.4 %), France (11.9 %) and Italy (10.5 %) followed, while Spain (7.7 %) was the only other Member State ⁽⁹⁾ to account for more than 5 % of the EU-25's value added.

In relative terms, the most specialised producer of parts and accessories was the Czech Republic (specialisation ratio relative to EU-25 manufacturing of 210.9 %). There were only three other countries ⁽¹⁰⁾ that were relatively specialised in the manufacture of vehicle parts and accessories: Germany (161.7 %), Hungary (156.8 %) and Spain (113.2 %).

Figure 12.6 Manufacture of parts, accessories for motor vehicles (NACE Group 34.3) Value added specialisation ratio relative to total manufacturing, 2001 (EU-25=100) (1)



(1) Estonia, Greece, Ireland, Latvia, Lithuania and Luxembourg, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

⁽⁹⁾ Estonia, Greece, Ireland, Latvia, Lithuania and Luxembourg, not available.

⁽¹⁰⁾ Estonia, Greece, Ireland, Latvia, Lithuania and Luxembourg, not available.

The parts and accessories sector is dominated by large enterprises (with 250 or more persons employed). They contributed 77.5 % of the EU-25's value added in 2001 compared with a manufacturing average of 54.9 %.

Production of motor vehicle parts and accessories consistently out-performed manufacturing between 1994 and 2003, with higher growth registered for the production index. Positive growth rates were registered every year, with particularly large expansions in 1994, 1997, 1998 and 2000 (9 % or more). Parts and accessories suppliers are increasingly under pressure from vehicle manufacturers demanding cost-cutting measures. This is evident in the data for output prices for the EU-25, as there was no change in prices between 1995 and 2003 (-0.1 % overall).

LABOUR AND PRODUCTIVITY

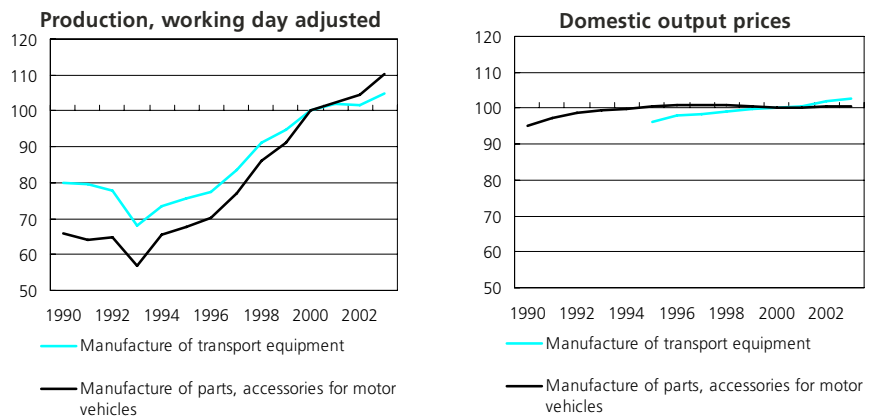
The apparent labour productivity of the EU-15's parts and accessories sector was equivalent to EUR 52 300 per person employed in 2001. The largest differences in productivity between national manufacturing averages and the figures registered for the parts and accessories sector were recorded in the Czech Republic (51.4 % higher than the manufacturing average), Portugal (37.6 %) and Hungary (27.5 %) (11). Average personnel costs in the EU-25's parts and accessories sector were EUR 34 800 per employee in 2001 and were at least 10 % above the manufacturing average in the parts and accessories sector in the Czech Republic, Germany, Spain, Hungary and Portugal (12). Combining these two ratios, the wage adjusted labour productivity ratio shows that for each euro spent on personnel costs in the EU-15, EUR 1.31 of value added was derived in 2001. Wage adjusted productivity ratios were above national manufacturing averages in the Czech Republic (30.5 % higher), Austria (17.3 %), Hungary (10.1 %), Portugal (8.8 %), Italy (4.6 %) and Spain (0.1 %) (13).

(11) Estonia, Greece, Ireland, Latvia, Lithuania, Luxembourg and Slovenia, not available.

(12) Estonia, Greece, Ireland, Cyprus, Latvia, Lithuania and Luxembourg, not available.

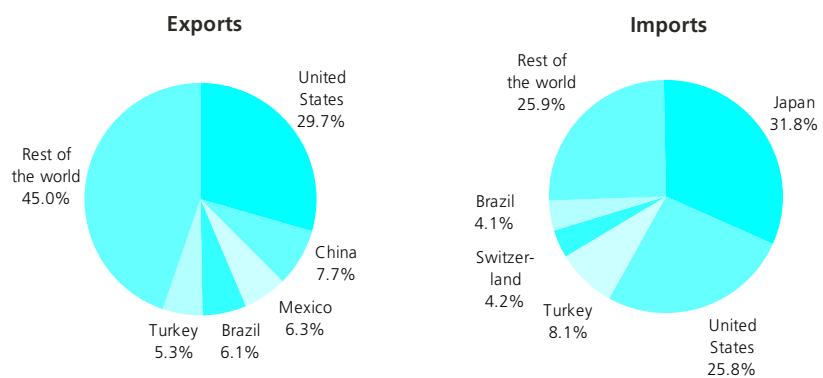
(13) Estonia, Greece, Ireland, Cyprus, Latvia, Lithuania, Luxembourg and Slovenia, not available.

Figure 12.7
Manufacture of parts, accessories for motor vehicles (NACE Group 34.3)
Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Figure 12.8
Parts and accessories for motor vehicles and their engines (CPA Group 34.3)
Share in extra-EU trade, 2002



Source: Eurostat, Comext

EXTERNAL TRADE

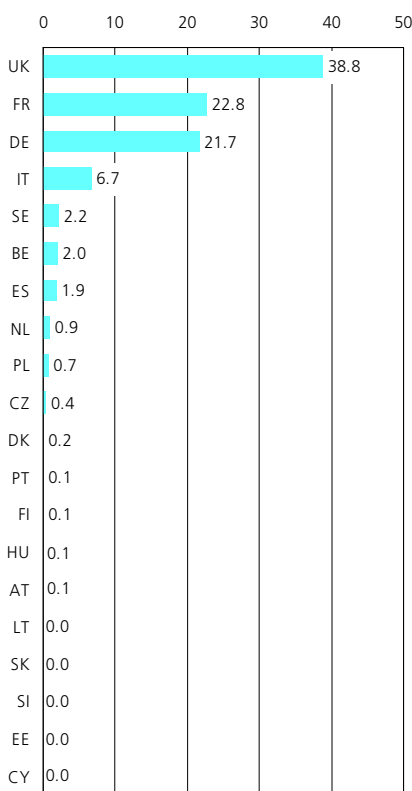
EU-25 exports of parts and accessories for motor vehicles and their engines (CPA Group 34.3) were valued at EUR 20.9 billion in 2002, while imports totalled EUR 11.8 billion. Considering intra- and extra-EU trade, by far the largest trade surplus among the Member States was registered in Germany (EUR 11.3 billion), followed by Italy and France (both just over EUR 3.5 billion).

The largest export market for the EU-25 for parts and accessories in 2002 was the United States (29.7 % of total exports), followed by China (7.7 %), Mexico (6.3 %), Brazil (6.1 %) and Turkey (5.3 %). Almost one third of the EU-25's imports originated in Japan (31.8 %), while a further quarter came from the United States (25.8 %), with Turkey's 8.1 % a distant third place.

12.3: 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. These activities are classified together within NACE Group 35.3. The data presented also cover other means of air transport, for example gliders, balloons and spacecraft, as well as parts and accessories that are used in the construction of aircraft and spacecraft.

Figure 12.9
Manufacture of aircraft and spacecraft
(NACE Group 35.3)
Share of EU-25 value added, 2001 (%) (1)



(1) Greece, Ireland, Latvia, Luxembourg and Malta, not available.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

The aerospace industry is one of the EU's cutting-edge, high-technology sectors. There is a high emphasis on R & D and enterprises are often faced with the need for considerable investment, with a long and uncertain period before costs are recouped. The use of alliances and consortia is often used as a means of spreading this investment risk. Europe's most successful example of an alliance is Airbus, which, for the first time, delivered more jets than Boeing in 2003.

The structure of the European aerospace industry has undergone profound changes in the last decade. A process of mergers and rationalisation took place, leading to the creation of global players such as EADS (second highest global turnover in this sector) and BAE Systems (fourth), alongside the US based Boeing (first) and Lockheed Martin (third).

The STAR 21 initiative (14) provides a framework for the development aerospace in the EU, underlining steps to improve competitiveness, for example by improving support for civil and defence research, establishing an EU-wide defence equipment market, as well as undertaking to produce a White Paper on space policy.

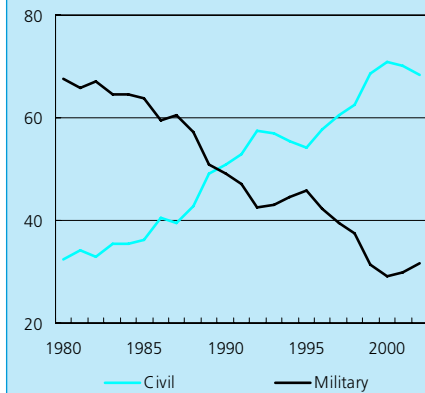
STRUCTURAL PROFILE

The EU-25's aerospace equipment sector generated EUR 30.0 billion of added value in 2001, which equated to 17.8 % of total value added in the transport equipment sector, a proportion that rose as high as 42.1 % in the United Kingdom and 26.1 % in France (15). The United Kingdom accounted for 38.8 % of the EU-25's value added, ahead of France (22.8 %) and Germany (21.7 %). As such, the three largest producers together generated 83.2 % of value added compared with a manufacturing average of 55.2 %. This high concentration led to only the United Kingdom (260.1 %) and France (168.8 %) being relatively specialised in the aerospace equipment sector in 2001 (16). Among the 10 new Member States, the Czech Republic and Poland had the largest aerospace sectors.

The simplest division that can be made for aerospace equipment is between civilian and military markets. Figure 12.10 shows the breakdown of consolidated turnover in the EU-15 between these two markets. After five annual reductions in the proportion of sales generated from military applications, 2001 and 2002 were marked by an increase in the share of the military sector, as civilian markets were hit by concerns over an economic slowdown and the after-effects of the terrorist attacks in the United States of 11 September 2001. Indeed, the production index for aerospace equipment fell by 9.0 % in 2002 for the EU-25, although it rebounded by 8.7 % in 2003. The longer-term evolution showed declining output during five successive years from 1991 to 1995, after which six consecutive positive annual rates were registered through to 2001.

(14) Communication from the European Commission, COM(2003) 600 final of 13 October 2003.
 (15) Greece, Ireland, Latvia, Luxembourg and Malta, not available.
 (16) Greece, Ireland, Latvia, Luxembourg and Malta, not available.

Figure 12.10
Breakdown of consolidated turnover in aerospace, EU-15 (%) (1)



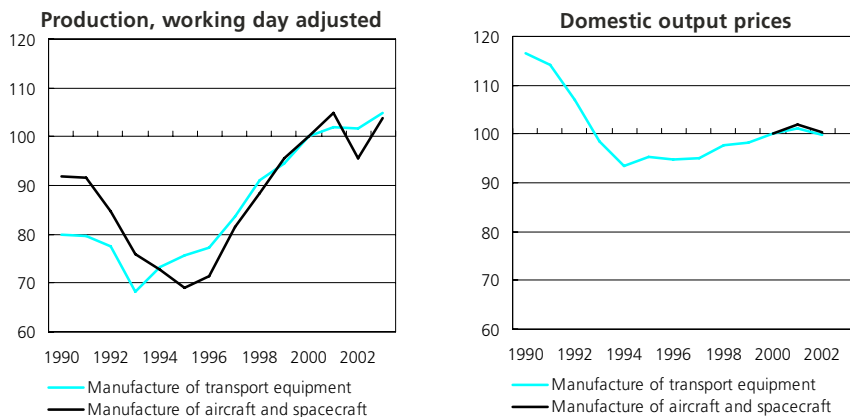
(1) Based on consolidated turnover in 2002 constant prices.
 Source: AECMA, available at <http://www.aecma.org>.

Table 12.7
Breakdown of consolidated turnover in aerospace, EU-15, 2002

	(billion EUR)	(% of total)
Total	74.6	100.0
Aircraft	68.6	91.9
Aircraft final products (1)	34.3	46.0
Large civil aircraft	18.7	25.0
Regional aircraft	1.2	1.6
Business jets	1.1	1.4
Helicopters	4.9	6.6
Military aircraft	8.5	11.3
Aerostructures	3.2	4.3
Aircraft engines	9.4	12.6
Aircraft equipment	5.5	7.4
Aircraft maintenance	16.1	21.7
Missiles (1)	2.4	3.2
Space (1)	3.7	4.9

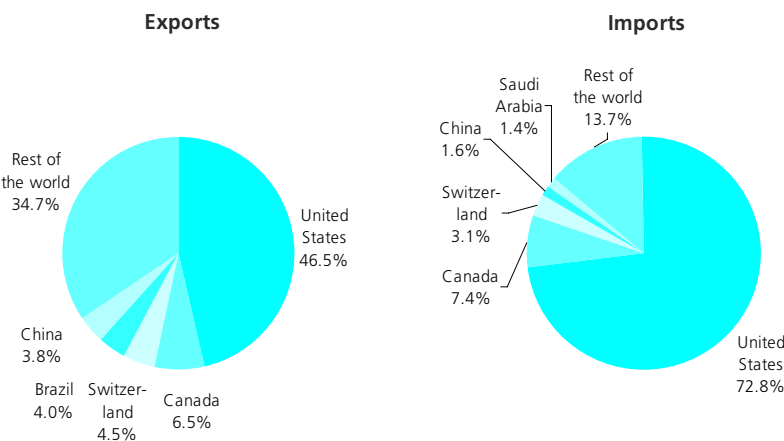
(1) Based on consolidated turnover in 2002 constant prices.
 Source: AECMA, available at <http://www.aecma.org>.

Figure 12.11
Manufacture of aircraft and spacecraft (NACE Group 35.3)
Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Figure 12.12
Aircraft and spacecraft (CPA Group 35.3)
Share in extra-EU trade, 2002



Source: Eurostat, Comext.

LABOUR AND PRODUCTIVITY

Apparent labour productivity in the EU-15's aerospace sector was EUR 85 000 per person employed in 2001, well above the transport equipment average of EUR 61 000. Average personnel costs for the EU-25 were EUR 50 300 per employee, also above the transport equipment average of EUR 40 300. When combining these two ratios, the resultant wage adjusted labour productivity ratio showed that added value exceeded personnel costs by 59.5 % in the EU-15's aerospace sector, compared with a transport equipment average of 36.7 %. The highest wage adjusted productivity ratios were registered in the Czech Republic (208.4 %), Lithuania (195.3 %) and the United Kingdom (190.1 %) ⁽¹⁷⁾.

EXTERNAL TRADE

The EU-25 had an almost balanced trade situation for aircraft and spacecraft (CPA Group 35.3) in 2002, as exports of EUR 46.7 billion were cancelled out by imports valued at EUR 47.6 billion. The largest surpluses among the Member States (intra- and extra-EU trade) were registered in France (EUR 7.7 billion) and Germany (EUR 4.9 billion), while the United Kingdom recorded a deficit of EUR 595 million in 2002, which was only exceeded in Denmark (EUR 1.1 billion) and Ireland (EUR 1.6 billion).

Given that the other main global players in the aerospace equipment industry are American, it is no surprise that the highest shares of the EU-25's imports and exports were with the United States. Just under half (46.5 %) of the EU's exports in 2002 were destined for the United States, with Canada, Switzerland, Brazil and China all accounting for between 6.5 and 3.8 %. The origin of the EU's imports was even more concentrated, as the United States accounted for almost three quarters (72.8 %) of the total, followed by Canada (7.4 %) and Switzerland (3.1 %).

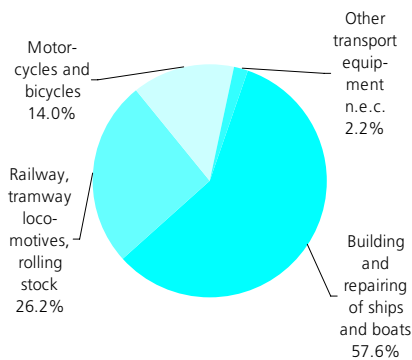
⁽¹⁷⁾ Estonia, Greece, Ireland, Cyprus, Latvia, Luxembourg, Malta and Slovenia, not available.

12.4: MISCELLANEOUS TRANSPORT EQUIPMENT

This miscellaneous grouping brings together the remaining activities within the transport equipment sector. It includes 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).

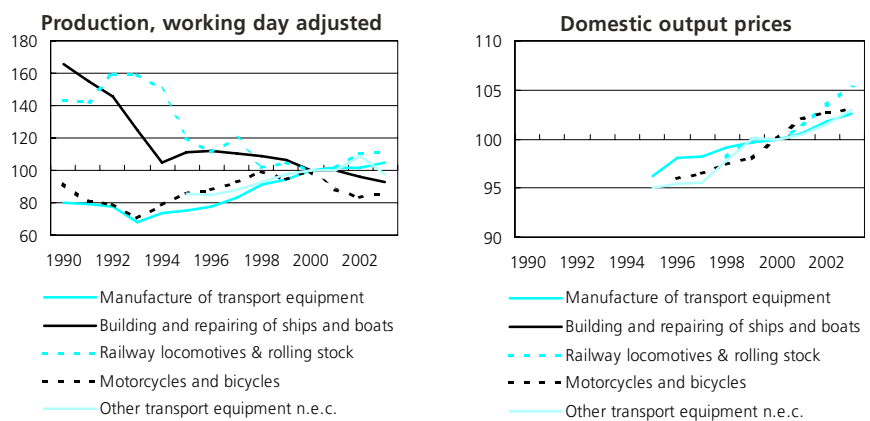
The miscellaneous transport equipment sector generated EUR 16.8 billion of value added in 2001 in the EU-25 and employed 354 100 persons in the EU-15. As such, the combined weight of these activities in the whole of the EU-25's transport equipment sector was 10.0 % in terms of value added and 13.4 % of EU-15 employment.

Figure 12.13
Manufacture of miscellaneous transport equipment (NACE Groups 35.1, 35.2, 35.4 and 35.5)
Share of value added at factor cost, EU-25, 2001



Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 12.14
Manufacture of miscellaneous transport equipment (NACE Groups 35.1, 35.2, 35.4 and 35.5)
Main indicators, EU-25 (2000=100) (1)



(1) Note: different scales for figures.

Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Table 12.8
Manufacture of miscellaneous transport equipment (NACE Groups 35.1, 35.2, 35.4 and 35.5)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Manufacture of miscellaneous transport equipment	42.7	121.6	35.1
Building and repairing of ships and boats	42.7	126.7	33.7
Manufacture of railway, tramway locomotives, rolling stock	44.2	106.9	41.3
Manufacture of motorcycles and bicycles	41.0	133.5	30.7
Manufacture of other transport equipment n.e.c.	41.7	133.3	31.3

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

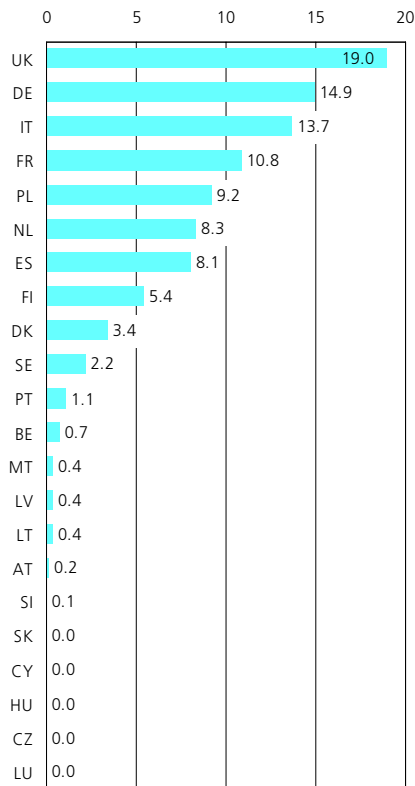
Table 12.9
Miscellaneous transport equipment (CPA Groups 35.1, 35.2, 35.4 and 35.5)
External trade, EU-25, 2002

	Exports		Imports		Trade balance (EUR million)
	Value (EUR million)	Share of total (%)	Value (EUR million)	Share of total (%)	
Miscellaneous transport equipment	16 250	100.0	13 730	100.0	2 520
Ships and boats	12 706	78.2	8 309	60.5	4 397
Railway and tramway locomotives and rolling-stock	1 949	12.0	706	5.1	1 243
Motorcycles and bicycles	1 500	9.2	4 622	33.7	-3 121
Other transport equipment n.e.c.	95	0.6	94	0.7	1

Source: Eurostat, Comext.

Figure 12.15

Building and repairing of ships and boats (NACE Group 35.1)
Share of EU-25 value added, 2001 (%) (1)



(1) Estonia, Greece and Ireland, not available.
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

BUILDING AND REPAIRING OF SHIPS AND BOATS (NACE GROUP 35.1)

European shipbuilding has undergone widespread changes since the early 1970's, as two out of every three shipyards have disappeared. Short-term statistics show that output fell overall by 44.0 % between 1990 and 2003 in the EU-25, equivalent to an average decline of 5.6 % per annum.

Table 12.10 provides information on the breakdown of the world shipbuilding market by geographical region in terms of completions and new orders. One of the most striking features is the rapid decline in the proportion of the total order book that was accounted for by European ⁽¹⁸⁾ shipbuilders in 2001 and 2002. This may in part be explained by a lack of orders in the high-end, cruise-liner market following the terrorist attacks in the United States on 11 September 2001.

⁽¹⁸⁾ EU-15, Norway, Poland and Romania; data for Romania are included from 2000 onwards, data for Croatia are included from 2002 onwards.

Table 12.10

Breakdown of the world shipbuilding market (%) (1)

	1997	1998	1999	2000	2001	2002
Completions						
Europe (2)	23.7	24.8	23.4	24.4	23.6	22.9
South Korea	23.5	20.3	29.4	32.4	30.2	31.1
Japan	37.2	38.0	34.6	30.9	32.1	30.7
Rest of the world	15.6	16.9	12.6	12.3	14.1	15.3
New orders						
Europe (2)	17.1	28.5	21.1	24.8	17.1	10.9
South Korea	27.5	24.4	32.5	35.8	29.9	28.3
Japan	39.1	31.3	26.2	25.5	33.3	37.1
Rest of the world	16.3	15.8	20.2	13.9	19.7	23.7

(1) All data are based on compensated gross tonnage.

(2) EU-15, Norway, Poland and Romania; data for Romania are included from 2000, data for Croatia are included from 2002.

Source: Lloyd's Register of Shipping in AWES Annual Report 2002-2003.

Environmental accidents, such as those involving the Erika and Prestige oil tankers in the winters of 1999 and 2002, have focused concerns on safety at sea and the resulting environmental impact of oil spills, resulting in stricter EU regulations to strengthen certain parts of the steel structure of ships. This has had the effect of bringing forward the replacement of some oil tankers, a market segment dominated by South-East Asian shipyards. Capacity continues to expand, with new shipyard investment being undertaken in China, South Korea and Vietnam. The European Commission believes that certain business practices in Korean shipyards could be unlawful and, in the absence of a negotiated solution, the Commission has started to pursue actions at a WTO and OECD level.

The sector of the building and repairing of ships and boats (NACE Group 35.1), hereafter referred to as shipbuilding, generated EUR 9.7 billion of added value in 2001 in the EU-25. There were 202 600 persons employed in the EU-15 in 2001. As such, the shipbuilding sector accounted for 5.7 % of value added in the EU-25's transport equipment sector and for 7.7 % of EU-15 employment. The 10 new Member States were collectively relatively specialised in the shipbuilding sector, as they contributed 10.6 % of the EU-25's value added in 2001, compared with a 5.6 % share of manufacturing value added. By far the largest contribution came from Poland, which accounted for 9.2 % of the EU-25's value added. This was the fifth highest share behind the United Kingdom (19.0 %), Germany (14.9 %), Italy (13.7 %) and France (10.8 %) ⁽¹⁹⁾.

⁽¹⁹⁾ Estonia, Greece and Ireland, not available.

Apparent labour productivity in the EU-15's shipbuilding sector was, at EUR 42 700 per person employed in 2001, well below the transport equipment average of EUR 61 000. Average personnel costs (EUR 28 500 per employee) in the EU-25 were also below the transport equipment average (EUR 40 300). Wage adjusted productivity for the shipbuilding sector was, as a result, 126.7 % in the EU-15, again below the ratio for the whole of transport equipment (136.7 %). Value added did not cover adjusted personnel costs in 2001 in a number of countries including Sweden (98.3 %), Spain (85.2 %), Malta (54.4 %) and the Czech Republic (48.8 %) ⁽²⁰⁾.

The EU-25 had a trade surplus of EUR 4.4 billion for ships and boats (CPA Group 35.1), with EUR 12.7 billion of exports. There were only four Member States that reported a trade surplus/deficit in excess of +/- EUR 1 billion in 2002. Three of them reported surpluses (Germany, Italy and Finland), while Greece had the largest deficit of EUR -2.5 billion. External trade statistics for ships and boats is complicated by the existence of flags of convenience that result in the Cayman Islands, Bermuda and the Bahamas appearing as the second, third and fourth most important export destinations for EU-25 exports. South Korea was by far the most important origin of EU-25 imports, accounting for a 27.8 % share in 2002, while no other country accounted for a double-digit share.

⁽²⁰⁾ Estonia, Greece, Ireland, Cyprus, Luxembourg and Slovenia, not available.

MANUFACTURE OF RAILWAY AND TRAMWAY LOCOMOTIVES AND ROLLING STOCK (NACE GROUP 35.2)

The EU-25 generated EUR 4.4 billion of value added in 2001 in the manufacture of railway and tramway locomotives and rolling stock (NACE Group 35.2), hereafter referred to as railway equipment. The 10 new Member States together contributed 12.4 % of this total, which was more than double their average contribution to manufacturing value added (5.6 %).

Germany (28.6 %) made the largest contribution to the EU-25's value added, while the United Kingdom (17.7 %) and France (12.7 %) followed ⁽²¹⁾.

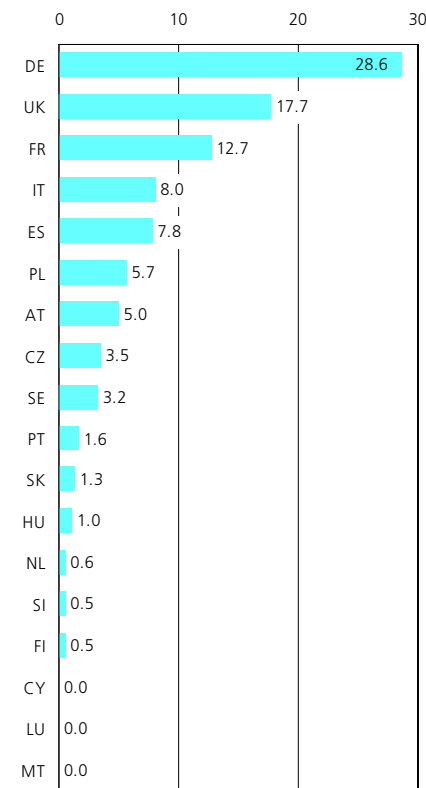
However, relative to manufacturing as a whole, the highest value added specialisation ratio (EU-25 = 100) was recorded in Slovakia (510.4 %), which was the third highest of any manufacturing group in that country. The next highest ratio was recorded in the Czech Republic (359.3 %), which was the highest value added specialisation ratio of any manufacturing NACE group in that country, while Poland and Slovenia also reported specialisation ratios above 190 %. Austria (214.9 %) was the only EU-15 Member State to report a specialisation ratio in excess of 150 % ⁽²²⁾.

From a high in 1992, the production index for railway equipment fell for four consecutive years to 1996 when a pattern of alternating positive and negative rates began, which lasted until 2001. During the period 2001 to 2003 there was a gradual recovery in output with three consecutive positive rates, as the EU-25's output of railway equipment stood in 2003 some 11.3 % above its level of 2000, although still 30.0 % below its level of 1992.

⁽²¹⁾ Belgium, Denmark, Estonia, Greece, Ireland, Latvia and Lithuania, not available.

⁽²²⁾ Belgium, Denmark, Estonia, Greece, Ireland, Latvia and Lithuania, not available.

Figure 12.16
Manufacture of railway, tramway locomotives, rolling stock (NACE Group 35.2)
Share of EU-25 value added, 2001 (%) (1)



(1) Belgium, Denmark, Estonia, Greece, Ireland, Latvia and Lithuania, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Apparent labour productivity in the railway equipment sector was EUR 44 200 per person employed in 2001 in the EU-15. In every country for which data are available ⁽²³⁾, labour productivity in the railway equipment sector was below the national transport equipment average. Average personnel costs in 2001 were EUR 29 300 per employee in the EU-25 and EUR 41 300 in the EU-15. With relatively high average personnel costs and relatively low labour productivity, the railway equipment sector recorded a wage adjusted labour productivity ratio of 106.9 % in the EU-15, compared with a transport equipment average of 136.7 %. France (87.1 %) and Sweden (65.9 %) reported that value added did not cover adjusted personnel costs in 2001. The highest wage adjusted labour productivity ratios were registered in the Czech Republic (166.2 %) and Poland (164.2 %), the only countries ⁽²⁴⁾ to report ratios over 135 %.

The EU-25 reported a trade surplus of EUR 1.2 billion in 2002 for railway and tramway locomotives and rolling stock (CPA Group 35.2), with exports valued at EUR 1.9 billion. Germany (EUR 818 million) and France (EUR 507 million) were the only countries that reported a trade surplus (intra- and extra-EU trade) in excess of EUR 500 million.

⁽²³⁾ Belgium, Denmark, Estonia, Greece, Ireland, Cyprus, Latvia, Lithuania, Luxembourg, Malta and Slovenia, not available.

⁽²⁴⁾ Belgium, Denmark, Estonia, Greece, Ireland, Cyprus, Latvia, Lithuania, Luxembourg, Malta and Slovenia, not available.

MANUFACTURE OF MOTORCYCLES AND BICYCLES (NACE GROUP 35.4)

ACEM estimates that the total number of moped deliveries in the EU ⁽²⁵⁾ reached over 1.25 million units in 2001, while there were 1.51 million motorcycle registrations. Italy was the largest single producer of motorcycles and mopeds in the EU, with 754 600 units in 2002, well ahead of Spain (223 700), while France and Germany were the only other countries where more than 100 000 units were made.

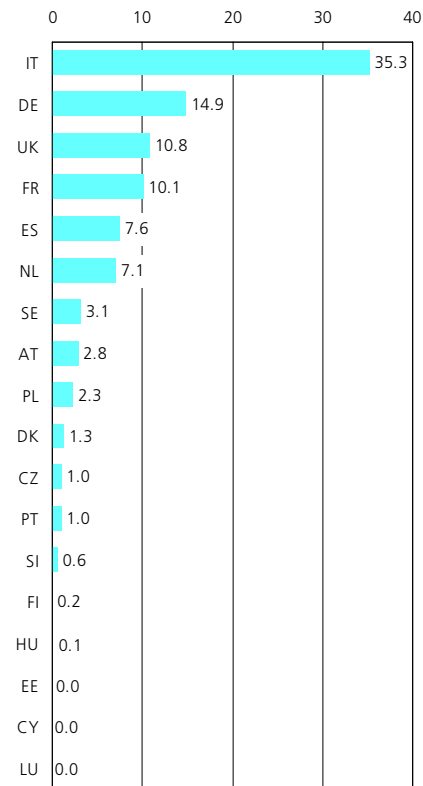
The motorcycles and bicycles sector (NACE Group 35.4) generated EUR 2.4 billion of added value in the EU-25 in 2001, 4.3 % of which came from the 10 new Member States. This sector therefore contributed 1.4 % of the EU-25's value added in the transport equipment sector, a share that rose to 7.3 % in Slovenia and 7.2 % in Italy ⁽²⁶⁾. Italy produced more than one third (35.3 %) of the EU's output in value added terms in 2001.

A breakdown of activity for the EU-15 shows that the manufacture of motorcycles (NACE Class 35.41) accounted for almost half (49.7 %) of the value added in 2001 in the motorcycles and bicycles sector. Some 34.0 % of value added in the EU-15 was created in the bicycle sector (NACE Class 35.42) and the remaining 16.3 % by the manufacture of invalid carriages (NACE Class 35.43).

⁽²⁵⁾ Belgium, the Czech Republic, Denmark, Germany, Greece, Spain, France, Ireland, Italy, the Netherlands, Austria, Portugal, Finland, Sweden and the United Kingdom; excluding Greece for moped deliveries.

⁽²⁶⁾ Belgium, Greece, Ireland, Latvia, Lithuania, Malta and Slovakia, not available.

Figure 12.17
Manufacture of motorcycles and bicycles (NACE Group 35.4)
Share of EU-25 value added, 2001 (%) (1)



(1) Belgium, Greece, Ireland, Latvia, Lithuania, Malta, Slovakia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

The evolution of the production index of motorcycles and bicycles followed closely that of transport equipment during the 1990s. There was a low point in output registered in 1993, following which there was fairly rapid growth though to 2000, which averaged 5.1 % per annum for motorcycles and bicycles, compared with 5.5 % for the whole of transport equipment. This similar development ended after 2000, as the output of transport equipment continued to grow at a modest rate of 1.4 % per annum through to 2003, while the production of motorcycles and bicycles fell (-5.3 % per annum).

In employment terms, the motorcycles and bicycles sector contributed 2.1 % of the EU-15's employment in the transport equipment sector, with 55 300 persons employed in 2001. Their apparent labour productivity was EUR 41 000 per person employed. Average personnel costs in the EU-25 were EUR 27 200 per employee, which was the lowest figure recorded among the NACE groups that make up the transport equipment sector.

The EU-25 had a relatively large trade deficit in motorcycles and bicycles (CPA Group 35.4) in 2002 that was equal to EUR 3.1 billion, with imports valued at EUR 4.6 billion. Some 61.4 % of the EU-25's imports were composed of motorcycles (CPA Class 35.41), while just over one third of the total was accounted for by bicycles (CPA Class 35.42). Japan was by far the most important origin of motorcycle imports, with a 76.8 % share of the EU-25 total in 2002, which was more than eight times higher than the next highest share recorded by the United States (8.9 %). The main origin of EU-25 bicycle imports (CPA Class 35.42) in 2002 was Taiwan (34.4 %), followed by China (24.4 %), with Japan (12.2 %) the only other country with a double-digit share.

Table 12.11

Manufacture of motor vehicles; bodies (coachwork) for motor vehicles; trailers and semi-trailers (NACE Groups 34.1 and 34.2)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	15 920	:	673 176 079	:	:	32 252 101 567	118 27 715	8	:	:	:	:	:	:
Value added at factor cost (EUR million)	2 663	:	173 40 029	:	:	4 520 12 709	2 884	3	:	:	:	:	:	:
Purchases of goods and services (EUR million)	14 228	:	0 166 731	:	:	33 829 92 510	90 30 779	5	:	:	:	:	:	:
Gross investment in tangible goods (EUR million)	408	:	28 8 870	:	:	2 135 4 092	4 1 126	0	:	:	:	:	:	:
Number of persons employed (thousands)	43	:	3 569	:	:	94 186	1 87	0	:	:	:	:	:	:
App. labour productivity (EUR thous./pers. emp.)	61.3	:	50.2 70.3	:	:	47.9 68.3	33.3	23.0	:	:	:	:	:	:
Average personnel costs (EUR thous./employee) (1)	46.4	:	37.8 56.5	:	:	33.7 42.2	33.6	13.8	:	:	:	:	:	:
Wage adjusted labour productivity (%) (1)	131.9	:	132.9 124.4	:	:	142.0 161.8	99.1	135.2	:	:	:	:	:	:
Gross operating rate (%)	3.8	:	6.5 3.9	:	:	3.6 4.6	0.0	14.5	:	:	:	:	:	:
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	4 358	:	6 373 5 891	5 027	3 313	1 142	:	856 17 086	38 362	10	:	:	:	:
Value added at factor cost (EUR million)	696	:	1 527 1 356	1 102	587	77	:	316 3 955	8 151	3	:	:	:	:
Purchases of goods and services (EUR million)	4 123	:	5 398 4 682	4 742	3 250	1 038	:	622 14 703	39 578	7	:	:	:	:
Gross investment in tangible goods (EUR million)	343	:	129 271	331	161	38	:	30 1 010	2 931	1	:	:	:	:
Number of persons employed (thousands)	12	:	22 19	29	12	:	:	7 54	122	2	:	:	:	:
App. labour productivity (EUR thous./pers. emp.)	57.7	:	71.0 70.9	38.2	47.8	:	:	46.9 73.3	66.8	1.9	:	:	:	:
Average personnel costs (EUR thous./employee)	12.4	:	37.9 44.3	9.9	19.8	14.6	:	34.4 43.3	44.8	1.8	:	:	:	:
Wage adjusted labour productivity (%)	463.9	:	187.1 159.9	386.4	241.7	:	:	136.5 169.5	149.1	105.3	:	:	:	:
Gross operating rate (%)	11.4	:	10.3 8.6	13.3	9.0	1.6	:	9.5 9.4	5.6	2.0	:	:	:	:

(1) Cyprus, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 12.12

Manufacture of parts, accessories for motor vehicles (NACE Group 34.3)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	2 242	3 582	463 50 734	:	:	10 560 21 028	350 14 559	9	:	:	:	:	:	:
Value added at factor cost (EUR million) (1)	609	815	178 17 300	:	:	3 058 4 757	114 4 174	4	:	:	:	:	:	:
Purchases of goods and services (EUR million)	1 689	2 915	0 42 506	:	:	7 796 17 152	236 10 877	6	:	:	:	:	:	:
Gross investment in tangible goods (EUR million)	180	420	34 2 748	:	:	739 1 021	27 746	1	:	:	:	:	:	:
Number of persons employed (thousands)	11	50	4 294	:	:	68 100	3 88	0	:	:	:	:	:	:
App. labour productivity (EUR thous./pers. emp.) (1)	57.7	16.2	50.5 58.8	:	:	45.3 47.6	47.1 47.5	20.0	:	:	:	:	:	:
Average personnel costs (EUR thous./employee) (2)	40.1	7.8	39.0 48.2	:	:	29.8 37.3	26.1 31.3	13.1	:	:	:	:	:	:
Wage adjusted labour productivity (%) (2)	143.7	208.1	129.5 122.1	:	:	152.0 127.7	180.1 151.7	143.7	:	:	:	:	:	:
Gross operating rate (%) (1)	8.3	11.6	8.7 5.3	:	:	9.9 4.7	14.7 10.1	12.1	:	:	:	:	:	:
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	1 555	2	963 2 754	2 508	1 130	236	198	92 3 529	14 197	17	417	:	:	:
Value added at factor cost (EUR million)	471	1	268 766	942	299	57	56	35 1 004	4 936	7	158	:	:	:
Purchases of goods and services (EUR million)	1 137	2	767 2 029	1 657	872	206	147	62 2 552	9 684	14	317	:	:	:
Gross investment in tangible goods (EUR million)	130	0	36 129	213	119	13	25	5 153	914	1	44	:	:	:
Number of persons employed (thousands)	24	0	6 11	49	11	:	6	1 24	98	2	41	:	:	:
App. labour productivity (EUR thous./pers. emp.)	19.5	14.4	46.1 68.2	19.3	27.1	:	9.8	45.9 42.5	50.4	3.4	3.8	:	:	:
Average personnel costs (EUR thous./employee)	8.4	9.4	37.5 40.0	7.9	16.0	14.0	5.5	34.2 35.0	36.2	2.0	2.6	:	:	:
Wage adjusted labour productivity (%)	231.6	152.4	123.2 170.7	245.3	169.9	:	178.7	134.4 121.3	139.2	173.1	147.8	:	:	:
Gross operating rate (%)	16.8	11.4	5.5 11.2	22.8	10.8	5.3	12.2	10.1	5.2	9.7	15.2	12.3	:	:

(1) Ireland, 2000.

(2) Ireland and Cyprus, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 12.13

Building and repairing of ships and boats (NACE Group 35.1)

Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	155	12	1 094	5 683	:	:	2 898	4 383	35	4 549	7	73	81	0
Value added at factor cost (EUR million) (1)	68	2	329	1 442	:	:	782	1 049	11	1 323	4	36	35	0
Purchases of goods and services (EUR million) (2)	100	6	0	4 450	:	:	2 282	3 617	20	3 335	6	45	47	0
Gross investment in tangible goods (EUR million)	5	1	44	111	:	:	116	171	2	189	1	5	6	:
Number of persons employed (thousands)	2	0	7	27	:	:	31	21	0	30	0	3	5	0
App. labour productivity (EUR thous./pers. emp.) (1)	41.5	3.2	46.0	52.5	:	:	25.1	48.9	32.3	43.4	27.8	12.9	7.2	:
Average personnel costs (EUR thous./employee) (3)	35.8	6.5	38.0	43.3	:	:	29.5	32.9	25.2	30.0	16.5	4.9	5.7	:
Wage adjusted labour productivity (%) (4)	115.8	48.8	120.9	121.4	:	:	85.2	148.4	127.7	144.8	138.7	264.8	125.8	:
Gross operating rate (%) (1)	8.7	:	6.1	5.2	:	:	-3.5	7.9	9.6	13.0	18.6	34.4	9.2	:
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	8	58	3 271	33	1 762	289	35	13	2 178	691	4 500	93	386	:
Value added at factor cost (EUR million) (1)	3	38	808	16	891	103	7	5	525	209	1 836	23	161	:
Purchases of goods and services (EUR million)	7	26	2 600	21	1 199	195	29	10	1 687	543	2 659	102	300	:
Gross investment in tangible goods (EUR million)	1	1	61	3	63	21	3	2	35	29	141	5	27	:
Number of persons employed (thousands)	0	4	17	0	40	5	:	1	11	6	37	6	27	:
App. labour productivity (EUR thous./pers. emp.) (1)	7.4	10.3	46.9	38.7	22.0	20.2	:	5.5	46.6	35.6	49.7	4.4	6.0	:
Average personnel costs (EUR thous./employee)	4.9	18.8	39.5	32.3	11.2	18.2	11.5	5.1	36.0	36.2	32.8	2.6	3.7	:
Wage adjusted labour productivity (%) (4)	149.9	54.5	118.9	119.6	196.5	110.9	:	108.0	129.3	98.3	151.6	149.9	161.0	:
Gross operating rate (%) (1)	10.8	-48.7	6.0	12.5	25.4	4.4	6.5	5.0	5.6	3.2	15.7	10.0	19.4	:

(1) Ireland and Bulgaria, 2000.

(2) The Czech Republic, 1999.

(3) Ireland and Cyprus, 2000.

(4) Ireland, Cyprus and Bulgaria, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 12.14

Manufacture of railway, tramway locomotives, rolling stock (NACE Group 35.2)

Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE (1)	IT	CY	LV (1)	LT	LU
Production (EUR million)	:	435	:	4 591	:	:	1 088	2 291	0	1 436	0	21	:	0
Value added at factor cost (EUR million)	:	154	:	1 258	:	:	344	559	0	354	0	8	:	0
Purchases of goods and services (EUR million)	:	287	:	3 463	:	:	770	1 703	0	1 049	0	10	:	0
Gross investment in tangible goods (EUR million)	:	17	:	132	:	:	51	47	0	31	0	0	:	:
Number of persons employed (thousands)	:	12	:	23	:	:	8	14	0	10	0	2	:	0
App. labour productivity (EUR thous./pers. emp.)	:	12.4	:	54.8	:	:	42.1	38.9	:	36.5	:	3.3	:	:
Average personnel costs (EUR thous./employee)	:	7.5	:	49.3	:	:	36.6	44.7	:	34.8	:	3.1	:	:
Wage adjusted labour productivity (%)	:	166.2	:	111.2	:	:	115.1	87.1	:	104.9	:	106.1	:	:
Gross operating rate (%)	:	15.1	:	2.7	:	:	4.3	-3.9	:	1.4	:	2.8	:	:
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	146	0	76	851	615	199	42	254	68	1 000	2 080	27	279	:
Value added at factor cost (EUR million)	46	0	26	221	251	70	23	58	22	143	782	11	103	:
Purchases of goods and services (EUR million)	112	0	51	671	564	136	18	198	47	860	1 562	20	215	:
Gross investment in tangible goods (EUR million)	5	0	2	25	19	3	2	7	3	22	104	3	18	:
Number of persons employed (thousands)	5	0	4	4	19	3	:	8	1	5	14	4	29	:
App. labour productivity (EUR thous./pers. emp.)	9.6	:	6.3	55.5	13.5	25.3	:	7.4	31.5	29.1	55.4	3.0	3.6	:
Average personnel costs (EUR thous./employee)	8.8	:	5.3	53.5	8.2	24.4	14.8	5.5	29.6	44.1	40.9	2.3	2.7	:
Wage adjusted labour productivity (%)	109.2	:	119.3	103.9	164.2	103.9	:	135.4	106.6	65.9	135.5	129.7	135.5	:
Gross operating rate (%)	2.5	:	5.2	1.0	13.4	1.2	0.4	5.9	2.1	-7.3	9.3	9.6	11.3	:

(1) 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 12.15

Manufacture of aircraft and spacecraft (NACE Group 35.3)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV (1)	LT	LU
Production (EUR million)	1 411	268	106	18 077	0	:	1 833	42 174	:	5 855	0	0	6	:
Value added at factor cost (EUR million)	603	125	49	6 500	0	:	567	6 827	:	2 005	0	0	3	:
Purchases of goods and services (EUR million)	841	:	0	11 657	0	:	1 390	36 304	:	3 598	0	0	10	:
Gross investment in tangible goods (EUR million)	98	21	9	951	0	:	166	846	:	219	0	0	0	:
Number of persons employed (thousands)	8	8	1	75	0	:	11	84	:	32	0	0	0	:
App. labour productivity (EUR thous./pers. emp.)	79.1	15.5	79.5	87.1	:	:	53.5	81.6	:	62.4	:	3.1	9.2	:
Average personnel costs (EUR thous./employee)	49.1	7.4	48.7	60.4	:	:	39.7	55.5	:	42.9	:	0.2	4.7	:
Wage adjusted labour productivity (%)	161.1	208.4	163.2	144.1	:	:	134.8	147.1	:	145.5	:	1 274.1	195.3	:
Gross operating rate (%) (2)	16.9	6.7	18.8	11.7	:	:	8.1	5.2	:	10.7	:	64.4	11.5	:
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million) (3)	37	:	691	35	276	88	3	8	57	1 547	27 269	1	96	:
Value added at factor cost (EUR million)	19	:	275	17	205	40	1	3	39	648	11 627	0	56	:
Purchases of goods and services (EUR million) (3)	33	:	474	24	144	52	2	4	18	903	16 881	0	51	:
Gross investment in tangible goods (EUR million) (4)	2	:	15	1	41	9	0	1	1	46	738	0	4	:
Number of persons employed (thousands) (3)	1	:	5	0	15	2	:	1	1	10	113	0	9	:
App. labour productivity (EUR thous./pers. emp.) (3)	14.8	:	57.1	45.6	13.8	18.2	:	5.3	50.6	66.4	103.0	1.4	6.1	:
Average personnel costs (EUR thous./employee) (3)	13.4	:	44.9	41.2	8.6	22.0	11.4	5.3	40.2	47.2	54.2	1.5	3.6	:
Wage adjusted labour productivity (%) (3)	110.3	:	127.2	110.6	161.4	82.6	:	99.8	125.9	140.8	190.1	96.4	168.8	:
Gross operating rate (%) (4)	3.8	:	9.8	8.4	24.5	-9.6	3.6	0.1	14.6	12.6	19.7	16.7	26.7	:

(1) 1999.

(2) Bulgaria, 2000; the Czech Republic, 1999.

(3) Bulgaria, 2000.

(4) The United Kingdom, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 12.16

Manufacture of motorcycles and bicycles (NACE Group 35.4)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	:	84	78	1 180	0	:	825	994	:	3 894	0	:	:	0
Value added at factor cost (EUR million)	:	24	30	351	0	:	179	238	:	833	0	:	:	0
Purchases of goods and services (EUR million)	:	68	0	900	0	:	924	854	:	3 334	0	:	:	0
Gross investment in tangible goods (EUR million)	:	5	5	35	0	:	70	31	:	153	0	:	:	:
Number of persons employed (thousands)	:	3	1	8	0	:	4	7	:	23	0	:	:	0
App. labour productivity (EUR thous./pers. emp.)	:	7.7	45.5	42.4	:	:	43.3	33.2	:	36.8	:	:	:	:
Average personnel costs (EUR thous./employee)	:	5.7	33.8	34.8	:	:	27.7	32.4	:	29.6	:	:	:	:
Wage adjusted labour productivity (%)	:	134.7	134.5	121.9	:	:	156.1	102.5	:	124.5	:	:	:	:
Gross operating rate (%)	:	8.0	10.0	5.2	:	:	6.1	0.7	:	5.2	:	:	:	:
	HU	MT	NL	AT	PL	PT	SI	SK (1)	FI	SE	UK	BG (2)	RO	TR
Production (EUR million)	13	:	613	247	120	69	48	3	16	276	688	2	:	:
Value added at factor cost (EUR million)	2	:	169	67	53	24	13	0	5	74	254	0	:	:
Purchases of goods and services (EUR million)	15	:	457	184	84	48	36	3	11	214	488	2	:	:
Gross investment in tangible goods (EUR million) (3)	4	:	11	8	2	5	1	0	0	7	36	0	:	:
Number of persons employed (thousands)	1	:	3	1	3	2	:	:	0	1	4	0	:	:
App. labour productivity (EUR thous./pers. emp.)	2.3	:	55.9	65.2	18.8	15.8	:	:	35.9	50.3	61.4	1.5	:	:
Average personnel costs (EUR thous./employee)	4.5	:	28.8	28.8	5.4	10.8	12.5	3.6	28.5	36.2	35.9	1.0	:	:
Wage adjusted labour productivity (%)	50.9	:	194.3	226.0	349.0	146.2	:	:	125.8	139.2	170.8	148.5	:	:
Gross operating rate (%)	-8.7	:	13.0	15.1	28.5	11.2	3.9	-19.4	7.2	8.0	14.8	5.6	:	:

(1) 1999.

(2) 2000.

(3) The United Kingdom, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Furniture, other manufacturing industries and recycling



13.1: FURNITURE

Furniture manufacturing (NACE Group 36.1) is made up of the following activities: the manufacture of chairs and seats (NACE Class 36.11), other office and shop furniture (NACE Class 36.12), other kitchen furniture (NACE Class 36.13), other furniture (NACE Class 36.14) and mattresses (NACE Class 36.15).

Traditionally, furniture manufacturing was almost exclusively a wood-processing industry. Over time, as a consequence of changes in taste, cost and techniques, glass, plastics and metals have been used increasingly in furniture making. Furthermore, solid wood has to a greater or lesser extent been substituted by composites, such as chipboard, which may for example be produced from off-cuts or recycled wood.

STRUCTURAL PROFILE

The EU-25's furniture sector generated a value added of EUR 37.0 billion in 2001, equivalent to 2.4 % of manufacturing value added. In the same year there were 1.3 million persons employed in the furniture sector in the EU-25 ⁽¹⁾, of which 1.0 million were employed in the EU-15. Within the EU-15, the number of persons employed in the furniture sector corresponded to 3.6 % of total manufacturing employment.

⁽¹⁾ Slovenia, employees.

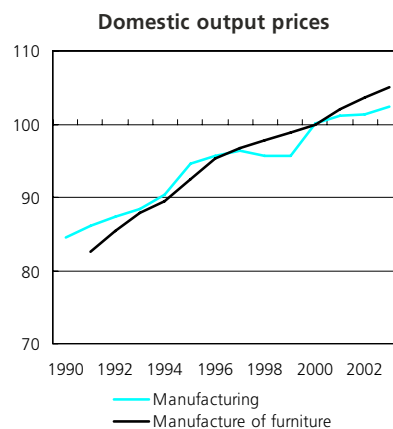
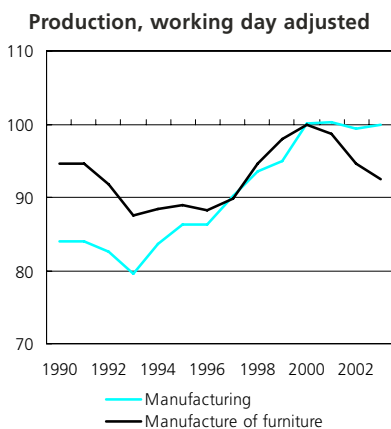
This chapter covers a number of unrelated manufacturing activities that are classified within NACE Divisions 36 and 37. The largest of these is the furniture sector (NACE Group 36.1), which is the subject of a specific subchapter. The remaining activities include the manufacture of jewellery and related articles (NACE Group 36.2), musical instruments (NACE Group 36.3), sports goods (NACE Group 36.4) and games and toys (NACE Group 36.5), as well as recycling and waste treatment (NACE Division 37). 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.;
- 37: recycling;
- 37.1: recycling of metal waste and scrap;
- 37.1: recycling of non-metal waste and scrap.

Figure 13.1

Manufacture of furniture (NACE Group 36.1) Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

In 2001, Germany (22.2 %) had the highest value added share of the EU-25's furniture sector, followed by Italy (17.2 %) and the United Kingdom (15.9 %). The importance of the furniture sector in manufacturing value added ⁽²⁾ was highest in Estonia with a 7.5 % proportion. Malta and Cyprus were also relatively highly specialised within this sector as furniture accounted for over 5 % of manufacturing value added in both of these countries. In contrast, Luxembourg, Ireland (2000) and Hungary accounted for the lowest specialisation rates, registering less than 1 % of their manufacturing value added in the furniture sector.

The development of the EU-25's furniture manufacturing production index was very similar to the index for manufacturing as a whole when considering working day adjusted series during the period from 1996 to 2000. There was an annual increase of 3.2 % in furniture manufacturing compared with 3.7 % in manufacturing. After 2000, production

declined quite strongly in furniture manufacturing, with an average reduction of 2.6 % per annum through to 2003, while the index for manufacturing was more stable. Domestic output prices for furniture manufacturing showed growth throughout the period 1993 to 2003, increasing on average by 1.8 % per annum, slightly faster than the manufacturing average of 1.5 %; price increases were also more regular in furniture manufacturing than in manufacturing as a whole.

LABOUR AND PRODUCTIVITY

In 2001, apparent labour productivity was EUR 33 500 per person employed in the EU-15's furniture sector. This was 34.6 % less than the productivity recorded in the manufacturing sector. Apparent labour productivity in the furniture sector was lower than the manufacturing average in every Member State ⁽³⁾.

⁽³⁾ Greece and Slovenia, not available; Ireland, 2000.

In the EU-15, average personnel costs were EUR 26 800 per employee in the furniture sector, EUR 8 900 less than in total manufacturing. As with apparent labour productivity, average personnel costs in the furniture sector were consistently below manufacturing averages in every Member State ⁽⁴⁾.

Despite lower than average personnel costs, the wage adjusted labour productivity ratio in the EU-15's furniture sector in 2001 was 125.0 %, 18.5 percentage points less than the manufacturing average. Again, the furniture sector recorded ratios that were lower than those registered across the whole of manufacturing in every Member State ⁽⁵⁾.

⁽⁴⁾ Greece, not available; Ireland and Cyprus, 2000.

⁽⁵⁾ Greece and Slovenia, not available; Ireland and Cyprus, 2000.

⁽²⁾ Greece, not available.

Table 13.1
Selected furniture (CPA Group 36.1), EU-15

	Prodcom code	Latest year for production	Production value (EUR million)
Seats for aircraft and motor vehicles	36.11.11.10 and 36.11.11.30	2000	8 225.7
Swivel seats with variable height adjustment, with backrest and fitted with castors or glides excluding medical, surgical, dental or veterinary seats - barbers' or similar chairs	36.11.11.55 and 36.11.11.59	2001	1 739.6
Upholstered seats with metal frames (excluding swivel seats, medical, surgical, dental or veterinary seats, barbers' or similar chairs, for motor vehicles, for aircraft)	36.11.11.70	2000	2 235.1
Seats convertible into beds (excluding garden seats or camping equipment)	36.11.12.10	2001	1 507.3
Upholstered seats with wooden frames (including three piece suites) (excluding swivel seats)	36.11.12.50	2001	9 160.4
Wooden furniture for shops (including shop, office, bar and hotel fittings, modular shop fitting systems, counters, coat stands) (excluding seats, shop fronts of wood)	36.12.13.00	2001	2 662.4
Wooden units for fitted kitchens; wooden kitchen furniture (excluding units for fitted kitchens)	36.13.10.50 and 36.13.10.90	2001	10 078.7
Metal furniture excluding office, medical, surgical, dental or veterinary furniture; barbers' chairs - cases and cabinets specially designed for hi-fi systems, videos or televisions	36.14.11.00	2001	4 426.6
Wooden bedroom furniture (excluding builders' fittings for cupboards to be built into walls, mattress supports, lamps and lighting fittings, floor standing mirrors, seats)	36.14.12.30	2001	7 588.0
Wooden furniture for the dining-room and living-room (excluding floor standing mirrors, seats)	36.14.12.50	2001	5 803.5
Other wooden furniture excluding bedroom, dining-, living-room, kitchen office, shop, medical, surgical, dental/veterinary furniture, cases & cabinets designed for hi-fi, videos & televisions	36.14.13.00	2001	4 225.7
Furniture of materials other than metal and wood excluding medical, surgical, dental or veterinary furniture - cases and cabinets specially designed for hi-fi systems, videos and televisions	36.14.14.30 and 36.14.14.50	2001 (1)	960.9
Mattress supports (including wooden or metal frames fitted with springs or steel wire mesh, upholstered mattress bases, with wooden slats, divans)	36.15.11.00	2001	1 422.6
Mattresses of cellular rubber (including with a metal frame) (excluding water-mattresses, pneumatic mattresses); with spring interiors (excluding of cellular rubber or plastics); mattresses (excluding with spring interiors, of cellular rubber or plastics)	36.15.12.30, 36.15.12.70 and 36.15.12.90	2001 (2)	2 013.3

(1) 1999 for one heading in the aggregate.

(2) 2000 for one heading in the aggregate.

Source: Eurostat, European production and market statistics (Comext).

Table 13.2

Manufacture of furniture (NACE Group 36.1)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Manufacture of furniture	33.5	125.0	26.8
Manufacture of chairs and seats	33.5	122.3	27.4
Manufacture of other office and shop furniture	41.3	132.9	31.1
Manufacture of other kitchen furniture	38.6	133.2	29.0
Manufacture of other furniture	29.5	121.3	24.3
Manufacture of mattresses	36.8	133.0	27.7

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

EXTERNAL TRADE

In 2002, the EU-25's exports of furniture (CPA Group 36.1) were valued at EUR 9.8 billion, while imports reached EUR 6.9 billion, resulting in a trade surplus of EUR 2.8 billion. The main destination for EU exports of furniture was the United States, which imported furniture from the EU-25 valued at almost EUR 3.0 billion in 2002. This was double the value of EU-25 exports to Switzerland, the next most important destination. China was the largest supplier of furniture to the EU-25, as EUR 1.4 billion of furniture were imported, approximately double the level of imports from Indonesia (EUR 773.2 million), while the third most important origin of imports was Romania (EUR 560.6 million).

A more detailed analysis of the export and import performance of the Member States shows that Italy dominated exports (intra- and extra-EU combined), accounting for 26.4 % of the exports by EU-25 Member States. Germany (15.8 %) and Poland (8.4 %) followed in the ranking. Collectively the ten new Member States accounted for 18.7 % of all furniture exports made by EU-25 Member States. This was about three times higher than their corresponding share for all manufactured goods (6.1 %), and was the fourth highest proportion of the 10 new Member States to any CPA group within manufactured goods.

Italy, Poland and Denmark recorded the highest external trade surpluses (intra- and extra-EU combined) for furniture, while the United Kingdom, France, Germany and the Netherlands accounted for the highest deficits.

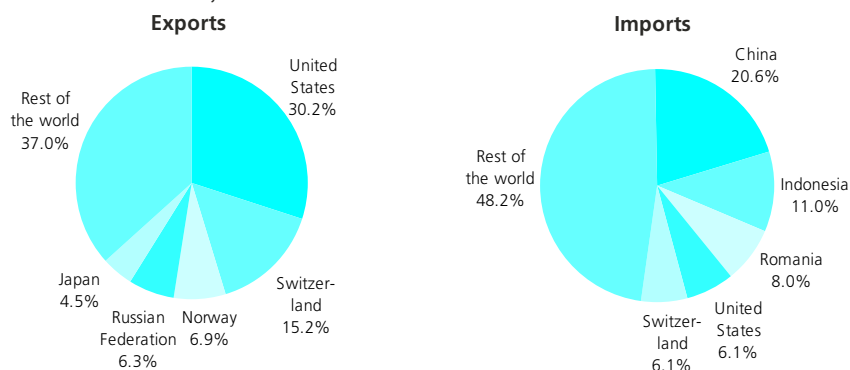
Table 13.3

Furniture (CPA Group 36.1)
External trade, EU-25, 2002

	Exports		Imports		Trade balance (EUR million)
	Value (EUR million)	Share of total (%)	Value (EUR million)	Share of total (%)	
Furniture	9 768	100.0	6 922	100.0	2 846
Chairs and seats	3 279	33.6	2 992	43.2	286
Other office and shop furniture	753	7.7	199	2.9	555
Kitchen furniture	596	6.1	32	0.5	563
Other furniture	4 968	50.9	3 581	51.7	1 387
Mattresses	172	1.8	117	1.7	55

Source: Eurostat, Comext.

Figure 13.2

Furniture (CPA Group 36.1)
Share in extra-EU trade, 2002


Source: Eurostat, Comext.

13.2: MUSICAL INSTRUMENTS, SPORTS GOODS, TOYS AND GAMES, JEWELLERY

This subchapter covers the manufacture of: coins, medals and jewellery; musical instruments including string, wind and percussion instruments, as well as electronic instruments and juke boxes; sports goods for indoor and outdoor sports as well as other physical pursuits (note that sportswear and vehicles are excluded); games and toys including electronic games and scale-sized models (but excluding bicycles); miscellaneous goods, including imitation jewellery, brooms, and brushes, umbrellas and lighters. Collectively these activities cover NACE Groups 36.2 to 36.6 and are hereafter referred to as other manufacturing.

STRUCTURAL PROFILE

The other manufacturing sector in the EU-25 generated a value added of EUR 15.7 billion in 2001, equivalent to 1.0 % of total manufacturing value added. There were 489 400 persons employed in the other manufacturing sector in the EU-25 ⁽⁶⁾. Miscellaneous manufacturing (NACE Group 36.6) was the largest subsector in value added terms, contributing 43.4 % of sectoral value added, followed by jewellery manufacturing (NACE Group 36.2) with a 26.6 % share.

⁽⁶⁾ Estonia, Malta and Slovakia, not available; Latvia, 1999; Slovenia, employees.

In jewellery manufacturing, Cyprus recorded the highest specialisation among the Member States ⁽⁷⁾, with this activity generating 1.4 % of manufacturing value added, while Italy, Malta and Portugal were also relatively specialised. The Czech Republic, Austria and Germany were relatively specialised in the manufacture of musical instruments ⁽⁸⁾, while Austria was by far the most specialised country ⁽⁹⁾ in the manufacture of sports goods, generating 0.7 % of its manufacturing value added in this activity (compared with an EU-25 average of 0.1 %). Indeed, sports goods manufacturing was the manufacturing NACE group in which Austria was most specialised compared with the EU-25 in 2001. Finland, France and Estonia (2000) were also relatively specialised in the manufacture of sports goods. In the manufacture of games and toys, Malta was by far the most specialised country ⁽¹⁰⁾, generating 3.0 % of manufacturing value added in 2001. As such, the manufacture of games and toys was the manufacturing NACE group in which Malta was most specialised relative to the EU-25.

⁽⁷⁾ Estonia, Greece and Ireland, not available.

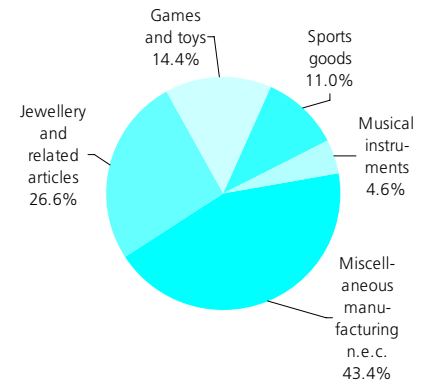
⁽⁸⁾ Slovakia, 1999; Denmark, Ireland and Latvia, 2000; Estonia and Greece, not available.

⁽⁹⁾ Latvia, 1999; Estonia, Ireland and Slovakia, 2000; Greece, Luxembourg and Malta, not available.

⁽¹⁰⁾ Denmark, Estonia, Greece, Ireland and Cyprus, not available.

Figure 13.3

Musical instruments, sport goods, toys and games, jewellery (NACE Groups 36.2 to 36.6)
Share of value added at factor cost, EU-25, 2001



Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

LABOUR AND PRODUCTIVITY

In 2001, the apparent labour productivity of other manufacturing was EUR 37 500 per person employed in the EU-15, some EUR 13 700 less than the manufacturing average. Average personnel costs were EUR 26 600 per employee in the EU-15. The low average personnel costs compensated for the low apparent labour productivity, such that the resulting wage adjusted labour productivity ratio was 140.9 % in this sector, not far below the ratio for manufacturing as a whole (143.5 %).

Table 13.4

Musical instruments, sport goods, toys and games, jewellery (NACE Groups 36.2 to 36.6)
Labour productivity and personnel costs, EU-15, 2001

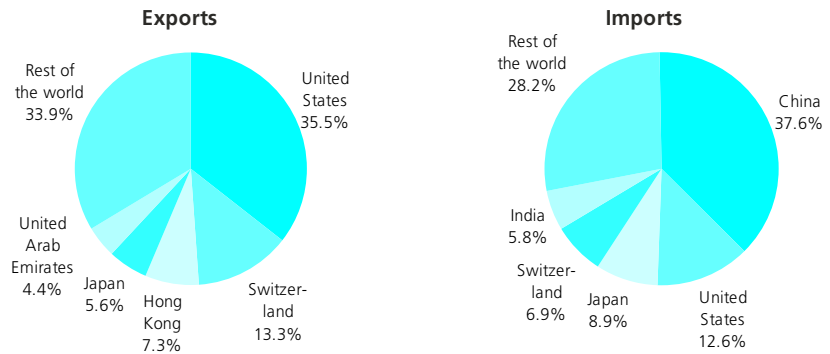
	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Manufacture of musical instruments, sport goods, toys and games, jewellery	37.5	140.9	26.6
Manufacture of jewellery and related articles	34.6	142.1	24.4
Manufacture of musical instruments	35.1	119.6	29.4
Manufacture of sports goods	46.2	148.9	31.0
Manufacture of games and toys	41.0	143.7	28.5
Miscellaneous manufacturing n.e.c.	36.9	141.6	26.0

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

EXTERNAL TRADE

In 2002, EUR 19.6 billion worth of other manufactured goods (CPA Groups 36.2 to 36.6) were exported from the EU-25, while imports of these goods were valued at EUR 26.5 billion. More than one third (35.5 %) of the EU-25's exports were destined for the United States, while the main origin of EU-25 imports was China (37.6 %). Most Member States registered an external trade deficit for these goods; however, Italy registered a trade surplus of EUR 4.6 billion. The United Kingdom (EUR -4.6 billion), France (EUR -1.5 billion) and Spain (EUR -813.4 million) recorded the highest external trade deficits.

Figure 13.4 Musical instruments, sport goods, toys and games, jewellery (CPA Groups 36.2 to 36.6) Share in extra-EU trade, 2002



Source: Eurostat, Comext.

13.3: RECYCLING AND WASTE TREATMENT

This subchapter covers the recycling of waste and scrap (NACE Division 37) and solid waste treatment (part of NACE Division 90). NACE characterises recycling as 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. It 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. Note that the re-use of products is not covered by this NACE heading and is treated in the appropriate chapters elsewhere in the publication.

Solid waste treatment covers the treatment of solid waste, which is neither recycled nor re-used. As well as the collection and transportation of solid waste, this activity also involves disposal by means of dumping (for example, land-fill), incineration (with or without energy recovery) or other means of destruction. Treatment of liquid waste is covered in Chapter 14.

At the beginning of 2004, an amendment ⁽¹²⁾ to the packaging directive ⁽¹³⁾ was adopted. This modified recovery rates for packaging, setting an overall target and specific targets for different kinds of materials to be achieved by the end of 2008 for the EU-15 Member States, except for Greece, Ireland and Portugal who would have an extra three years before implementation. The minimum recycling targets (by weight) were set at 60 % for glass, paper and board, 50 % for metals, 22.5 % for plastics (counting exclusively material that is recycled back into plastics) and 15 % for wood.

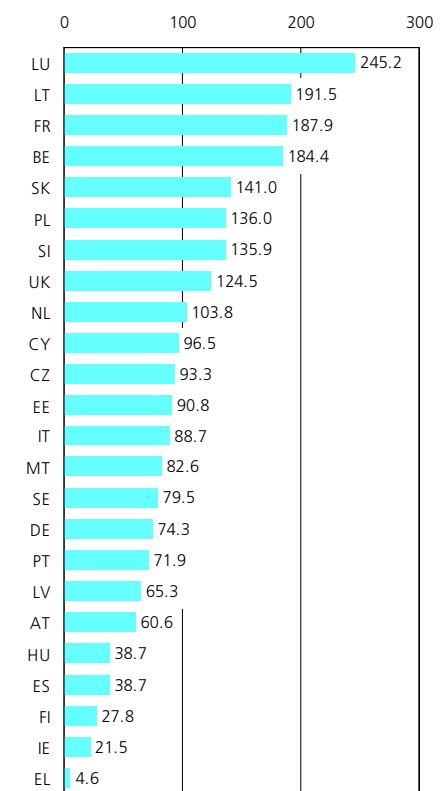
Another development in terms of environmental protection has been the proposal for a new directive for the collection and recycling of batteries and accumulators ⁽¹⁴⁾ adopted by the Commission in November 2003. The use of metals in batteries leads to environmental risks if they are burned in incinerators or stored in landfill sites. As such, the proposal aims to recover the metals used in batteries, creating a closed loop. It includes rules to enable collection and recycling systems, as well as using collection targets as a measure of efficiency, notably with respect to the recovery of lead.

⁽¹²⁾ Directive 2004/12/EC of the European Parliament and of the Council.

⁽¹³⁾ Directive 94/62/EC of the European Parliament and of the Council of 20 December 1994 concerning packaging and packaging waste.

⁽¹⁴⁾ COM(2003) 723 final.

Figure 13.5 Recycling (NACE Division 37) Value added specialisation ratio relative to total manufacturing, 2001 (EU-25=100) (1)



(1) Denmark, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

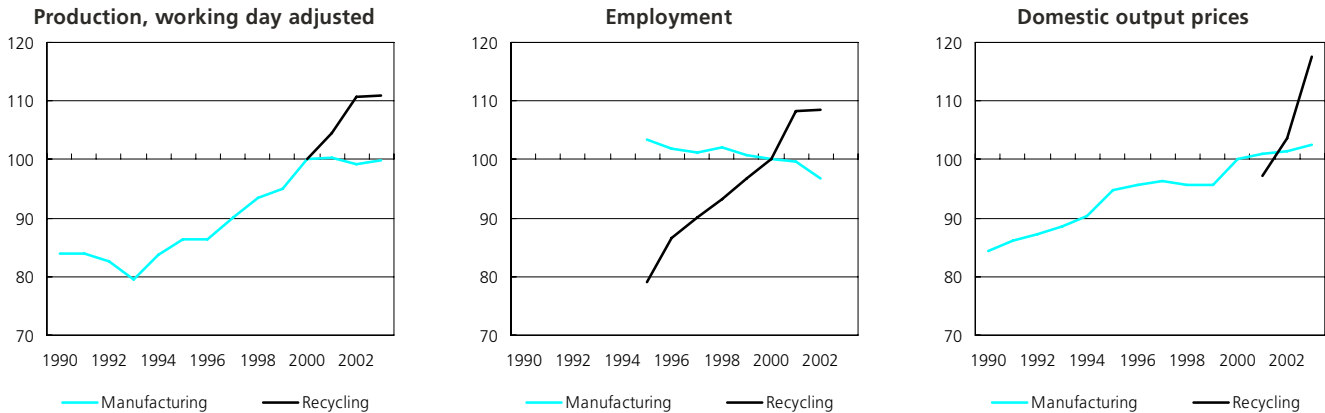
Based on the sixth environment action programme, the European Commission adopted a communication, *Towards a thematic strategy on waste prevention and recycling* ⁽¹¹⁾, in May 2003. Its aim is to find ways to avoid waste, to minimise the input of resources and recycle waste.

⁽¹¹⁾ COM(2003) 301.

Figure 13.6

Recycling (NACE Division 37)

Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

STRUCTURAL PROFILE

In 2001, the EU-25's recycling sector (NACE Division 37) generated a value added of EUR 4.5 billion and employed 106 100 persons⁽¹⁵⁾. This was equivalent to 0.3 % of the EU-25's manufacturing value added and of the EU-15's employment.

The recycling of non-metal waste and scrap (NACE Group 37.2) was slightly larger than the recycling of metal waste and scrap (NACE Group 37.1), as the former generated 52.4 % of sectoral value added in the EU-25, and 54.1 % of sectoral value added in the EU-15, while a similar distribution was observed for employment in the EU-15.

France reported the largest contribution to the EU-25's value added in the recycling sector, with a 25.3 % share in 2001. Germany and the United Kingdom were the next largest contributors adding a further 38.5 % together. Luxembourg and Lithuania had the highest value added specialisation⁽¹⁶⁾ in recycling, as this sector contributed 0.7 % and 0.6 % respectively of total manufacturing value added in 2001.

The working day adjusted production index for recycling in the EU-25 recorded strong increases in 2001 (4.5 %) and 2002 (6.1 %), while in 2003 output was stable (0.1 %). In employment terms, after a period of annual growth averaging 4.8 % between 1995 and 2000, there was an 8.2 % increase in the number of persons employed between 2000 and 2001. In 2002 growth was much more subdued at 0.2 %.

⁽¹⁵⁾ Slovenia, employees.⁽¹⁶⁾ Denmark, 1999.

Micro and small enterprises (with less than 50 persons employed) accounted for 62.5 % of the value added generated in the EU-25's recycling sector in 2001. This was the highest share of any manufacturing NACE division. Equally, the 11.5 % share of value added accounted for by large enterprises (with 250 or more persons employed) in the recycling sector was the smallest of any manufacturing NACE division. A similar situation was observed in terms of employment in EU-15, as micro and small enterprises employed 67.8 % of the workforce, while the corresponding share of large enterprises was 9.9 %.

Figure 13.7

Quantity of collectable plastics waste by end use in Europe, 2001 (1)

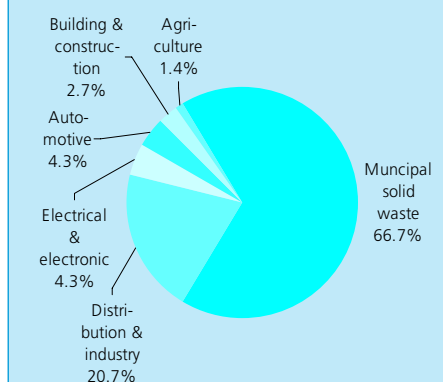
(1) EU-15, Norway and Switzerland.
Source: APME.

Table 13.5

Share of size-class in value added and employment, 2001 (%)

	Medium-sized				Total
	Micro	Small	Large		
Proportion in value added, EU-25					
Recycling (Division 37)	21.5	41.1	25.9	11.5	100
Recycling of metal waste and scrap (Group 37.1)	19.2	35.7	27.3	17.8	100
Recycling of non-metal waste and scrap (Group 37.2)	23.5	45.9	24.7	5.9	100
Proportion in employment, EU-15					
Recycling (Division 37)	27.0	40.8	22.3	9.9	100
Recycling of metal waste and scrap (Group 37.1)	30.0	35.6	19.5	14.9	100
Recycling of non-metal waste and scrap (Group 37.2)	24.5	45.2	24.6	5.7	100

Source: Eurostat, Structural Business Statistics (theme4/sbs/sizclass/indus_ms).

Data from Eurostat's environmental statistics database on waste provides information on the infrastructure and volume of waste treatment, covering recovery and disposal (see Tables 13.6 to 13.8). In this context, the term 'waste' refers to materials that are not prime products (destined for the market), for which the generator has no further own use and which are discarded. This definition excludes residuals directly recycled or reused at the place of generation and waste materials that are directly discharged into ambient water or air.

Waste management operations can be considered as recovery or disposal. Recovery is defined 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 mainly refers to recycling (material recovery), incineration (energy recovery), composting (biological recovery) and reuse. Reuse is any operation by which end-of-life products and equipment or their components are used for the same purpose for which they were conceived. Disposal is defined as any waste management operation serving or carrying out the final treatment and/or disposal of waste.

Table 13.6
Treatment of municipal waste (thousand tonnes) (1)

	Year	Recovery			Disposal operations		
		Recycling	Composting	Incineration with energy recovery	Incineration without energy recovery	Landfill	of which: controlled
EU-25		:	:	:	:	:	:
EU-15 (2)	2002	:	:	:	:	102 131	:
BE	2000	826	828	665	121	360	360
CZ (3)	1998	433	:	398	4	:	:
DK	2002	680	560	2 090	:	297	297
DE (4)	2001	13 025	7 325	31	10 796	12 174	:
EE (5)	2001	15	11	0	0	403	402
EL	2002	375	32	:	:	4 233	2 380
ES	2001	2 956	2 746	1 488	:	15 707	15 707
FR	2001	3 769	4 145	8 905	1 465	13 890	13 890
IE (6)	2001	271	17	:	:	2 071	2 071
IT (7)	2002	2 595	2 209	2 554	107	19 705	19 705
CY (8)	2002	1	:	:	:	450	450
LV	2001	14	16	27	0	911	:
LT	2002	:	:	:	:	1 000	:
LU	2000	1	41	123	:	60	60
HU	2002	67	47	288	:	3 907	3 761
MT	2001	1	31	:	:	185	:
NL	2002	2 113	2 386	3 227	:	830	830
AT	2000	1 129	1 818	481	:	1 478	1 578
PL	2002	116	215	:	36	10 142	10 142
PT	2000	347	275	930	:	3 410	2 820
SI	2002	87	11	5	0	699	699
SK (9)	2002	37	39	91	65	1 192	:
FI	2002	:	:	280	:	1 540	1 540
SE	2001	1 130	390	1 500	:	880	:
UK (10)	2001	4 294	:	2 555	0	27 846	:

(1) Municipal waste includes waste originating from households, commerce and trade, small businesses, office buildings and institutions (schools, hospitals, government buildings), as well as selected municipal services (park and garden maintenance, street cleaning services) if managed as waste.

(2) Estimated.

(3) Recycling, incineration with energy recovery, estimated; composting, 2002.

(4) Incineration with energy recovery, 2000.

(5) Recovery, estimated.

(6) Recovery, 2000.

(7) Recycling, composting, 1999; landfill, landfill of which: controlled, 2001.

(8) Recycling, 1999.

(9) Landfill, landfill of which: controlled, 2000.

(10) Incineration without energy recovery, estimated.

Source: Eurostat, Environment statistics (theme8/milieu/waste).

Table 13.7

Treatment of hazardous waste (thousand tonnes) (1)

	Year	Recovery (2)			Disposal operations						
		Total	Incineration with energy recovery	Recycling and composting	Preparatory activities	Total	Physical/chemical treatment	Biological treatment	Incineration without energy recovery	Landfill	Preparatory activities
BE	1999	634	:	:	:	:	:	:	129	631	:
CZ	2001	1 003	46	60	:	1 371	555	269	5	394	148
DK	2000	185	99	86	:	103	:	:	:	103	:
DE	1999	10 465	2 210	2 247	:	6 555	2 331	:	:	4 224	:
EE	2000	141	3	59	1	5 773	2	:	0	5 768	3
EL	2000	114	19	95	:	:	:	:	3	:	265
ES	2000	1 300	204	982	:	:	950	140	84	1 472	:
FR	1998	222	:	222	:	2 466	302	:	1 361	803	:
IE	1998	153	5	115	6	120	3	10	66	41	:
IT	1998	1 903	134	666	970	2 982	908	291	497	10	680
CY		:	:	:	:	:	:	:	:	:	:
LV	2001	:	:	:	:	:	23	:	5	:	:
LT	2001	84	3	:	:	5	:	:	1	3	:
LU	2000	72	:	68	4	11	11	:	:	:	:
HU		:	:	:	:	:	:	:	:	:	:
MT		:	:	:	:	:	:	:	:	:	:
NL	2000	339	:	:	:	1 406	627	:	389	390	:
AT	1999	:	110	:	:	:	:	:	:	:	:
PL	2001	406	:	:	37	902	:	:	:	63	:
PT		:	:	:	:	:	:	:	:	:	:
SI		:	:	:	:	:	:	:	:	:	:
SK	1998	:	68	158	:	:	592	103	68	292	:
FI	2000	135	69	66	239	828	:	:	35	793	:
SE		:	:	:	:	:	:	:	:	:	:
UK	1999	1 045	56	989	:	3 762	1 576	:	102	2 054	407

(1) Hazardous waste refers to the categories of waste streams to be controlled according to the Basle Convention on the control of transboundary movements of hazardous wastes and their disposal.

(2) Recovery, recycling or re-use.

Source: Eurostat, Environment statistics (theme8/milieu/waste).

Table 13.8

Hazardous and non-hazardous waste: estimated number of waste treatment facilities (units)

	Year	Incineration plants	Landfill sites
BE		:	:
CZ	1998	:	3
DK		:	:
DE		:	:
EE	2000	17	170
EL		:	:
ES		:	:
FR		:	:
IE		:	:
IT	1998	:	152
CY		:	:
LV	2001	:	341
LT	2001	7	:
LU	2001	1	14
HU		:	:
MT		:	:
NL	2000	:	36
AT	1999	53	53
PL		:	:
PT	1999	:	120
SI	2001	7	51
SK	2000	67	141
FI		:	:
SE	2000	:	243
UK		:	:

Source: Eurostat, Environment statistics (theme8/milieu/waste).

LABOUR AND PRODUCTIVITY

In 2001, the apparent labour productivity of the recycling sector was EUR 48 000 per person employed in the EU-15 and, as such, was EUR 3 200 lower than the manufacturing average. However, average personnel costs (EUR 28 800 per employee) were much lower than the manufacturing average (EUR 35 700), a situation that existed in the majority of Member States ⁽¹⁷⁾, exceptions being the Czech Republic, Poland, Portugal, Slovenia and Slovakia. Due to particularly low average personnel costs, the wage adjusted labour productivity ratio was higher in the EU's recycling sector (166.3 %) than the manufacturing average (143.5 %).

⁽¹⁷⁾ Denmark, 1999; Ireland and Cyprus, 2000; Greece, not available.

Table 13.9

Recycling (NACE Division 37)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Recycling	48.0	166.3	28.8
Recycling of metal waste and scrap	48.1	158.6	30.3
Recycling of non-metal waste and scrap	47.9	173.2	27.7

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 13.10

Manufacture of furniture; manufacturing n.e.c. (NACE Division 36)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	4 163	2 034	3 963	29 923	280	429	12 831	19 179	1 386	33 443	149	149	201	53
Value added at factor cost (EUR million)	1 070	546	1 464	11 153	85	201	4 319	5 931	693	9 141	67	78	60	14
Purchases of goods and services (EUR million)	3 552	1 577	0	20 050	213	:	9 106	14 757	:	25 475	114	102	147	75
Gross investment in tangible goods (EUR million)	167	99	209	914	19	:	526	663	:	1 334	14	16	14	:
Number of persons employed (thousands)	29	81	32	279	13	8	178	168	11	297	3	10	15	1
App. labour productivity (EUR thous./pers. emp.)	37.4	6.7	45.9	40.0	6.6	26.7	24.3	35.2	63.1	30.8	20.3	8.0	4.0	22.8
Average personnel costs (EUR thous./employee) (1)	30.1	5.4	33.5	33.1	4.5	:	18.9	29.9	:	23.0	14.4	3.2	3.1	29.1
Wage adjusted labour productivity (%) (1)	124.4	125.3	136.9	120.7	147.1	:	128.4	117.8	:	134.0	135.6	252.6	131.9	78.5
Gross operating rate (%)	7.4	8.0	10.9	7.9	9.4	:	10.0	6.2	:	11.9	13.1	33.5	7.6	-3.0
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	479	173	4 704	4 086	4 518	2 464	587	432	1 663	3 006	22 655	151	873	:
Value added at factor cost (EUR million)	155	65	1 685	1 887	1 942	778	181	84	653	1 058	9 294	40	307	:
Purchases of goods and services (EUR million)	449	100	3 397	2 608	3 115	1 828	406	372	1 180	2 152	14 620	124	707	:
Gross investment in tangible goods (EUR million)	31	18	307	178	219	146	30	39	53	143	940	11	100	:
Number of persons employed (thousands)	26	4	46	49	167	64	:	16	16	32	214	22	117	:
App. labour productivity (EUR thous./pers. emp.)	5.9	17.2	36.3	38.6	11.7	12.1	:	5.3	39.9	32.8	43.4	1.8	2.6	:
Average personnel costs (EUR thous./employee)	4.5	12.1	30.1	29.1	5.7	9.3	10.5	4.2	29.5	30.7	28.6	1.4	1.7	:
Wage adjusted labour productivity (%)	130.4	141.5	120.7	132.6	203.4	129.8	:	126.2	135.4	106.7	152.0	131.1	152.9	:
Gross operating rate (%)	6.3	19.3	10.7	13.3	24.1	9.6	4.4	4.0	11.0	5.9	15.5	8.9	12.8	:

(1) Cyprus, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 13.11

Recycling (NACE Division 37)
Main indicators, 2001

	BE	CZ	DK (1)	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	1 288	367	123	2 981	9	6	447	4 090	60	2 146	10	21	25	38
Value added at factor cost (EUR million)	237	40	32	890	3	1	117	1 131	21	523	3	3	8	16
Purchases of goods and services (EUR million)	1 195	327	106	2 515	17	:	366	3 760	47	1 721	10	19	30	21
Gross investment in tangible goods (EUR million)	79	13	10	138	0	:	25	282	5	136	0	1	3	:
Number of persons employed (thousands)	4	6	0	18	0	0	3	26	0	12	0	0	1	0
App. labour productivity (EUR thous./pers. emp.)	62.2	6.8	74.3	48.1	8.5	40.0	43.9	43.4	69.6	42.0	26.9	6.9	5.5	72.3
Average personnel costs (EUR thous./employee) (2)	32.1	6.9	39.5	30.9	3.8	:	24.7	29.7	26.6	24.7	12.1	2.7	2.7	40.6
Wage adjusted labour productivity (%) (2)	193.5	98.9	187.9	155.7	222.0	:	177.9	145.9	261.6	169.9	266.4	255.4	205.5	178.0
Gross operating rate (%) (3)	8.7	1.4	11.7	10.0	8.3	:	11.3	7.9	20.5	12.8	10.6	9.4	10.1	19.6
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	65	6	693	193	387	180	67	33	84	487	3 052	28	169	:
Value added at factor cost (EUR million)	13	2	163	63	179	37	16	16	25	96	829	1	38	:
Purchases of goods and services (EUR million)	152	3	537	152	431	158	57	38	80	391	2 273	26	193	:
Gross investment in tangible goods (EUR million)	5	0	47	20	24	31	10	2	5	30	147	2	18	:
Number of persons employed (thousands)	2	0	3	1	7	2	:	1	0	2	15	0	9	:
App. labour productivity (EUR thous./pers. emp.)	7.9	21.5	49.7	60.9	24.7	24.2	:	19.8	68.3	60.7	54.9	4.0	4.2	:
Average personnel costs (EUR thous./employee)	6.5	10.8	29.0	34.7	9.1	14.1	15.9	6.0	30.3	35.5	27.9	1.2	2.1	:
Wage adjusted labour productivity (%)	121.9	198.5	171.2	175.3	270.3	171.3	:	327.6	225.5	171.0	196.4	340.2	200.5	:
Gross operating rate (%)	1.5	19.2	12.1	13.2	20.2	8.4	4.3	21.2	13.6	8.7	14.1	3.2	9.0	:

(1) 1999.

(2) Ireland and Cyprus, 2000.

(3) Ireland, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Water supply and sewerage



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. Among the key issues that affect this sector are pricing and the metering of water use. The EU water framework directive ⁽¹⁾ was adopted in October 2003, and one of its goals was the introduction of pricing regimes to reflect the costs of water supply and to provide an incentive for efficient water use. Costs concern not only the financial costs related to investment in infrastructure and the operation of services, but also the environmental costs related to the impact of abstraction and wastewater collection, treatment and disposal. Pricing issues need to consider these costs balanced against the vital nature of water, and hence the need to supply consumers, regardless of location, season and resources.

STRUCTURAL PROFILE

In 2001 the EU-25's water supply sector generated an estimated EUR 17.9 billion of value added. In the EU-15 value added was estimated at EUR 16.0 billion in 2001, around 0.4 % of value added in the non-financial business economy (NACE Sections C to I and K). As such, the 10 new Member States accounted for an estimated 10.6 % of the EU-25's total value added in the water supply sector, close to double their contribution to the manufacturing sector (5.6 %) and slightly more than their contribution to the mining and quarrying sector (10.3 %).

⁽¹⁾ Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for Community action in the field of water policy.

EU-25 employment data are only available on the basis of the number of employees: it should be noted that this is a fairly good approximation for the number of persons employed in this sector, as 2000 data for the EU-15 show that employees made up over 99 % of the number of persons employed. In 2000 there were 310 600 employees in the EU-25's water supply sector, of which nearly two fifths (39.0 %) were working in one of the 10 new Member States. In value added terms, the water supply sector was dominated by Germany and the United Kingdom, with 27.2 % and 23.2 % shares of the EU-25's value added in 2000. Several of the ten new Member States reported relatively large water supply sectors in 2001, relative to the size of their non-financial business economies. In Estonia (1999), Lithuania and Slovakia, the water supply sector contributed 1.2 % of the non-financial business economy's value added, while in Hungary (1.0 %), the Czech Republic (0.8 %) and Slovenia (0.7 %), the contribution of the water supply sector was also equal to, or above, the level indicated in Portugal (0.7 %), which had the highest share among the EU-15 Member States ⁽²⁾.

⁽²⁾ Greece, Cyprus, Malta and Poland, not available.

This chapter describes the activities involved in water supply and sewerage. The former provides for the collection, purification, desalination and distribution of water (NACE Division 41) and is treated in NACE separately from sewerage treatment (which is classified as part of liquid waste treatment, found within NACE Division 90).

NACE

- 41: collection, purification and distribution of water;
90: sewage and refuse disposal, sanitation and similar activities.

Table 14.1
Collection, purification and distribution of water (NACE Division 41)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Largest number of persons employed (thousands) (2)
1	United Kingdom (4.1)	Germany (35.3)
2	France (2.0)	France (34.3)
3	Spain (1.5)	United Kingdom (31.2)
4	Italy (1.1)	Spain (24.9)
5	Netherlands (0.9)	Hungary (23.0)

(1) Germany, Estonia, Malta and Poland, not available.

(2) Estonia, Malta, Poland and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 14.2

Collection, purification and distribution of water (NACE Division 41)

Value added at factor cost and persons employed, by enterprise size-class, 2001 (% of total)

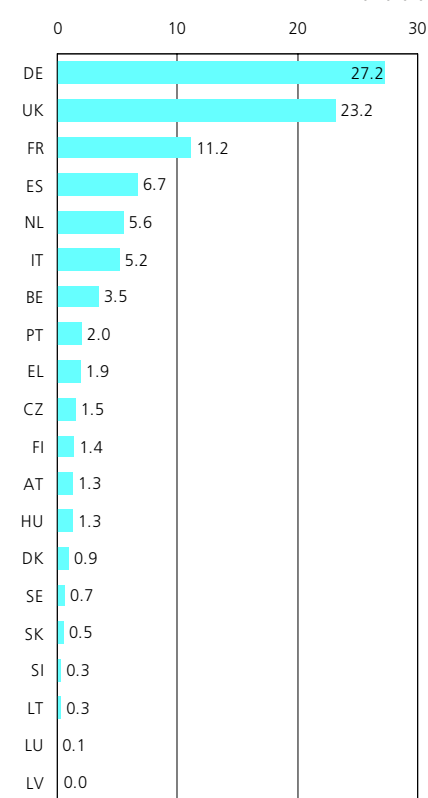
	Micro enterprises		Small enterprises		Medium-sized enterprises		Large enterprises	
	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed
EU-25	6.4	:	9.4	:	18.6	:	65.5	:
EU-15	7.0	6.8	9.8	10.4	17.9	19.2	65.3	63.6

Source: Eurostat, Structural Business Statistics (theme4/sbs/sizclass).

Close to two thirds (65.5 %) of value added in the EU-25 was generated by large enterprises (with 250 or more persons employed) in 2001, a larger share than the equivalent figure in manufacturing (54.9 %). An analysis of the size-class breakdown shows a fairly common pattern among Member States, with large enterprises accounting for half or more of the water supply sector's value added in every country with data available, except for Denmark and Slovenia - see Table 14.3. In eight of the Member States with recent data available, micro enterprises (with less than 10 persons employed) had only a negligible role in the water supply sector, as they generated less than 1 % of total value added.

The working day adjusted production index for water supply in the EU-25 indicates a period of falling output between the beginning of the series in 1996 and 1998, followed by four years of alternating moderate growth and stability. The employment index starts in 1995 and shows that employment fell through to 1999, averaging -1.2 % per annum over the four years. Since then, the employment index registered two years of 1.6 % growth, followed by a fall of 0.3 % in 2002. The larger Member States experienced very different employment trends in recent years, as can be seen from the average rates of change in the five years until 2002. Germany (-2.6 % per annum) and the United Kingdom (-0.9 %) both recorded contractions in employment over this period, although the United Kingdom did register employment growth in 2000 and 2001. France averaged 1.7 % employment growth per annum over the same period, while Spain averaged 5.7 % growth per annum, despite a fall in employment in 2001. Output price increases for the supply of water in the EU-25 increased every year throughout the 1990s and through to 2003, averaging 4.0 % per annum during the 10-year period 1993 to 2003. These rates were notably higher than the manufacturing average of 1.5 % per annum over the same period.

Figure 14.1

Collection, purification and distribution of water (NACE Division 41)
Share of EU-25 value added, 2000 (%) (1)

(1) Estonia, Ireland, Cyprus, Malta and Poland, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 14.3

Collection, purification and distribution of water (NACE Division 41)
Share of size class in value added, 2001 (%)

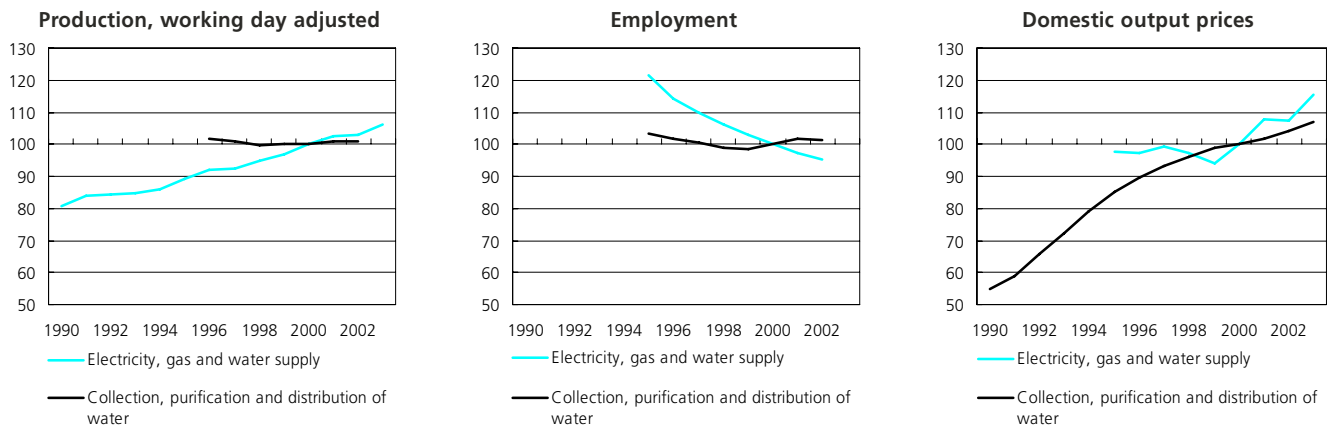
	Medium-sized				Total
	Micro	Small	Large		
EU-25	6.4	9.4	18.6	65.5	100
EU-15	7.0	9.8	17.9	65.3	100
BE (1)	2.6	3.2	8.2	86.1	100
CZ	0.2	2.4	17.5	79.8	100
DK (2)	95.0	5.0	0.0	0.0	100
DE (2)	16.1	23.1	:	:	100
EE (1)	1.1	13.5	:	:	100
EL	:	:	:	:	:
ES (2)	4.5	8.6	25.5	61.4	100
FR	0.9	4.6	12.5	82.0	100
IE	:	:	:	:	:
IT	3.0	10.2	31.6	55.2	100
CY	:	:	:	:	:
LV	:	:	:	:	:
LT (2)	0.6	5.9	25.9	67.7	100
LU	:	:	:	:	:
HU	0.3	2.7	14.8	82.2	100
MT	:	:	:	:	:
NL	0.2	:	:	90.5	100
AT	14.2	19.8	:	:	100
PL	:	:	:	:	:
PT	0.4	3.8	32.5	63.3	100
SI (1)	0.3	15.5	65.8	18.4	100
SK (1)	0.0	0.0	:	:	100
FI	10.4	19.9	:	:	100
SE	3.6	:	:	:	100
UK	:	:	10.5	:	100

(1) 1999.

(2) 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/sizclass/indus_ms).

Figure 14.2

Collection, purification and distribution of water (NACE Division 41)
Main indicators, EU-25 (2000=100)


Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Table 14.4 shows the annual volume of fresh water abstraction in each of the Member States, and the amount used for selected purposes, notably for the public water supply (PWS) concerned by this sector. In most Member States, the PWS accounted for between 10 and 40 % of total fresh water abstraction, with a few notable exceptions. The share was higher in Luxembourg, where there is practically no water used for cooling in electricity generation (Luxembourg's main electricity generation is hydro-electric - see Chapter 1), in Slovenia, and in Malta, where practically all fresh water abstraction is destined for the PWS. The share of PWS in total water abstraction was lower in the Baltic States, where, at least in Estonia and Lithuania, water for cooling in electricity generation was responsible for a very large share of fresh water abstraction. Table 14.5 shows the volume of PWS, with information on main users and also the proportion of households connected to the PWS network.

Table 14.4

Fresh water abstraction (million m³ per year)

	Latest year	Total surface and ground water	Of which, for:		
			public water supply	manu- facturing	electricity (cooling)
BE	1998	7 442	730	1 404	4 244
CZ	2002	1 908	764	339	577
DK	2002	669	:	:	:
DE	2001	38 006	5 409	5 374	24 837
EE	2001	1 471	67	33	1 103
EL	1997	8 695	861	110	124
ES	2001	38 544	5 616	1 089	5 836
FR	2000	30 932	5 872	3 633	18 339
IE		:	:	:	:
IT	1998	41 982	:	:	:
CY	2000	175	39	4	:
LV	2001	258	17	43	:
LT	2002	3 126	79	38	2 863
LU	1999	61	38	14	0
HU (1)	2001	4 552	687	204	4 028
MT (2)	2000	17	20	:	:
NL	2001	8 813	1 257	1 352	6 204
AT	1997	3 561	604	1 286	1 571
PL	2002	11 728	2 171	633	6 737
PT	1998	11 190	872	385	1 237
SI	2001	293	210	83	:
SK	2002	1 094	385	623	:
FI	1999	2 328	404	1 569	274
SE	2002	2 689	923	1 406	97
UK (3)	2000	15 895	5 988	1 621	2 626

(1) Electricity cooling, 2000.

(2) Public water supply, 1997.

(3) England and Wales only.

Source: Eurostat, Environment statistics (theme8/milieu/water).

Table 14.5

Public water supply (million m³ per year)

	Latest year	Proportion of households connected to PWS (1) (%)	Total supply	Of which, to:			
				agriculture, forestry and fishing	manu- facturing	electricity generation	house- holds
BE	1998	:	559	18	94	3	381
CZ	2002	90	545	6	:	:	343
DK	2001	95	411	:	:	:	251
DE	2001	99	4 474	:	360	39	3 779
EE	2001	71	66	:	:	:	:
EL	1997	:	:	:	:	:	670
ES	2001	:	4 402	387	379	48	2 460
FR (2)	1998	99	4 000	:	:	:	3 491
IE		:	:	:	:	:	:
IT	1999	100	5 692	84	:	:	4 258
CY	1998	:	68	24	:	:	:
LV (2)	2001	:	302	9	79	119	78
LT (2)	2002	76	45	:	:	0	43
LU	1999	:	37	0	:	:	24
HU	2002	93	546	5	20	:	381
MT		:	:	:	:	:	:
NL	2001	100	1 269	:	215	2	714
AT	1997	:	604	:	:	:	456
PL	2002	81	1 627	:	20	10	1 284
PT	1998	:	:	:	:	:	680
SI	2001	:	107	:	18	1	88
SK	2002	:	388	:	:	:	:
FI	1999	:	404	:	:	:	404
SE	2002	86	720	:	102	:	526
UK	1998	:	6 597	:	:	:	:

(1) Poland, 1999; Sweden, 1997.

(2) Households includes also activities other than industry and agriculture.

Source: Eurostat, Environment statistics (theme8/milieu/water).

Table 14.6

Urban waste water treatment (all treatment methods)

	Latest year	Number of plants	Thousand kg O ₂ /day (1)	
			Design capacity	Actual occupation
BE		:	:	:
CZ	1999	959	749	445
DK	1998	1 475	724	526
DE	1998	10 312	9 367	7 343
EE	2000	447	:	:
EL	1997	140	452	357
ES		:	:	:
FR	2000	4 119	4 291	:
IE		:	:	:
IT		:	:	:
CY	2000	30	:	:
LV	2001	1 421	:	:
LT	2001	791	:	:
LU	1998	301	:	:
HU	2000	520	:	:
MT		:	:	:
NL	2000	399	1 363	969
AT	2001	1 487	:	808
PL	2001	2 558	2 608	:
PT		:	:	:
SI	2000	110	60	43
SK	1998	199	:	237
FI	2001	:	415	624
SE	2000	1 260	:	:
UK (2)	2000	6 432	:	4 008

(1) Quantity of oxygen-demanding material.

(2) England and Wales only.

Source: Eurostat, Environment statistics (theme8/milieu/water).

Tables 14.6 and 14.7 provide information on wastewater treatment concerning the infrastructure for treating this waste and access to various collection and treatment systems. Most wastewater is treated after collection, but as can be seen in Table 14.7 a large proportion of the population in Malta (87 %), Belgium (44 %) and Portugal (36 %) only had access to collection systems without treatment.

Table 14.7

Proportion of the population connected to waste water systems (%)

	Latest year	Urban waste water treatment			Total	Urban waste water collecting system without treatment	Independent waste water collecting system of which: with independent treatment	
		Primary treatment	Secondary treatment	Tertiary treatment			Total	
BE	1998	0	22	16	38	44	17	:
CZ	2001	:	:	:	65	7	25	:
DK	1998	2	3	84	89	0	11	11
DE	1998	1	6	83	91	2	7	5
EE	2000	1	28	40	69	1	30	:
EL	1997	32	14	10	56	11	32	:
ES		:	:	:	:	:	:	:
FR	1998	:	:	:	77	2	18	:
IE		:	:	:	:	:	:	:
IT		:	:	:	:	:	:	:
CY	2000	0	0	35	35	0	66	66
LV		:	:	:	:	:	:	:
LT		:	:	:	:	:	:	:
LU	1999	:	:	:	93	0	7	7
HU	2000	2	24	6	32	19	49	17
MT	2001	:	:	:	13	87	:	:
NL	2000	0	18	80	98	0	2	:
AT	2001	:	:	:	86	0	14	14
PL	2001	3	29	23	55	:	:	:
PT	1998	18	26	2	46	36	18	5
SI	1999	15	15	0	30	23	47	45
SK	1998	:	:	:	49	5	46	:
FI	2001	0	0	81	81	0	19	:
SE	2000	0	5	81	86	:	14	13
UK (1)	2000	4	64	27	95	2	3	:

(1) England and Wales only.

Source: Eurostat, Environment statistics (theme8/milieu/water).

LABOUR AND PRODUCTIVITY

The water supply sector's labour force is characterised by a higher proportion of men and of full-time employment than the manufacturing average, although not as high as in construction, mining and quarrying, or electricity, gas, steam and hot water supply. Full-time employment was 93.6 % in the EU-15 in 2002, 1.2 percentage points above the manufacturing average, while men made up 79.7 % of the workforce, 8.0 percentage points above the manufacturing average.

The EU-15 water supply sector recorded apparent labour productivity of EUR 83 700 per person employed in 2001, well above the manufacturing average of EUR 51 200 for comparison. Average personnel costs were EUR 38 100 per employee, again above the manufacturing average of EUR 35 700 per employee. The resulting wage adjusted labour productivity ratio was 219.7 %, indicating that value added was more than double the level of personnel costs. This was much higher than the manufacturing average (143.5 %), and was higher than the level recorded for the majority of the divisions within the non-financial business economy. Particularly high wage adjusted labour productivity ratios⁽³⁾ were recorded in Latvia, the Netherlands, Finland and Sweden, where this indicator was at least twice as high in the water supply sector as the non-financial business economy average.

⁽³⁾ Germany, Estonia, Greece, Ireland, Cyprus, Malta, Poland and Slovenia, not available.

Table 14.8

Collection, purification and distribution of water (NACE Division 41)
Labour force characteristics, 2002

	Share of men (%)	Share of full-time (%)	Share of employees (%)
EU-25	:	:	:
EU-15	79.7	93.6	97.7
BE	88.1	90.8	100.0
CZ	74.3	96.9	95.1
DK	:	:	:
DE	71.7	89.6	98.5
EE	:	:	:
EL	86.4	98.4	100.0
ES	87.5	97.5	98.3
FR	75.9	92.5	100.0
IE	:	:	:
IT	92.3	97.8	89.8
CY	:	100.0	100.0
LV	:	:	:
LT	:	:	:
LU	:	:	:
HU	79.9	98.4	99.3
MT	95.3	100.0	100.0
NL	81.2	87.7	100.0
AT	93.5	:	100.0
PL	:	:	:
PT	83.8	100.0	100.0
SI	87.0	100.0	100.0
SK	81.9	98.6	100.0
FI	:	92.5	100.0
SE	:	:	:
UK	75.6	93.5	97.1

Source: Eurostat, Labour Force Survey.

Table 14.9

Collection, purification and distribution of water (NACE Division 41)

Main indicators, 2001

	BE	CZ	DK	DE	EE (1)	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	1 230	659	424	8 264	51	295	3 008	10 394	0	2 921	75	10	93	44
Value added at factor cost (EUR million) (2)	599	292	168	4 638	28	323	1 457	2 032	0	1 092	37	29	53	34
Purchases of goods and services (EUR million) (3)	610	371	257	3 742	19	:	1 642	8 124	0	1 773	39	4	31	35
Gross investment in tangible goods (EUR million) (3)	221	201	49	3 119	23	:	406	576	0	551	1	23	44	:
Number of persons employed (thousands)	8	22	3	35	:	7	25	34	0	18	0	1	7	0
App. labour productivity (EUR thous./pers. emp.) (2)	78.8	13.4	49.2	103.7	:	45.4	58.6	59.3	:	60.8	109.7	37.3	7.9	84.2
Average personnel costs (EUR thous./employee) (2)	49.3	7.5	29.2	37.3	5.3	:	32.1	47.9	:	39.9	:	4.3	4.7	53.0
Wage adjusted labour productivity (%) (2)	159.6	178.2	168.8	278.2	:	:	182.3	123.8	:	152.4	:	867.8	168.8	158.8
Gross operating rate (%) (2)	19.1	19.6	18.0	36.9	32.1	:	23.5	4.0	:	15.4	41.0	299.8	25.1	18.8
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	498	:	1 624	326	:	634	192	207	356	184	6 805	179	394	:
Value added at factor cost (EUR million)	234	:	935	218	:	372	63	111	247	104	4 131	89	196	:
Purchases of goods and services (EUR million)	358	:	547	110	:	307	91	92	110	80	2 222	96	231	:
Gross investment in tangible goods (EUR million)	76	:	353	69	:	616	81	78	10	67	2 748	39	200	:
Number of persons employed (thousands)	23	:	7	2	:	13	:	15	2	1	31	19	54	:
App. labour productivity (EUR thous./pers. emp.)	10.2	:	134.5	117.7	:	29.4	:	7.6	130.3	118.7	132.5	4.6	3.6	:
Average personnel costs (EUR thous./employee)	7.5	:	44.6	44.2	:	16.4	15.7	5.0	35.8	45.2	40.0	3.0	2.7	:
Wage adjusted labour productivity (%)	136.4	:	301.8	266.6	:	179.2	:	152.4	364.1	262.6	331.4	154.4	133.5	:
Gross operating rate (%)	10.9	:	39.9	42.1	:	25.8	1.2	19.8	53.1	38.3	43.6	18.2	13.4	:

(1) 1999.

(2) Germany, 2000.

(3) Ireland, 1999.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Construction and real estate



Building and civil engineering changes the environment in which people live and work; it involves the construction of normally unique projects, with the time scale for many projects from conception to completion typically longer than in many other sectors (often years). The construction of many projects, whether building or civil engineering, often involves a large number of sub-contracting enterprises with various specialisations, organised by a project coordinating enterprise or lead developer.

The household sector consumed 17 % of the EU-25's gross inland consumption of energy in 2001 and about half of household energy consumption expenditure was on space heating. As part of efforts to use energy more efficiently, and so improve the EU's position with respect to the security of energy supply, a directive on the energy performance of buildings ⁽¹⁾ was adopted on 25 November 2002. This involves establishing a common methodology for energy performance standards for new buildings and major extensions to large buildings, certification schemes, and inspection and assessment for boilers, heating and cooling systems. It is hoped that actions in these areas will reduce energy consumption in buildings and consequently reduce the production of greenhouse gases.

The construction products directive (CPD) was passed in 1989 and modified in 1993 and forms the central part of the EU legislation for the single market for the construction sector; it is still in an implementation stage. One of the underlying principles of the CPD is that only construction products which are fit for their intended use may be commercialised within the single market. Products must satisfy six

essential requirements where the works are subject to regulations containing such requirements: (i) mechanical resistance and stability; (ii) safety in case of fire; (iii) hygiene, health and the environment; (iv) safety in use; (v) protection against noise; and (vi) energy economy and heat retention. For the current round of enlargement the implementation of this directive is one of the main issues for the sector, not just in terms of transposing the directive, but also implementing the decisions on the conformity of products, developing testing and certification facilities, and participation in international standard setting bodies. Furthermore, in December 2003 a Commission recommendation on 'Eurocodes' was adopted, to promote the use of these harmonised methods for calculating the strength of structural construction products: the first Eurocodes were published in 2000 and it is planned that 57 of them will have been established by the end of 2006.

Public procurement is relevant to many sectors, but is especially important for construction as the public sector is a major purchaser of building and particularly civil engineering work. The Commission proposed an amendment to the regulations governing public procurement in May 2000, and a final version of the new legislation was adopted by the European Parliament at the end of 2003 and by the Council at the beginning of 2004. After publication this directive on the coordination of procedures for the award of public supply contracts, public service contracts and public works contracts will need to be transposed into national law within 21 months. The main principles of this modern legislation are non-discrimination, transparency, free establishment of services and a respect of the rules of competition.

The statistical classification of economic activities covers construction activities and real estate services within NACE Section F and Division 70 respectively. Other activities related to the construction sector, although not formally part of it, such as architectural services or landscaping, are covered within Chapter 22.

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 additional activity in Division 45 covers the renting with an operator of construction equipment (NACE Group 45.5).

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.

⁽¹⁾ Directive 2002/91/EC of the European Parliament and of the Council of 16 December 2002 on the energy performance of buildings.

STRUCTURAL PROFILE

The construction and real estate sectors had a combined value added of EUR 571.2 billion in the EU-25 in 2001, of which the construction sector accounted for just over two thirds. The construction sector ⁽²⁾ employed 11.9 million persons, and the real estate sector ⁽³⁾ 2.0 million. As such, these two sectors together generated an estimated 12.5 % of value added and 12.2 % of employment in the EU-25's non-financial business economy (NACE Sections C to I and K).

In terms of value added, the United Kingdom had the largest construction sector in the EU-25 with a 19.5 % share in 2001, followed by Germany (17.3 %). The Spanish construction sector in 2001 generated 13.0 % of the EU-25's total, nearly as much as in France (13.3 %). Relative to its non-financial business economy, Spain had the most important construction sector ⁽⁴⁾ in value added terms some 14.1 % of Spanish value added in the non-financial business economy in 2001. Luxembourg, Portugal and the Netherlands all reported that the construction sector accounted for 10 % or more of value added in the non-financial business economy, as did Cyprus among the new Member States. Hungary and Slovakia reported the lowest relative shares, as the construction sector accounted for approximately 5 % of the value added generated in their respective non-financial business economies. The situation with respect to employment was, however, quite different within the EU-15; the United Kingdom had only the fifth largest construction workforce (13.2 % of the EU-15 total), behind Germany (19.1 %), Spain (18.8 %), Italy (14.7 %) and France (14.0 %). This very high share in Spain was confirmed, as a 17.0 % share of the Spanish non-financial business economy workforce was engaged in the construction sector.

⁽²⁾ Slovenia, number of employees.

⁽³⁾ Cyprus, not available; Poland and Slovenia, number of employees.

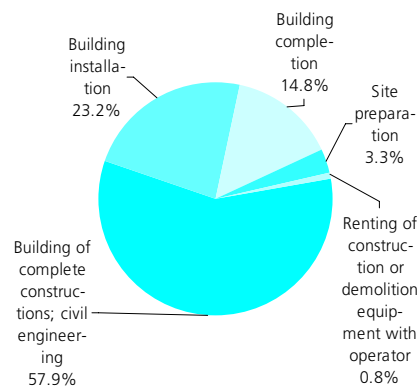
⁽⁴⁾ Greece and Ireland, not available.

Table 15.1
Construction (NACE Division 45)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Largest number of persons employed (thousands) (2)
1	United Kingdom (76.4)	Germany (1 987)
2	Germany (67.6)	Spain (1 952)
3	France (52.1)	Italy (1 529)
4	Spain (50.7)	France (1 458)
5	Italy (43.3)	United Kingdom (1 366)

(1) Greece and Ireland, not available.
(2) Greece, Ireland and Slovenia, not available.
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

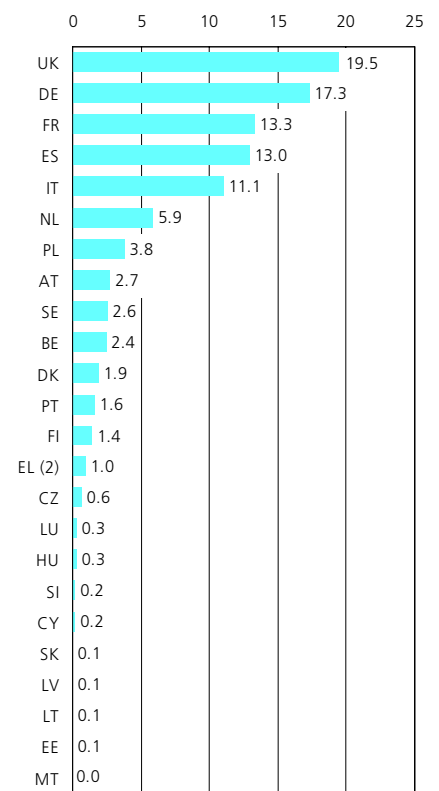
Figure 15.1
Construction (NACE Division 45)
Share of value added at factor cost, EU-25, 2001



Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Various classifications can be used to describe the construction sector. The NACE classification identifies five groups, the largest of which, according to SBS data, was the building of complete constructions or parts thereof and civil engineering (Group 45.2, hereafter referred to as general construction). This alone accounted for more than half of the value added (57.9 %) in the EU-25's construction sector, as well as that of the EU-15 (56.7 %). In employment terms, the general construction subsector accounted for 52.4 % of those employed in the EU-15's construction sector in 2001. This activity covers all civil engineering and the main structural works of building. Building installation work (Group 45.3) and building completion work (Group 45.4) were the next largest subsectors, with 23.2 % and 14.8 % respectively of the EU-25's value added in construction. In most of the Member

Figure 15.2
Construction (NACE Division 45)
Share of EU-25 value added, 2001 (%) (1)



(1) Ireland, not available.
(2) 2000.
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

States ⁽⁵⁾ the general construction subsector generated approximately half or more of the construction sector's value added, with Denmark (44.6 %) and France (43.0 %) a few percentage points below this level. Malta reported a completely different structure with general construction generating just 17.8 % of construction value added, and building installation and completion work together accounting for 73.7 %. For comparison, Cyprus reported the highest concentration of activity in the general construction subsector in 2001, with 83.2 % of construction value added generated in this subsector, and just 15.0 % in the building installation and completion subsectors.

⁽⁵⁾ Greece and Finland, 2000; Slovakia, 1999; Ireland, not available.

Table 15.2

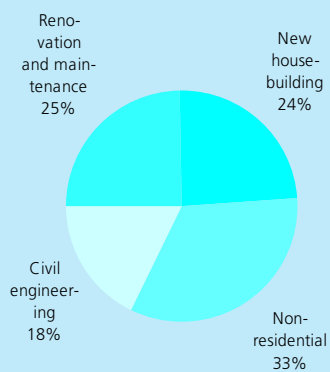
Construction (NACE Division 45)

Value added at factor cost and persons employed, by enterprise size-class, 2001 (% of total)

	Micro enterprises		Small enterprises		Medium-sized enterprises		Large enterprises	
	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed
EU-25	31.5	:	32.2	:	17.8	:	18.5	:
EU-15	32.3	40.7	32.8	32.6	16.9	14.1	18.0	12.6

Source: Eurostat, Structural Business Statistics (theme4/sbs/sizclass).

Figure 15.3

Breakdown of construction output, Europe, 2002 (1)

(1) Estimates; EU-15 plus the Czech Republic, Hungary, Poland, Slovakia, Turkey, Switzerland and Norway.

Source: FIEC.

Table 15.3

Top 10 international construction contractors, EU-15, 2002 (1)

		Total international revenue (EUR million)	Share of international revenue in total revenue (%)
Skanska AB	SE	11 520	82.6
Hochtief AG	DE	10 010	83.7
VINCI	FR	6 841	41.2
Bouygues	FR	6 449	42.5
TECHNIP-COFLEXIP	FR	4 619	99.2
Bovis Lend Lease	UK	3 625	77.8
Bau Holding Strabag AG	AT	3 544	70.4
AMEC plc	UK	3 017	58.2
Bilfinger Berger AG	DE	2 991	69.7
Balfour Beatty plc	UK	1 610	29.1

(1) Ranked according to the construction revenue generated outside of each company's home country.

Source: Engineering News-Record, McGraw-Hill, 25 August, 2003, available at http://enr.construction.com/people/topLists/topIntlCont/topIntlCont_1-50.asp.

The European Construction Industry Federation (FIEC) provides a project-based breakdown of construction output - see Figure 15.3. According to these estimates, approximately 18% of construction work in Europe ⁽⁶⁾ was accounted for by civil engineering, and the largest building segment was non-residential (33%). Renovation and maintenance, and new residential building each accounted for about one quarter of total construction output in 2002.

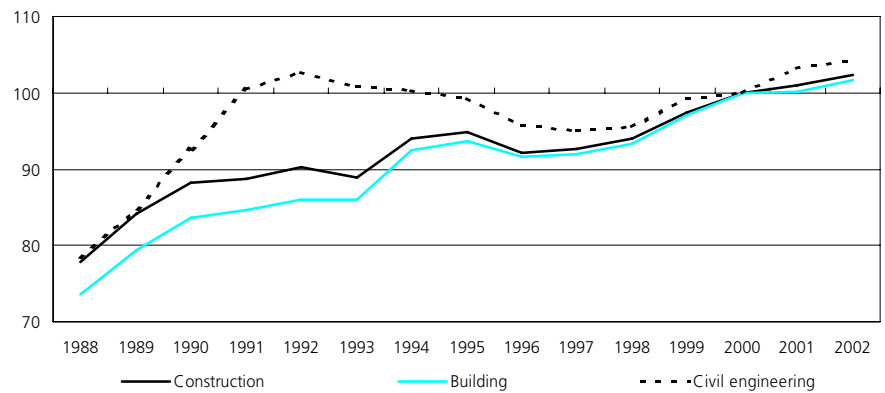
⁽⁶⁾ EU-15, plus the Czech Republic, Hungary, Poland, Slovakia, Switzerland, Norway and Turkey.

Micro and small enterprises together generated close to two thirds of the EU-25's value added in construction, far more than in the non-financial business economy as a whole (39%). Large enterprises generated less than one fifth of value added, less than half their share in the non-financial business economy as a whole. Most Member States displayed a similar pattern, the notable exceptions being the relatively low share of micro and small enterprises in the construction sectors of the Baltic States and Poland. Despite this dominance by micro and small enterprises, the EU's construction sector had a number of major multinational contractors - see Table 15.3.

Figures 15.4 and 15.5 show the development of construction output in the EU-15, and in some of the larger Member States. The references to building and civil engineering are based on the 'Classification of constructions', rather than NACE. It can be seen that since 1993 building work has gone through more than one complete economic cycle, with activity increasing in 1994 and 1995, contracting in 1996, recovering slowly in 1997, with stronger growth in the last five years (through to 2002) averaging 2.0 % per annum. The development for civil engineering has been somewhat different. The decline in activity started in 1993, however, instead of picking up again in 1994, this part of the construction sector continued to contract for five consecutive years, with no year-on-year growth recorded until 1998. By 1997 the production index for civil engineering in the EU-15 was 7.4 % lower than it had been in 1992. From 1998 until 2002 civil engineering output in the EU-15 grew each year, averaging 1.8 % per annum. As such the economic downturn in 2001 and 2002 reflected in the production indices of many manufacturing activities does not appear to have affected construction activity in the EU-15 as strongly, perhaps in part supported by demand stimulated by interest rate cuts by central banks. As Figure 15.5 shows, the situation within the five largest Member States was not uniform. Spain, the United Kingdom and France all recorded sustained periods of growth as regards construction activity since around 1993, continuing through to 2002, with only occasional year-on-year contractions in output. However, since a peak of activity in 1994, construction in Germany has only expanded in one year, the production index falling by an average of 3.8 % per annum over the nine years to 2003. The shorter time-series for Poland shows very rapid growth between the beginning of the series (1995) and 1999, averaging 10.5 % per annum, followed by a period of contraction, averaging 7.1 % per annum over the four years to 2003.

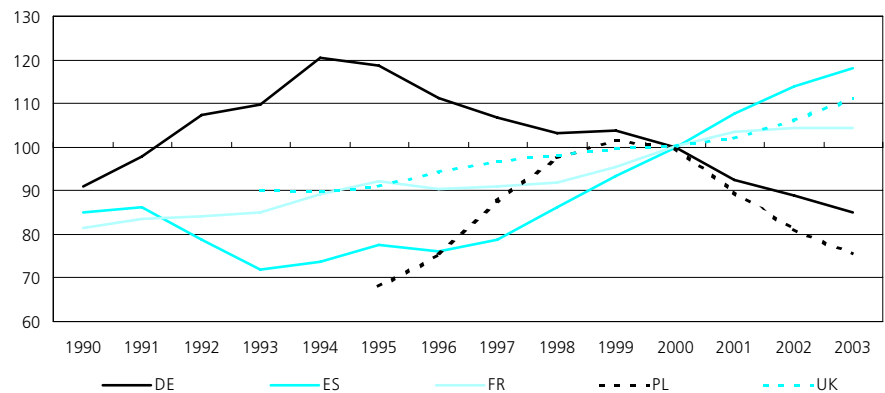
Throughout most of the 1990's the construction sector failed to regain the employment losses experienced at the beginning of the decade, and employment only picked up in 1999. Since 2000 the index of employment for the EU-15 has remained relatively stable - see Figure 15.6.

Figure 15.4 Production indices: construction, building and civil engineering, EU-15 (2000=100) (1)



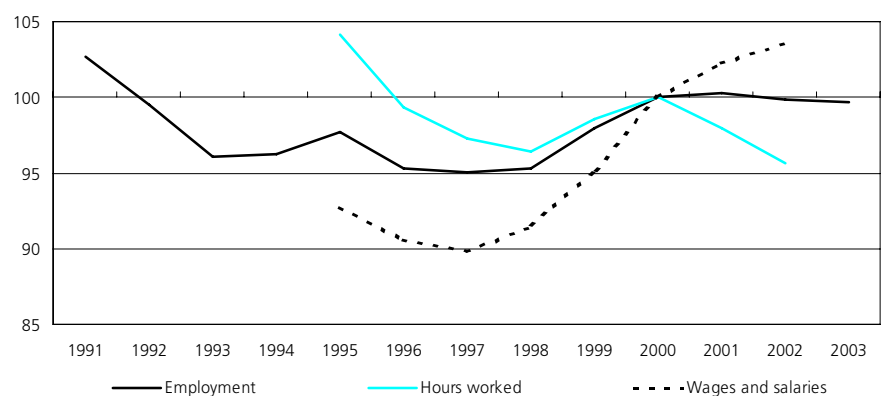
(1) Working-day adjusted data. Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Figure 15.5 Production indices for construction (2000=100) (1)



(1) Working-day adjusted data. Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

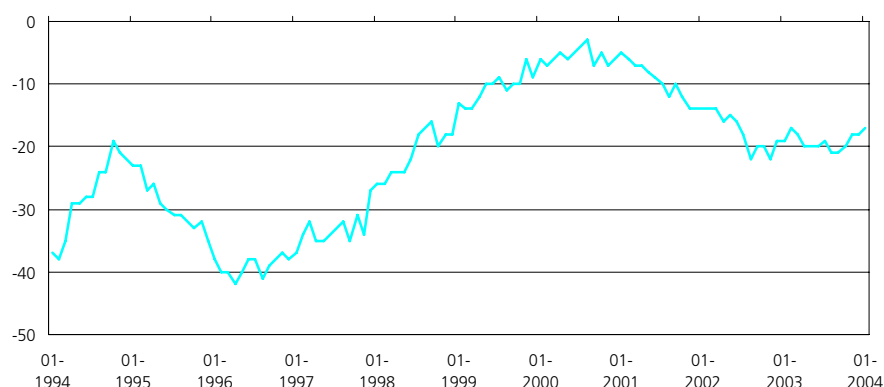
Figure 15.6 Labour input indices for construction, EU-15 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Figure 15.7 shows the development of the index of construction confidence for the EU-15 over a 10-year period, during which the index remained negative, although it rose from its low in April 1996 to close to zero in the middle of 2000. Since then the confidence index fell more gently, bottoming out in August 2002 and stabilising in the range of -17 to -22 percentage points through to January 2004. Table 15.4 provides a snapshot of the latest position in all of the Member States, as well as at the key dates mentioned above. As can be seen there was a large negative balance for the construction confidence indicator at the beginning of 2004 in several countries, notably Sweden, Germany and Poland.

Figure 15.7

Construction confidence indicator, EU-15 (balance %) (1)

(1) Percentage of positive responses minus the percentage of negative responses; seasonally adjusted data.
Source: Eurostat, European and national short term indicators - Business and consumer surveys (theme1/euroind/bs).

Table 15.4

Construction confidence indicator (balance, %) (1)

	04-1996	08-2000	08-2002	01-2004
EU-25	:	:	:	:
EU-15	-42	-3	-22	-17
BE	-27	6	-24	-12
CZ	-7	-31	-9	-4
DK	-2	-1	-18	-16
DE	-58	-41	-53	-50
EE	-1	-5	29	1
EL	-44	21	9	6
ES	-33	39	-19	2
FR	-53	32	-4	4
IE	37	33	-52	22
IT	-24	-2	3	-7
CY	:	:	17	4
LV	-58	-32	-19	-17
LT	-57	-76	-26	-25
LU	-55	-2	-34	-31
HU	-8	-5	-3	-22
MT	:	:	:	:
NL	2	22	-11	-19
AT	-60	-20	-37	-24
PL	:	-44	-61	-48
PT	-23	-8	-44	-40
SI	:	:	-19	-6
SK	5	-48	-18	-30
FI	-22	15	2	-3
SE	-52	9	-40	-56
UK	-36	-8	-7	1

(1) Percentage of positive responses minus the percentage of negative responses; seasonally adjusted data.

Source: Eurostat, European and national short term indicators - Business and consumer surveys (theme1/euroind/bs).

Table 15.5

Construction (NACE Division 45) Labour force characteristics, 2002

	Share of men (%)	Share of full-time (%)	Share of employees (%)
EU-25	:	:	:
EU-15	91.4	94.5	76.1
BE	92.3	94.7	78.4
CZ	91.3	98.6	64.2
DK	91.6	92.6	83.1
DE	86.9	92.2	85.2
EE	95.3	96.1	92.4
EL	98.2	97.9	66.8
ES	94.8	98.5	79.8
FR	90.4	94.7	81.0
IE	95.1	95.8	72.8
IT	93.6	95.7	61.0
CY	93.3	98.4	77.0
LV	89.3	95.8	91.7
LT	92.2	95.9	95.6
LU	93.4	95.9	92.2
HU	92.9	97.7	77.5
MT	97.3	99.5	62.7
NL	91.5	86.9	82.2
AT	91.5	:	92.9
PL	:	:	:
PT	95.6	96.6	74.2
SI	90.6	97.1	81.1
SK	92.9	99.2	76.4
FI	91.7	95.4	81.4
SE	92.3	92.5	79.5
UK	90.6	93.3	65.4

Source: Eurostat, Labour Force Survey.

LABOUR AND PRODUCTIVITY

The high importance of micro and small enterprises in the construction sector reflects the importance of self-employment. The proportion of paid employees was 76.2 % in the EU-25 in 2002, 7.8 percentage points lower than the business economy (NACE Sections C to K) average. The self-employed made up 22.6 % of the EU-25's construction labour force, compared to 14.7 % in the business economy as a whole. At the NACE division level, this was the second highest rate of self-employment within the EU-15's business economy, behind other business activities (Division 74). The above average share of self-employed was repeated in every Member State with data available ⁽⁷⁾ except for Greece, Luxembourg and Austria.

Like other activities involving physical labour (such as mining), the male proportion of the labour force in the construction sector was very high, 91.4 % in the EU-15 in 2002. This was 26 percentage points higher than the business economy average, and the third highest of all of the business economy NACE divisions (for the EU-15), lower only than two of the mining activities. In all Member States with data available, the proportion of men in the construction labour force was between 24 and 38 percentage points higher than national business economy averages.

⁽⁷⁾ Estonia and Lithuania, not available.

Full-time employment was also atypically high in the construction sector, as 94.8 % of persons were employed on this basis in the EU-25 in 2002, compared to 87.0 % in the business economy as a whole.

Apparent labour productivity in the EU-15's construction sector in 2001 was EUR 35 600 per person employed, one of the lower rates at the NACE division level within the business economy (higher than clothing and footwear manufacturing, retail trade, and hotels and restaurants, and at a similar level to the manufacture of wood products or textiles). Only in the United Kingdom, Poland and the Netherlands was apparent labour productivity in this sector higher than the national non-financial business economy average ⁽⁸⁾. The United Kingdom recorded the highest apparent labour productivity in the construction sector at EUR 55 900 per person employed. In the EU-25, average personnel costs were EUR 26 000 per employee, and in the EU-15 they were EUR 28 700. Again these were some of the lowest levels recorded in the business economy. The relatively low levels of apparent labour productivity and average personnel costs were particularly important given the small proportion of part-time employment within this sector: as most of the other activities that recorded low values for these two indicators were characterised by considerably higher levels of part-time employment, driving these ratios down.

⁽⁸⁾ Germany, 2000; Greece, Ireland, Cyprus, Malta and Slovenia, not available.

The wage adjusted labour productivity ratio provides a measure of the extent to which value added covers personnel costs (adjusted by the ratio of persons employed to employees), and as such is unaffected by issues of part-time employment or hours worked. In the construction sector in 2001 this ratio was 124.0 % for the EU-15, indicating that value added was 24.0 % higher than adjusted personnel costs, again one of the lowest levels among the non-financial business economy NACE divisions. This was reflected in the data for the Member States, as the wage adjusted labour productivity ratio was below 100 % in the Czech Republic and Malta ⁽⁹⁾, while only in Poland, Latvia and the United Kingdom did this ratio for the construction sector rise above the non-financial business economy average.

⁽⁹⁾ Greece, 2000, Ireland, Cyprus, and Slovenia, not available.

Figure 15.6

Construction (NACE Division 45)**Labour productivity and personnel costs, EU-15, 2001**

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Construction	35.6	124.0	28.7
Site preparation	40.6	133.4	30.4
Building of complete constructions or parts thereof; civil engineering	38.6	130.5	29.6
Building installation	33.7	118.7	28.4
Building completion	28.7	110.5	26.0
Renting of construction or demolition equipment with operator	55.7	162.8	34.2

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

15.1: SITE PREPARATION AND GENERAL CONSTRUCTION

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. 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.

As already noted in the overview, interest rate cuts over recent years are believed to have stimulated the real estate market. Table 15.8 shows the number of dwellings completed and Figure 15.8 shows various indices of building permits. The table shows that the number of completions was generally lower around 2000 and 2001 than 20 years earlier, with only a few countries showing an increase, notably on the Iberian peninsula and in Ireland and Austria. Over a shorter period, the building permits' indices for the EU-15 for residential buildings support this view of a declining trend. In terms of the area for which permits have been issued for residential buildings, the index generally fell less strongly than for the number of dwellings, suggesting, that fewer, but larger dwellings were being constructed. Since 2001 this has changed and in the last two years for which data are available the index in terms of the area declined at a faster pace. The building permits indices also cover non-residential buildings and the index of the area for which permits have been issued in this case also suggested a decline in this market segment, with a particularly large fall in the area for which permits were issued in 2002.

Table 15.7

Number of newly completed dwellings (thousands)

	1980	1985	1990 (1)	1995	2000 (2)	2001
BE (3)	48.6	30.3	44.5	38.7	38.9	41.0
DK	30.3	22.6	27.2	13.5	15.2	16.2
DE (4)	500.8	427.8	319.0	602.8	423.0	326.2
EL (4) (5)	136.0	88.5	120.2	70.9	89.4	:
ES	262.9	191.4	281.0	242.1	366.8	365.7
FR (3)	400.0	295.0	296.0	272.6	311.1	303.4
IE (6)	27.8	23.9	19.5	30.6	49.8	52.6
IT (7)	287.0	200.8	176.4	163.9	142.4	:
LU	2.0	1.3	2.5	2.8	1.7	:
NL	113.8	98.1	97.4	93.8	70.7	73.0
AT (4)	:	41.2	36.6	53.4	55.4	:
PT (4)	41.0	38.4	65.8	68.4	110.5	108.3
FI	49.6	50.3	65.4	25.0	32.7	30.6
SE	51.4	32.9	58.4	12.7	:	15.4
UK (8)	242.4	207.2	202.7	199.0	180.4	:

(1) Belgium, 1991

(2) Austria, provisional.

(3) Dwellings started.

(4) Including extended, reconstructed and restored dwellings.

(5) Private building activity, according to building permits issued.

(6) Including an estimated 400 converted units per year.

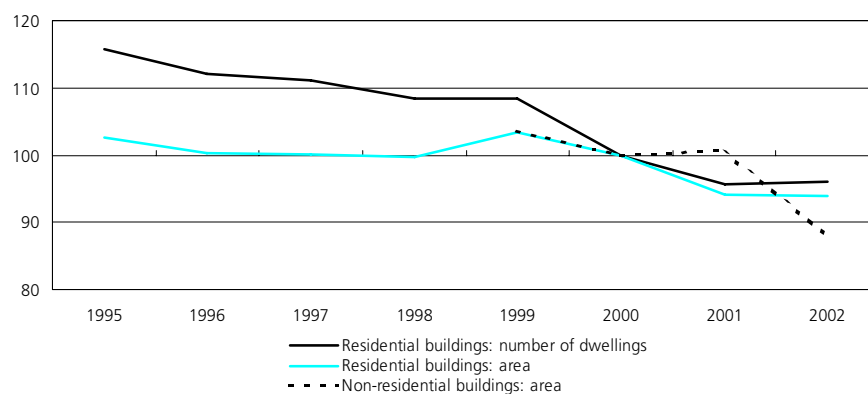
(7) Authorised dwellings only.

(8) Dwellings are regarded as completed when they are ready for occupation, whether they are occupied or not.

Source: National statistical institutes and Government departments, in 'Housing statistics in the European Union, 2002', Department of Housing of the Direction General of Planning, Housing and Heritage (Direction Générale de l'Aménagement du Territoire, du Logement et du Patrimoine) of the Walloon Region of Belgium.

Figure 15.8

Building permits indices, EU-15 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/eht).

Table 15.8 shows the types of housing that exist within the EU-15 according to various household classifications; the data come from the European Community household panel. In 2001 just over 55 % of households lived in houses, a steadily increasing proportion.

STRUCTURAL PROFILE

Site preparation and general construction generated EUR 239.5 billion of value added in the EU-25 in 2001, 61.2 % of value added in the construction sector; in the EU-15, site preparation and general construction accounted for a lower proportion of construction value added, 60.1 %. In the majority of the Member States, site preparation and general construction accounted for at least 50 % of the value added generated in the construction sector, with France (49.5 %), Denmark (46.3 %) and most notably Malta (24.0 %) the exceptions ⁽¹⁰⁾.

⁽¹⁰⁾ Greece and Finland, 2000; Slovakia, 1999; Ireland, not available.

Table 15.9

Site preparation; building of complete constructions or parts thereof; civil engineering (NACE Groups 45.1 and 45.2)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Largest number of persons employed (thousands) (2)
1	United Kingdom (49.3)	Spain (1 276.5)
2	Spain (35.4)	Germany (929.6)
3	Germany (35.2)	Italy (820.7)
4	Italy (27.5)	United Kingdom (811.9)
5	France (25.8)	France (697.8)

(1) Greece, Ireland, Slovakia and Finland, not available.

(2) Greece, Ireland, Slovenia, Slovakia and Finland, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 15.8

Types of dwelling according to the occupier, EU-15, 2001 (% of households)

	House	Flat	Others (1)
Total	55.4	39.1	5.5
Socio-economic status			
Employed	57.5	37.9	4.6
Unemployed	42.2	50.2	7.7
Retired	54.9	38.1	7.0
Other	47.2	48.1	4.7
Type of household			
One adult younger than 30 years	26.4	67.9	5.7
One adult aged between 30 and 64 years	36.6	58.0	5.3
One adult older than 65 years	44.5	47.1	8.4
Single parent with dependent children	44.0	54.2	1.8
Two adults with one dependent child	59.1	37.2	3.7
Two adults with two dependent children	65.2	31.0	3.8
Two adults with three or more dependent children	68.1	28.5	3.4
Two adults, at least one aged 65 years and over	62.5	31.7	5.8
Income group (2)			
High	55.9	40.8	3.3
Mid-high	57.4	37.9	4.7
Mid-low	55.0	38.5	6.5
Low	51.8	39.9	8.4

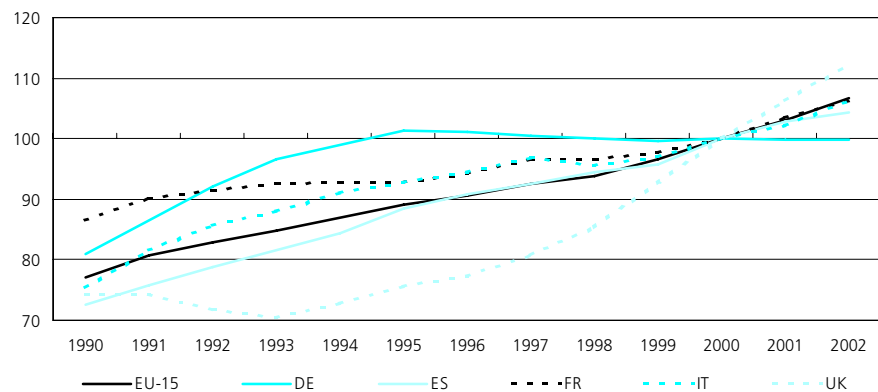
(1) For example hotel, institution or campsite.

(2) Income breakdown expressed in relation to median income: low income, less than 60 %; mid-low income, 60 % to 100 %; mid-high income, 100 % to 140 %; high income, more than 140 %.

Source: Eurostat, European Community Household Panel (theme3/housing/prholds/type).

Figure 15.9

Output price indices for residential buildings (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Site preparation (NACE Group 45.1) accounted for just 5.3 % of the total value added in the EU-25's site preparation and general construction sector, and general construction (NACE Group 45.2) for the remainder. A more detailed analysis of the EU-25's ⁽¹¹⁾ general construction subsector is available for 2001. General construction of buildings and civil engineering work (NACE Class 45.21) was by far the largest part of Group 45.2, with 69.3 % of value added. Other construction work involving special trades (NACE Class 45.25) was the second largest class with 12.9 %. Construction of highways, roads, airfields, sports facilities and water projects (NACE Classes 45.23 and 45.24) generated 10.7 % of value added in the general construction subsector, while the erection of roof coverings and frames (NACE Class 45.22) accounted for the remaining 7.1 %. General construction of buildings and civil engineering work (NACE Class 45.21) accounted for at least half of the value added in the general construction subsector in all countries for which data are available, except France and Malta.

Employment in the EU-25's site preparation and general construction sector was 6.8 million persons employed ⁽¹²⁾ in 2001, and in the EU-15 it was 5.7 million, equivalent to 5.9 % of the EU-15's non-financial business economy (NACE Sections C to I and K) workforce or 57.0 % of employment in the EU-25's construction sector ⁽¹³⁾, and 55.3 % of employment in the EU-15's construction sector (a smaller share than in terms of value added). Spain had the largest workforce in the site preparation and general construction sector in 2001, recording 1.3 million persons employed, followed at some distance by Germany, Italy and the United Kingdom with between 800 000 and 1 million persons employed each.

⁽¹¹⁾ The Netherlands, 1999; the Czech Republic, Greece, Spain, Ireland and Luxembourg, not available.

⁽¹²⁾ Slovenia, number of employees; Slovakia, excluding NACE Group 45.1.

⁽¹³⁾ Slovenia, number of employees; Slovakia, not available.

The difficult period experienced by the construction sector in Germany (see the overview of this chapter) was reflected in output price indices for residential buildings shown in Figure 15.9, as the German index has hardly moved since 1994. Of the five Member States shown in the figure, the United Kingdom recorded the fastest increase in construction output prices over the last 10 years, with price increases rising on average by 4.6 % per annum. Spain recorded average output price increases over the same period of 2.8 %, just above the EU-15 average of 2.5 %, while the average in France was 1.5 % per annum.

A size-class analysis is available for general construction ⁽¹⁴⁾ (NACE Group 45.2) for 2001, although this excludes one of the largest Member States in this sector, namely Spain. Micro enterprises (with less than 10 persons employed) generated 25.0 % of value added in this subsector, and small enterprises (10 to 49 persons employed) some 28.3 %. In both cases, this was less than the 31 to 32 % of value added that these size-classes generated in the construction sector as a whole. As such, medium-sized and large enterprises together generated 46.6 % of value added in the general construction subsector, approximately 10 percentage points higher than the equivalent share of medium-sized and large enterprises in the value added of the whole of the construction sector.

⁽¹⁴⁾ Greece, Spain, Ireland, Luxembourg and Malta, not available.

LABOUR AND PRODUCTIVITY

The EU-15's site preparation and general construction sector reported apparent labour productivity of EUR 38 700 per person employed in 2001, EUR 3 100 higher than the construction average. In the general construction subsector this ratio stood at EUR 38 600, while for site preparation it was EUR 40 600, as such the second highest apparent labour productivity among the NACE groups that make up the construction sector, behind the renting of construction or demolition equipment. A similar situation can be observed for average personnel costs, which were EUR 29 600 per employee in the site preparation and general construction sector in the EU-15, EUR 900 higher than the construction average; again the site preparation subsector reported the second highest value (EUR 30 400) among NACE groups within the construction sector.

The combination of higher apparent labour productivity and average personnel costs resulted in a wage adjusted labour productivity ratio of 130.6 %: this shows the ratio of value added to personnel costs, after adjusting the latter for the ratio of the number of persons employed relative to the number of employees to take account of self-employment. This ratio of wage adjusted labour productivity was higher for site preparation and general construction than it was for the whole of the construction sector (124.0 %), a situation repeated in both subsectors that make up the site preparation and general construction sector.

Table 15.10

Site preparation; building of complete constructions or parts thereof; civil engineering (NACE Groups 45.1 and 45.2) Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Site preparation; building of complete constructions or parts thereof; civil eng.	38.7	130.6	29.6
Site preparation	40.6	133.4	30.4
Building of complete constructions or parts thereof; civil engineering	38.6	130.5	29.6

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

15.2: INSTALLATION AND COMPLETION

Installation and completion work is divided into nine classes at the NACE four-digit level: installation of electrical wiring and fittings (Class 45.31); insulation (Class 45.32); plumbing (Class 45.33); plastering (Class 45.41); joinery installation (Class 45.42); floor and wall covering (Class 45.43); painting and glazing (Class 45.44); and other building installation and completion activities (Classes 45.34 and 45.45). This subchapter also covers the activities of renting construction or demolition equipment with an operator (Group 45.5). Collectively all of these activities are referred to as the installation and completion sector within this subchapter.

Installation and completion enterprises are generally the last stages of the construction process. As well as work on new structures, the renovation, repair and maintenance markets are also particularly important for enterprises in these sectors.

STRUCTURAL PROFILE

The installation and completion sector employed 5.1 million persons in the EU-25 ⁽¹⁵⁾, of which 4.6 million were working in the EU-15, a figure that equated to 4.8 % of the EU-15's non-financial business economy (NACE Sections C to I and K) workforce. The value added generated by this workforce was EUR 151.9 billion in the EU-25 and EUR 147.5 billion in the EU-15.

Building installation (NACE Group 45.3) was the largest part of the installation and completion sector with a 59.7 % share of the EU-25's value added in 2001. Building completion (NACE Group 45.4) was the second largest part with a 38.3 % share and the renting of construction or demolition equipment with an operator (NACE Group 45.5) was by far the smallest (2.0 %).

A more detailed analysis of this sector can be made for a selection of Member States ⁽¹⁶⁾, although it should be noted in particular that this excludes one of the larger Member States, namely Spain. This shows that at the class level of NACE the largest activity in this sector in value added terms was the installation of electrical wiring and fittings (Class 45.31), with over one quarter (28.4 %) of total value added, followed closely by plumbing (Class 45.33) with

⁽¹⁵⁾ Estonia, 2002; Slovenia, number of employees; Slovakia, NACE Group 45.5, not available.

⁽¹⁶⁾ The Netherlands, 1999; Slovakia and Finland, NACE Group 45.5, 1999; the Czech Republic, Estonia, Greece, Spain, Ireland and Latvia, not available

Table 15.11
Building installation; building completion; renting of construction or demolition equipment with operator (NACE Groups 45.3 to 45.5)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Largest number of persons employed (thousands) (2)
1	Germany (32.4)	Germany (1 058.1)
2	United Kingdom (27.0)	France (760.6)
3	France (26.3)	Italy (708.3)
4	Italy (15.9)	Spain (676.2)
5	Spain (15.4)	United Kingdom (554.7)

(1) Estonia, Greece, Ireland, Slovakia and Finland, not available.

(2) Estonia, Greece, Ireland, Slovenia, Slovakia and Finland, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

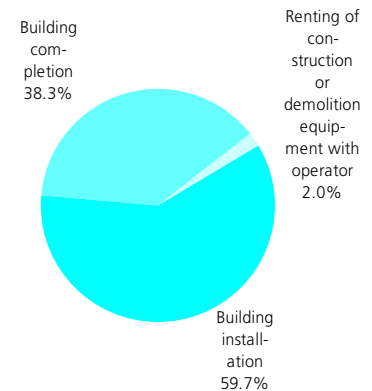
just under one quarter (24.4 %). The largest parts of building completion were painting and glazing (Class 45.44), with 13.0 % of the sector's total, and joinery installation (Class 45.42) with 10.9 %. Floor and wall covering, and other building completion (Classes 45.43 and 45.45) were the only other activities with a share above 5 %, contributing 6.1 % and 5.1 % to installation and completion value added respectively.

Germany (EUR 32.4 billion) had the largest share of EU-25 value added in the building installation and completion sector in 2001, equivalent to 21.3 %. The United Kingdom and France with between 17 and 18 % each followed, while Italy and Spain accounted for just over 10 % each of the EU-25's value added. Germany and France were clearly much more specialised in the building installation and completion sector as their respective shares of EU-25 value added were more than 6 percentage points higher than they were for site preparation and general construction, while Spain, and to a lesser extent Italy and the United Kingdom, were less specialised in the building installation and completion sector. Among the smaller EU-15 ⁽¹⁷⁾ Member States, Denmark also recorded a higher share of EU-25 value added in the installation and completion sector than in site preparation and general construction, while the reverse was true in Portugal.

One of the consequences of the relatively high shares of Germany and France in the value added of the EU-25's building installation and completion sector was that the 10 new Member States contributed 2.9 % of EU-25 value added,

⁽¹⁷⁾ Greece, Ireland and Finland, not available.

Figure 15.10
Building installation; building completion; renting of construction or demolition equipment with operator (NACE Groups 45.3 to 45.5)
Share of value added at factor cost, EU-25, 2001



Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

considerably less than their 7.2 % contribution to EU-25 value added in the site preparation and general construction sector. A more detailed breakdown shows that for the renting of construction or demolition equipment with an operator the 10 new Member States contributed 4.7 % to EU-25 value added, while for building installation it was 3.8 % and for building completion it was 1.5 %. Poland had the largest installation and completion sector among the 10 new Member States (EUR 2.7 billion of value added), which was equivalent to 1.8 % of the EU-25 total, compared to a 5.1 % share that Poland had of the EU-25's site preparation and general construction sector.

Again a size-class analysis can be made for a selection of Member States ⁽¹⁸⁾, notably excluding Spain, for the two largest parts of this sector, namely building installation and building completion (NACE Groups 45.3 and 45.4). Some 41.4 % of value added in these two activities was generated by micro enterprises (with less than 10 persons employed) in 2001, a much greater share than in general construction (NACE Group 45.2), where the share of micro enterprises was nearer 25 %. Although the data set is incomplete, small enterprises (10 to 49 persons employed) generated at least 30 % of value added in the two groups of building installation and building completion, indicating that the relatively high proportion of value added that was accounted for by micro enterprises was mainly compensated for by a lower share for medium-sized and large enterprises (with 50 or more persons employed).

⁽¹⁸⁾ Estonia, Greece, Spain, Ireland, Luxembourg, Malta and Slovakia, not available.

Table 15.12

Building installation; building completion; renting of construction or demolition equipment with operator (NACE Groups 45.3 to 45.5) Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Building installation; completion; renting of equipment with operator	31.8	115.6	27.5
Building installation	33.7	118.7	28.4
Building completion	28.7	110.5	26.0
Renting of construction or demolition equipment with operator	55.7	162.8	34.2

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

LABOUR AND PRODUCTIVITY

The building installation and completion sector recorded apparent labour productivity of EUR 31 800 per person employed in the EU-15 in 2001. Within this overall figure, building completion recorded the lowest value (EUR 28 700) with building installation higher (EUR 33 700), and the small activity of renting of construction or demolition equipment with an operator far above (EUR 55 700). Average personnel costs showed a similar, but less extreme situation, as these were lowest (again for the EU-15) in building completion (EUR 26 000 per employee), higher in building installation (EUR 28 400) and highest in the

renting of construction or demolition equipment with an operator (EUR 34 200). For both of these indicators, apparent labour productivity and average personnel costs, the renting of construction or demolition equipment with an operator was the only one of the three groups in this sector that recorded values that were above the construction sector averages.

Despite low average personnel costs, the wage adjusted labour productivity ratios of the building installation (118.7 %) and building completion (110.5 %) activities were below the construction average (124.0 %), while the ratio

for the renting of construction or demolition equipment with an operator was far above (162.8 %). In several Member States the building installation and building completion sectors recorded ratios for the wage adjusted labour productivity ratio that were below the threshold of 100 %, 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 the Czech Republic's building completion sector, where this ratio was just 52.6 % in 2001.

15.3: REAL ESTATE SERVICES

Within NACE, real estate services are covered by Division 70. Real estate activities are a service activity, classified in NACE alongside other business services within NACE Section K. They are nevertheless included in this chapter because of their close relationship with the construction sector.

Real estate services are very diverse: real estate agents sell on a commission basis; traders buy and sell property (perhaps altering or refurbishing the property between transactions); surveyors, valuers and estate managers provide professional services; and finally owners let property. These activities have very different cost structures and revenue streams and care has to be taken comparing them, particularly when trying to measure the size of each subsector. 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.

Table 15.13

Types of dwelling, 2001 (% of households)

	House	Flat	Other (1)
EU-15	55.4	39.1	5.5
BE	79.7	17.9	2.4
DK	65.5	29.6	4.9
DE	40.5	44.4	15.1
EL	50.4	48.5	1.1
ES	40.2	59.8	0.0
FR	64.0	34.8	1.2
IE	95.4	2.8	1.8
IT	35.9	58.4	5.7
LU	66.1	33.8	0.1
NL	68.2	27.4	4.4
AT	49.1	45.2	5.8
PT	64.5	34.0	1.5
FI	56.0	42.8	1.2
SE	67.2	32.6	0.2
UK	81.6	16.7	1.7

(1) For example hotel, institution or camp.

Source: Eurostat, European Community Household Panel (theme3/housing/prholds/type).

Table 15.14

Proportion of households owning their own dwelling, by housing type, 2001 (%)

	Total	House	Flat
EU-15	64.2	79.6	39.5
BE	73.9	83.8	33.2
DK	66.6	85.9	28.0
DE	43.8	71.9	14.6
EL	84.6	92.9	76.3
ES	84.8	89.9	81.5
FR	63.4	81.3	31.1
IE	81.9	84.3	25.5
IT	76.2	85.4	70.3
LU	69.5	85.9	38.4
NL	55.3	70.0	22.3
AT	55.3	84.5	22.3
PT	66.7	73.0	56.5
FI	68.1	85.9	46.0
SE	59.8	67.0	44.8
UK	71.8	79.7	36.4

Source: Eurostat, European Community Household Panel (theme3/housing/prholds/tenure).

The importance of different real estate sectors, for example agents selling property, or estate management services and renting agencies, is to some extent determined by the incidence of owner occupation. Owner occupation among households in the EU-15 was 64.2 % in 2001, rising to 79.6 % for houses and falling as low as 39.5 % for flats. Among the EU-15 Member States, overall owner occupation was above 80 % in Spain, Greece and Ireland and below 60 % in Germany, the Netherlands, Austria and Sweden - see Table 15.14. In Germany, the Netherlands and Austria it was the particularly low rate of owner occupancy in flats that lowered the overall owner-occupancy rate. As Figure 15.11 shows, the situation is evolving, and owner occupancy is generally increasing, although several countries recorded slight year-on-year reductions in owner occupancy during the second half of the 1990s, it was particularly widespread in 1997, leading to a fall in the overall EU-15 figure in that year.

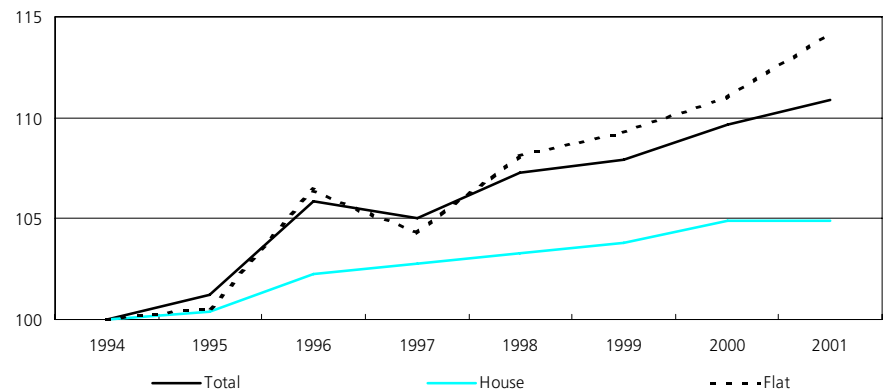
One indicator of the level of activity in the residential property market is the index for lending for house purchases compiled by the ECB. Figure 15.12 shows how the borrowing for house purchases, although increasing, was doing so at a progressively weaker rate until it reached a growth rate of 6.6 % in the last quarter of 2001, at which point the rate of increase stabilised and in fact picked up to a range of 7.3 to 7.7 % growth for most quarters of 2002 and 2003. As such, the stabilisation of this rate of increase and subsequent acceleration came a few months after the Governing Council of the ECB started to cut interest rates in May 2001. See Table 15.15 from the European mortgage federation on the number of housing transactions; note that some figures have been revised since the 2003 edition.

STRUCTURAL PROFILE

The EU-25's real estate services sector generated EUR 179.8 billion in 2001, of which the EU-15 contributed EUR 174.2 billion. As such, the 10 new Member States collectively contributed 3.1 % of the EU-25's value added in this sector, compared to 5.5 % in construction and 4.6 % in non-financial services (Sections G to I and K). The largest real estate services' sector in the EU-25 was in Germany (EUR 51.3 billion, 2000), far ahead of the United Kingdom (EUR 31.9 billion) and France (EUR 25.1 billion), and nearly three times higher than in Spain and four and a half times higher than in Italy. As a proportion of value added in non-financial services, the real estate services sector was largest ⁽¹⁹⁾ in Sweden

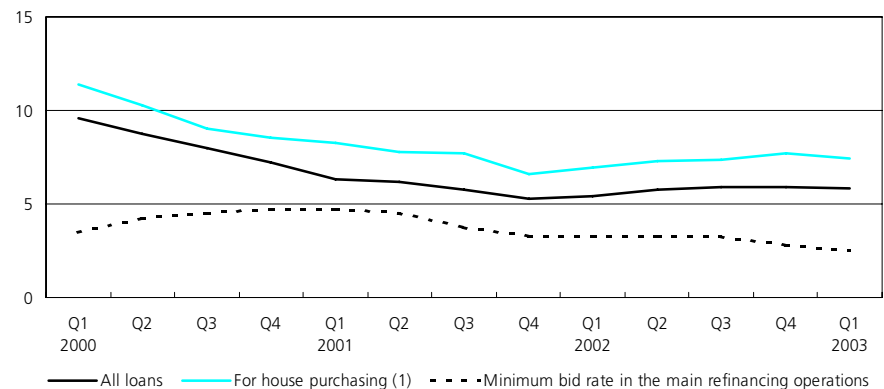
⁽¹⁹⁾ Greece and Cyprus, not available.

Figure 15.11 Index of the proportion of households owning their own dwelling, by housing type, EU-15 (1994=100)



Source: Eurostat, European Community Household Panel (theme3/housing/prhlds/tenure).

Figure 15.12 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-zone (%)



(1) The definitions of lending for house purchase are not fully consistent across the euro-zone.

Source: ECB.

(14.3 %), Denmark (11.5 %), Germany (11.2 %, 2000), the Netherlands (9.8 %, 2000) and Spain (9.4 %) in 2001. Its lowest share was recorded in Slovenia (1.5 %), while the other Member States recorded shares of 2.5 % or more. In employment terms, real estate services employed 2.0 million persons in the EU-25 ⁽²⁰⁾ in 2001, of which 1.7 million were working in the EU-15.

⁽²⁰⁾ Cyprus, not available; Poland and Slovenia, number of employees.

An analysis of size-class data shows that large enterprises had a relatively small impact on the real estate services sector, while micro enterprises dominated. Micro enterprises (with less than 10 persons employed) alone generated 53.3 % of the EU-25's value added in this sector, the highest proportion recorded by micro enterprises among all of the non-financial business economy NACE divisions, far ahead of the next highest share (38.4 %) recorded in the hotels and restaurants sector. Despite this dominance by micro enterprises, small enterprises (with 10 to 49 persons employed) generated 18.1 % of value added and medium-sized enterprises (with 50 to 249 persons employed) generated a further 16.9 % of value added, both quite close to the non-financial services' averages of 20.2 % and 16.4 % respectively. Consequently, it was large enterprises in real estate services whose contribution to value added was particularly low, as their added value accounted for 11.6 % of the whole sector, compared to an average for the non-financial services sector that was three times higher (36.9 %). Micro enterprises accounted for at least 40 % of value added in the real estate services sector in all Member States⁽²¹⁾, except for Austria (25.9 %), the Netherlands (26.6 %, 1999), Lithuania (27.4 %), Poland (31.8 %, 1999) and Latvia (34.7 %).

⁽²¹⁾ Greece, Cyprus, Luxembourg, Hungary and Malta, not available.

Table 15.15
Number of housing transactions (thousands)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
BE (1)	104	104	96	102	109	108	115	108	111	116
DK (2)	63	71	74	77	78	76	71	71	68	68
DE (3)	680	615	587	633	569	623	567	483	498	499
EL	:	:	:	:	:	:	:	:	:	:
ES	:	:	:	:	:	:	:	:	:	:
FR	624	684	618	734	701	780	863	:	:	:
IE (4)	45	50	49	61	65	69	79	81	69	93
IT	502	495	502	484	524	576	640	688	661	754
LU	3	4	4	4	4	4	4	:	:	:
NL (5)	198	215	224	259	281	280	292	269	265	269
AT	:	:	:	:	:	:	:	:	:	:
PT (6)	178	187	186	:	:	:	:	:	:	:
FI	75	71	68	83	81	90	94	85	93	:
SE (7)	36	43	42	47	55	52	61	55	54	55
UK (8)	1 195	1 275	1 134	1 241	1 441	1 348	1 469	1 431	1 457	1 587

(1) Excluding transactions on new dwellings and own constructions; 2002, estimated.

(2) Excluding own constructions.

(3) Residential property sales, therefore excluding gifts and inheritance.

(4) Estimate based on number of mortgage loan approvals.

(5) Includes commercial transactions.

(6) Includes commercial and residential property transactions; urban areas only.

(7) One- and two-dwelling buildings.

(8) England and Wales; freehold and leasehold transactions.

Source: European Mortgage Federation and national associations.

Table 15.16
Real estate activities (NACE Division 70)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (31.9)	Sweden (193)	United Kingdom (382.7)
2	France (25.1)	Denmark (156)	France (315.2)
3	Spain (17.9)	Spain (127)	Germany (304.0)
4	Netherlands (11.9)	Latvia (116)	Italy (220.3)
5	Italy (11.2)	Estonia (111)	Spain (211.3)

(1) Germany, Greece and Cyprus, not available.

(2) Germany, Greece, Cyprus and the Netherlands, not available.

(3) Greece, Cyprus, Poland and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

LABOUR AND PRODUCTIVITY

Real estate services in the EU-15 had a more balanced workforce in gender terms than services as a whole, with male employment equivalent to 51.4 % of the total in 2002, compared to a services' average of 56.3 %. This was notably not the case in Austria, where male employment in this sector accounted for just 29.8 % of the total workforce, compared to a services average of 49.5 %. The highest proportion of men in the real estate services workforce was recorded in Malta (73.9 %), while in all other Member States ⁽²²⁾ male employment ranged between 40 and 70 %.

The proportion of the EU-15 real estate services' workforce that was self-employed was 19.8 %, just above the services' average of 17.3 %. Paid employees made up 79.3 % of the EU-15 workforce, a share that exceeded 90 % in Denmark, the Baltic States and Slovakia, and only dipped below 60 % in Italy (48.8 %) ⁽²³⁾.

Part-time employment was quite common in real estate services, more so than in all of the business economy NACE divisions except for retail trade, hotels and restaurants, and other business activities (NACE Divisions 52, 55 and 74). In the EU-15, part-time employment averaged 21.1 % of the real estate services' workforce in 2002, compared to a services' average of 19.9 %.

Average personnel costs in real estate services were EUR 28 000 per employee in the EU-25 in 2001, and EUR 32 200 per employee in the EU-15, the latter being EUR 4 700 higher than the non-financial services' average. In the majority of the Member States ⁽²⁴⁾, average personnel costs were close to the non-financial services' average, with only the Netherlands, Slovenia and Denmark recording a large difference.

⁽²²⁾ Greece, Lithuania, Poland and Slovenia, not available.

⁽²³⁾ Greece and Poland, not available.

⁽²⁴⁾ Germany, 2000; Greece and Cyprus, not available.

Table 15.17
Real estate activities (NACE Division 70)
Labour force characteristics, 2002

	Share of men		Share of full-time		Share of employees	
	Value (%)	Index (services=100)	Value (%)	Index (services=100)	Value (%)	Index (services=100)
EU-25	:	:	:	:	:	:
EU-15	51.4	91.3	78.9	98.5	79.3	98.1
BE	59.6	100.7	79.7	97.5	61.1	78.8
CZ	47.7	89.8	88.8	94.3	69.3	92.0
DK	61.7	103.5	79.7	100.6	92.2	105.2
DE	55.1	107.6	73.0	97.3	73.0	86.1
EE	65.4	126.0	85.8	90.7	94.9	103.7
EL	:	:	97.6	101.3	:	:
ES	42.6	73.9	87.8	96.5	69.1	92.9
FR	45.6	80.3	83.5	98.4	88.4	99.5
IE	53.5	101.0	86.6	109.2	71.1	84.3
IT	55.5	89.7	89.2	98.8	48.8	81.1
CY	56.9	107.6	58.7	63.1	65.8	87.1
LV	42.7	91.9	92.9	99.9	90.5	98.8
LT	:	:	88.4	96.7	92.2	109.8
LU	46.0	81.9	82.0	92.8	69.2	76.9
HU	48.3	89.8	89.9	93.7	80.3	99.5
MT	73.9	106.3	73.9	83.7	75.5	93.4
NL	59.8	102.1	64.2	110.7	86.8	98.9
AT	29.8	60.2	:	:	88.3	101.8
PL	:	:	:	:	:	:
PT	44.1	79.0	87.5	94.4	68.1	96.4
SI	:	:	100.0	105.7	81.5	93.9
SK	48.0	92.5	96.9	99.0	96.7	112.5
FI	60.5	113.9	82.7	99.3	88.1	101.0
SE	68.4	115.5	76.1	96.1	82.4	96.4
UK	51.7	92.1	76.6	106.8	81.9	93.4

Source: Eurostat, Labour Force Survey.

Table 15.18

Construction (NACE Division 45)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL (1)	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	30 499	13 766	20 318	168 903	1 265	8 766	142 584	144 809	:	143 771	1 334	1 280	1 124	2 768
Value added at factor cost (EUR million)	9 507	2 475	7 421	67 564	232	3 433	50 731	52 070	:	43 314	722	428	338	1 172
Purchases of goods and services (EUR million)	21 102	10 904	12 228	101 198	1 020	6 017	95 154	92 230	:	103 038	612	887	797	1 652
Gross investment in tangible goods (EUR million)	1 717	513	782	4 264	36	:	:	3 976	:	6 992	44	65	68	:
Number of persons employed (thousands)	278	376	184	1 988	31	92	1 953	1 458	:	1 529	27	43	69	27
App. labour productivity (EUR thous./pers. emp.)	34.2	6.6	40.3	34.0	7.5	37.2	26.0	35.7	:	28.3	27.1	10.0	4.9	43.9
Average personnel costs (EUR thous./employee)	30.0	6.8	34.7	31.1	5.0	16.1	22.1	32.0	:	23.1	:	3.1	3.4	30.8
Wage adjusted labour productivity (%)	114.3	96.3	116.1	109.3	149.8	230.8	117.6	111.5	:	122.5	:	326.4	143.5	142.5
Gross operating rate (%)	9.9	5.2	8.5	7.1	6.3	23.6	10.8	7.6	:	16.4	17.0	22.7	9.6	13.6
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	6 286	276	70 376	23 981	25 792	25 607	3 013	2 309	16 636	27 789	210 865	1 792	4 715	:
Value added at factor cost (EUR million)	1 154	58	23 000	10 645	14 862	6 409	793	459	5 605	10 045	76 354	408	1 276	:
Purchases of goods and services (EUR million)	5 216	174	48 466	13 520	9 634	20 349	2 133	1 762	11 344	18 723	136 321	1 480	4 034	:
Gross investment in tangible goods (EUR million)	534	7	1 842	822	992	1 543	37	77	537	1 072	5 439	150	681	:
Number of persons employed (thousands)	117	8	496	235	709	382	:	74	126	237	1 367	124	373	:
App. labour productivity (EUR thous./pers. emp.)	9.8	7.2	46.3	45.4	21.0	16.8	:	6.2	44.4	42.3	55.9	3.3	3.4	:
Average personnel costs (EUR thous./employee)	5.9	10.6	39.9	34.9	7.0	12.3	10.8	4.7	33.6	36.2	31.7	3.0	2.2	:
Wage adjusted labour productivity (%)	167.4	67.5	116.2	130.1	298.8	136.1	:	129.8	132.2	117.0	176.4	110.2	152.1	:
Gross operating rate (%)	7.5	6.5	8.9	12.3	43.5	9.6	4.2	4.7	0.0	9.3	18.1	6.5	10.1	:

(1) 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 15.19

Site preparation; building of complete constructions or parts thereof; civil engineering (NACE Groups 45.1 and 45.2)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL (1)	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	18 967	10 638	11 114	94 324	1 004	8 062	104 631	80 922	:	97 974	1 108	876	822	1 667
Value added at factor cost (EUR million)	5 546	1 857	3 437	35 166	167	3 158	35 360	25 798	:	27 456	614	300	244	686
Purchases of goods and services (EUR million)	13 468	8 442	7 030	58 795	831	5 570	72 153	54 874	:	72 038	494	595	588	1 022
Gross investment in tangible goods (EUR million)	916	375	490	2 659	27	:	:	2 386	:	5 120	38	46	48	:
Number of persons employed (thousands)	135	261	79	930	22	80	1 277	698	:	821	22	26	48	15
App. labour productivity (EUR thous./pers. emp.)	41.2	7.1	43.7	37.8	7.5	39.5	27.7	37.0	:	33.5	27.8	11.4	5.1	46.2
Average personnel costs (EUR thous./employee)	35.1	6.8	37.1	34.7	4.9	16.6	22.5	32.6	:	24.4	:	3.7	3.7	31.2
Wage adjusted labour productivity (%)	117.4	105.2	117.7	109.1	152.9	237.8	123.3	113.4	:	137.1	:	308.6	137.5	148.0
Gross operating rate (%)	8.6	4.8	6.8	5.1	5.9	23.8	10.4	6.0	:	15.0	17.6	23.2	8.4	14.0
	HU	MT	NL	AT	PL	PT	SI	SK (2)	FI (1)	SE	UK	BG	RO	TR
Turnover (EUR million)	5 063	176	46 510	14 532	19 438	21 169	2 094	1 175	11 139	17 324	149 020	1 455	3 562	:
Value added at factor cost (EUR million)	853	14	13 609	6 209	12 148	5 083	536	252	3 357	5 757	49 309	356	940	:
Purchases of goods and services (EUR million)	4 282	118	33 775	8 472	6 835	17 211	1 506	858	8 109	12 387	101 610	1 184	3 152	:
Gross investment in tangible goods (EUR million) (3)	489	6	1 211	549	877	1 304	27	44	414	803	3 560	99	610	:
Number of persons employed (thousands)	85	4	265	120	482	284	:	:	77	128	812	103	275	:
App. labour productivity (EUR thous./pers. emp.)	10.1	3.4	51.3	51.7	25.2	17.9	:	:	43.6	45.1	60.7	3.5	3.4	:
Average personnel costs (EUR thous./employee)	6.0	10.1	42.8	39.9	7.1	12.5	11.3	4.1	31.4	36.4	33.3	3.3	2.3	:
Wage adjusted labour productivity (%)	167.4	33.6	119.9	129.4	354.9	143.0	:	:	138.7	123.7	182.6	105.2	149.0	:
Gross operating rate (%)	6.9	-3.8	8.0	10.8	48.0	9.5	3.2	0.8	0.0	9.4	16.9	6.3	9.5	:

(1) 2000.

(2) 1999.

(3) Bulgaria, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 15.20

**Building installation; building completion; renting of construction or demolition equipment with operator
(NACE Groups 45.3, 45.4 and 45.5)
Main indicators, 2001**

	BE	CZ	DK	DE	EE	EL (1)	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	11 532	3 128	9 204	74 579	:	704	37 953	63 887	:	45 797	226	404	302	1 101
Value added at factor cost (EUR million)	3 961	619	3 984	32 398	:	275	15 371	26 272	:	15 858	108	128	94	486
Purchases of goods and services (EUR million)	7 634	2 462	5 198	42 403	:	447	23 002	37 356	:	31 000	117	293	209	630
Gross investment in tangible goods (EUR million)	801	138	293	1 605	:	:	1 590	:	:	1 872	6	18	20	:
Number of persons employed (thousands)	143	115	106	1 058	:	12	676	761	:	708	4	17	21	12
App. labour productivity (EUR thous./pers. emp.)	27.7	5.4	37.7	30.6	:	22.4	22.7	34.5	:	22.4	24.1	7.8	4.5	41.0
Average personnel costs (EUR thous./employee)	24.4	7.1	32.7	27.6	:	12.5	21.3	31.5	:	21.2	:	2.1	2.8	30.2
Wage adjusted labour productivity (%)	113.2	76.0	115.1	110.8	:	179.0	106.7	109.8	:	105.9	:	378.9	162.6	135.5
Gross operating rate (%)	12.2	6.6	10.5	9.7	:	21.5	11.8	9.6	:	19.2	14.3	21.5	12.7	13.0
	HU	MT	NL	AT	PL	PT	SI	SK (2)	FI (1)	SE	UK	BG	RO	TR
Turnover (EUR million)	1 223	99	23 866	9 449	6 354	4 438	919	196	4 046	10 464	61 845	337	1 153	:
Value added at factor cost (EUR million)	301	44	9 391	4 437	2 714	1 326	258	42	1 681	4 289	27 046	52	336	:
Purchases of goods and services (EUR million)	933	56	14 691	5 047	2 799	3 139	627	147	2 438	6 336	34 711	296	882	:
Gross investment in tangible goods (EUR million) (3)	45	1	631	273	115	239	10	11	132	269	1 879	11	71	:
Number of persons employed (thousands)	33	4	231	114	226	98	:	:	43	110	555	21	98	:
App. labour productivity (EUR thous./pers. emp.)	9.2	11.0	40.7	38.8	12.0	13.6	:	:	39.2	39.1	48.8	2.4	3.4	:
Average personnel costs (EUR thous./employee)	5.5	11.7	36.4	29.3	6.8	11.8	9.8	4.3	31.3	35.9	29.3	1.6	2.1	:
Wage adjusted labour productivity (%)	167.7	94.6	111.9	132.5	177.3	115.4	:	:	125.2	109.1	166.5	153.3	161.6	:
Gross operating rate (%)	10.1	24.9	10.7	14.7	29.8	9.9	6.6	1.7	0.0	9.3	21.2	7.0	12.1	:

(1) 2000.

(2) 1999.

(3) Bulgaria, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 15.21

**Real estate activities (NACE Division 70)
Main indicators, 2001**

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	5 203	1 856	8 253	76 447	439	:	54 532	68 527	1 681	25 303	:	364	292	551
Value added at factor cost (EUR million) (1)	1 984	528	5 567	51 304	157	:	17 871	25 100	947	11 238	:	263	131	161
Purchases of goods and services (EUR million) (1)	3 379	1 326	1 982	33 460	285	:	47 424	40 999	663	14 283	:	151	166	389
Gross investment in tangible goods (EUR million) (1)	1 298	997	2 843	21 515	162	:	9 264	22 008	669	4 267	:	192	182	:
Number of persons employed (thousands)	30	44	41	304	12	:	211	315	11	220	:	21	16	2
App. labour productivity (EUR thous./pers. emp.) (1)	65.2	12.1	134.6	168.5	13.1	:	84.6	79.6	85.4	51.0	:	12.4	7.9	106.1
Average personnel costs (EUR thous./employee) (1)	32.9	7.3	24.5	38.2	4.4	:	21.1	34.8	30.4	27.0	:	3.5	3.2	33.6
Wage adjusted labour productivity (%) (1)	198.2	166.3	548.3	441.2	297.1	:	401.2	228.9	281.3	189.3	:	349.1	246.3	315.5
Gross operating rate (%) (1)	26.7	15.5	57.3	58.7	24.9	:	27.1	24.4	46.1	40.7	:	51.6	28.4	22.3
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	1 202	89	24 329	6 529	8 041	4 528	190	500	4 424	18 760	52 322	94	284	:
Value added at factor cost (EUR million)	414	54	11 929	2 961	3 872	1 126	58	194	2 214	9 880	31 885	42	146	:
Purchases of goods and services (EUR million)	821	50	12 745	3 637	3 672	4 273	132	299	2 199	9 567	22 645	64	146	:
Gross investment in tangible goods (EUR million)	292	41	:	3 309	2 470	1 036	19	146	1 657	10 353	29 987	58	200	:
Number of persons employed (thousands)	23	2	71	29	:	34	:	16	20	75	383	10	19	:
App. labour productivity (EUR thous./pers. emp.)	17.8	22.6	167.2	101.5	:	33.1	:	11.8	108.5	131.8	83.3	4.3	7.5	:
Average personnel costs (EUR thous./employee)	7.4	6.8	45.1	32.4	9.1	15.5	14.1	5.2	30.3	36.1	31.4	2.3	2.6	:
Wage adjusted labour productivity (%)	239.5	334.9	370.3	313.4	:	213.2	:	227.4	358.1	365.4	265.2	188.6	285.4	:
Gross operating rate (%)	20.2	52.2	37.5	32.9	34.6	16.8	11.3	22.2	37.4	42.7	41.9	24.9	35.9	:

(1) Germany, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Motor trades



Motor vehicles and automotive fuel and lubricants are products with very different characteristics of purchase. While the latter may be bought frequently, the purchase of a motor vehicle normally implies a longer period of price and characteristics comparison from the part of the client and represents a major expenditure.

STRUCTURAL PROFILE

The EU-25 value added in the motor trades sector was EUR 125.8 billion in 2001 and represented 14.4 % of the distribution total (NACE Section G). For comparison, in the EU-15, value added was EUR 119.1 billion and represented the same share of the distribution total. The statistical impact of enlargement on employment in the motor trades sector can be seen in terms of the number of paid employees, where in the EU-15 there were 2.6 million employees in 2001, while in the EU-25 there were 2.9 million. The EU-25 motor trades sector accounted for 13.6 % of all employees in the distribution sector in 2001, less than its share of value added. As well as paid employees, there were a further 524 400 working proprietors and unpaid family workers in the EU-15 motor trades sector in 2001, bringing the total number of persons employed in the EU-15 to 3.1 million.

Within the EU-25 motor trades sector, the sale of motor vehicles (NACE Group 50.1) was the largest activity in terms of value added, representing 54.2 % of total value added of the sector in 2001. The maintenance and repair of motor vehicles (NACE Group 50.2) was the second largest activity (21.7 %). An analysis for EU-15 gives a very similar picture, with the share of value added for the sale of motor vehicles being 0.8 percentage points higher. In employment terms, the sale of motor vehicles accounted for 43.3 % of the number of persons employed in the EU-15's motor trades sector, while maintenance and repair of motor vehicles accounted for 30.5 %.

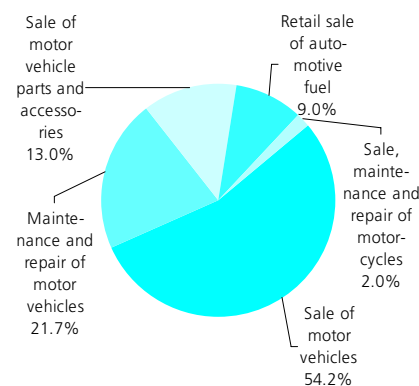
In 2001 the United Kingdom registered the highest value added of the EU-25 motor trades sector, at EUR 32.8 billion, followed by Germany (EUR 24.6 billion in 2000). The motor trades sector employed 609 400 persons in the United Kingdom in 2001 and 608 400 in Germany in 2000. Among the 10 new Member States Poland registered the highest value added (EUR 4.5 billion) and number of persons employed (206 300) in this sector.

Motor trades (NACE Division 50) covers the wholesale, retail sale and repair of motor vehicles and motorcycles, as well as the retailing of automotive fuel 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.

Figure 16.1
Sale, maintenance and repair of motor vehicles (NACE Division 50)
Share of value added at factor cost, EU-25, 2001



Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 16.1
Sale, maintenance and repair of motor vehicles (NACE Division 50)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (32.8)	Portugal (150)	United Kingdom (609.4)
2	France (16.2)	Lithuania (145)	Italy (455.1)
3	Italy (12.1)	Slovenia (134)	France (450.4)
4	Spain (9.5)	Poland (122)	Spain (350.2)
5	Netherlands (6.4)	Hungary (111)	Poland (206.3)

(1) Germany and Greece, not available.

(2) Germany, Greece, Cyprus and the Netherlands, not available.

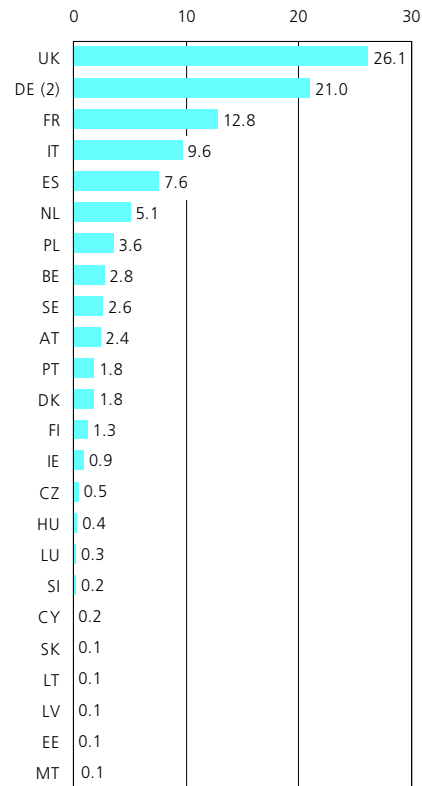
(3) Germany, Greece and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

The motor trades sector is dominated by micro (less than 10 persons employed) and small enterprises (between 10 and 49 persons employed). Indeed each of these size-classes accounted for over one quarter of the sector's value added, collectively contributing 55.5 %. This proportion was more than these size-classes contributed in either wholesale or retail trade; in fact, looking at all of the non-financial services divisions, only real estate services and hotels and restaurants reported a larger share of value added generated by the two smallest size-classes in 2001. Among countries with available data, in Italy and Cyprus, micro enterprises represented more than half of the value added in the motor trades sector. A similar situation was observed in Ireland and Slovakia, but for small enterprises. Large enterprises contributed a particularly low proportion of total value added in Cyprus (0.0 %) and Italy (0.5 %) compared with the EU-25 average (23.9 %), and a relatively high share in the United Kingdom (38.9 %).

The largest part of the motor trades workforce was within enterprises with less than 10 persons employed, as they provided 42.6 % of EU-25 employment in 2001, a similar share to their counterparts in the retail trade sector. Micro enterprises accounted for more than 70 % of sectoral employment in Italy and Cyprus, while in Hungary more than 50 % of those employed were working in small enterprises.

Figure 16.2
Sale, maintenance and repair of motor vehicles (NACE Division 50)
Share of EU-25 value added, 2001 (%) (1)



(1) Greece, not available.

(2) 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 16.2
Sale, maintenance and repair of motor vehicles (NACE Division 50)
Value added at factor cost and persons employed, by enterprise size-class, 2001 (% of total)

	Micro enterprises		Small enterprises		Medium-sized enterprises		Large enterprises	
	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed
EU-25	27.6	42.6	27.9	30.2	20.6	16.3	23.9	10.8
EU-15	28.2	41.4	27.2	30.5	19.8	16.3	24.9	11.7

Source: Eurostat, Structural Business Statistics (theme4/sbs/sizclass).

LABOUR AND PRODUCTIVITY

According to LFS data, the motor trades sector is rather different from the distribution sector (NACE Section G) as a whole as regards its employment characteristics. This is notably the case regarding the gender breakdown and the incidence of full-time employment. In 2002 men represented 82.0 % of the persons employed in EU-15's motor trades sector, considerably higher than the equivalent share in wholesale trades, which was 13.7 percentage points lower, or in retail trade (41.7 points lower). This general pattern of a high male employment rate was observed in all of the countries for which data are available. Furthermore, full-time employment (90.7 %) was higher in the EU-15 motor trades sector than in both of the other distributive activities, and in all of the countries for which data are available motor trades showed a higher proportion of full-time employment than in retail trade, notable exception Latvia.

The EU-15 motor trades sector was also characterised by a relatively high share of self-employment (20.3 %), the fourth highest of any division in the non-financial services business economy, just below the retail trade sector.

In motor trades, apparent labour productivity was EUR 38 000 per person employed in the EU-15 in 2001. The activity that contributed the most to the productivity of the motor trades sector was the sale of motor vehicles (NACE Group 50.1). EU-15 average personnel costs were EUR 26 100 per employee in 2001; the highest average was recorded for the sale of motor vehicles (EUR 29 400) and the lowest for the retail sale of automotive fuel (EUR 17 700). Value added in the EU-15 motor trades sector represented 145.4 % of personnel costs (after adjustment for the ratio of the number of persons employed to the number of employees), with the sale of motor vehicles (164.7 %) and the retail sale of automotive fuel (163.1 %) recording higher ratios. Poland reported that value added represented 328.6 % of personnel costs in the motor trades sector, the highest ratio for any Member State, followed by Latvia ⁽¹⁾.

⁽¹⁾ Germany, Greece and Slovenia, not available.

Table 16.3
Sale, maintenance and repair of motor vehicles (NACE Division 50)
Labour force characteristics, 2002

	Share of men		Share of full-time		Share of employees	
	Value (%)	Index (services=100)	Value (%)	Index (services=100)	Value (%)	Index (services=100)
EU-25	:	:	:	:	:	:
EU-15	82.0	145.5	90.7	113.2	77.2	95.6
BE	80.6	136.1	92.9	113.7	69.6	89.7
CZ	80.3	151.3	96.7	102.7	69.2	91.9
DK	76.3	128.0	82.6	104.3	84.5	96.4
DE	77.8	151.8	88.2	117.6	87.3	102.9
EE	86.8	167.4	100.0	105.6	79.4	86.8
EL	87.6	142.6	96.8	100.4	52.2	90.3
ES	87.2	151.1	96.3	105.8	78.0	104.8
FR	80.3	141.4	92.9	109.5	83.7	94.3
IE	80.3	151.7	86.8	109.4	76.2	90.4
IT	86.1	139.1	95.9	106.1	51.5	85.7
CY	83.4	157.7	91.1	97.9	62.7	83.0
LV	73.8	158.8	91.2	98.2	72.7	79.4
LT	87.9	168.3	91.2	99.8	83.1	99.0
LU	77.7	138.3	93.7	106.0	89.7	99.7
HU	83.0	154.4	98.4	102.5	82.2	101.9
MT	91.8	132.2	94.1	106.6	59.6	73.8
NL	83.1	141.8	74.3	128.2	82.6	94.1
AT	77.2	156.1	:	:	89.0	102.6
PL	:	:	:	:	:	:
PT	85.6	153.4	96.0	103.6	69.8	98.7
SI	87.7	166.2	98.7	104.3	81.9	94.3
SK	90.0	173.5	98.8	100.9	80.4	93.6
FI	82.9	156.0	91.9	110.4	82.5	94.5
SE	81.5	137.5	82.5	104.1	82.4	96.4
UK	81.4	145.1	87.2	121.5	83.2	94.9

Source: Eurostat, Labour Force Survey.

16.1: SALE AND REPAIR OF MOTOR VEHICLES

These activities cover the wholesale, retail and commission sale of new and used motor vehicles (NACE Group 50.1) and motorcycles (part of Group 50.4), as well as parts and accessories (Group 50.3). The distribution of lorries, trailers and caravans is also included.

This subchapter also covers the maintenance and repair of motorcycles (part of Group 50.4) and of motor vehicles (Group 50.2). 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 22).

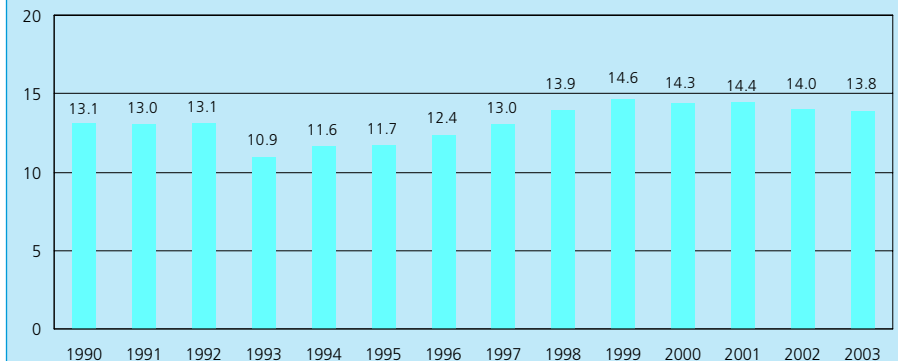
The various activities covered by this subchapter display different structural characteristics. The retail sale of motor vehicles is a sector that is highly influenced by multinational vehicle manufacturers which supply resellers. Two distinct markets can be distinguished: the final consumer (households) and large-scale business customers (who may buy directly from manufacturers). Demand for new vehicles is highly linked to the general level of the economy - see Figure 16.3 for information on the number of new car registrations that are made in the EU each year.

Changes in the sector are expected to come from the new block exemption regulations (BER) that came into effect in October 2003 ⁽²⁾. The new BER deals with the way carmakers sell their vehicles in the EU, as well as how they are serviced and spare parts are sourced. The aim of this new BER is to provide better transparency for consumers and to increase competition in the sector.

The repair of motor vehicles and provision of parts and accessories, as well as being carried out by new vehicle resellers, is dominated by small enterprises, supplemented by specialised, fast, nationwide or even international enterprises.

⁽²⁾ Commission Regulation (EC) No 1400/2002 of 31 July 2002 on the application of Article 81(3) of the Treaty to categories of vertical agreements and concerted practices in the motor vehicle sector.

Figure 16.3
New car registrations, EU-15 (millions)



Source: ACEA.

Table 16.4
Sale, maintenance and repair of motor vehicles (NACE Groups 50.1 to 50.4)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (30.2)	Portugal (150)	United Kingdom (546.4)
2	France (15.5)	Slovenia (111)	France (423.2)
3	Italy (10.7)	United Kingdom (111)	Italy (395.0)
4	Spain (8.2)	Belgium (105)	Spain (302.3)
5	Netherlands (6.0)	Austria (104)	Poland (175.5)

(1) Germany, Estonia and Greece, not available.

(2) Germany, Estonia, Greece, Cyprus and the Netherlands, not available.

(3) Germany, Estonia, Greece and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

STRUCTURAL PROFILE

Value added reached EUR 114.4 billion in the sale and repair of motor vehicles sector in the EU-25 in 2001, just over 90 % of total value added in the motor trades sector. There were 2.8 million persons employed in this sector in the EU-15 in 2001, just under 90 % of the motor trades total. Looking at the EU-25, there were 2.6 million employees, of which 2.3 million were accounted for by the EU-15 Member States.

As was noted in the overview, the sale (NACE Group 50.1) and maintenance and repair (NACE Group 50.2) of motor vehicles are the largest activities in motor trades in the EU-25 in terms of value added and employment. A comparison of the importance of these two groups between countries gives an indication of the importance of new and replacement car markets compared with repair and maintenance markets. In the EU-25, the sale of motor vehicles generated 2.5 times as much value added as maintenance and repair in 2001. This ratio was highest in Hungary (7.9 times), Luxembourg (6.0) and the Netherlands (5.4) and lowest in Italy and Cyprus where the repair and maintenance of vehicles generated slightly more value added than motor sales ⁽³⁾.

⁽³⁾ Germany, 2000; Greece, not available.

The United Kingdom accounted for the highest proportion of EU-25 value added for the sale and repair of motor vehicles (26.4 %), followed by Germany (20.4 %, in 2000) and France (13.5 %); all remaining countries had shares below 10 %.

The structure of the subsector in terms of enterprise size-classes showed that micro (1 to 9 persons employed) and small (10 to 49 persons employed) enterprises were dominant in these activities. Indeed, more than 70 % of the persons employed in the EU-25 were working in these two enterprise size-classes, which was well above the 60.8 % average for the whole of distribution.

The latest survey on car prices ⁽⁴⁾ (in the EU-15) was carried out by the Directorate-General for Competition of the European Commission in May 2003. This was five months before the new competition rules had been fully implemented. According to this report, the scale of price changes was limited between the surveys conducted in November 2002 and May 2003. National price differences between the highest and lowest price were 2 percentage points lower (8.6 %) than in May 2002. This was due, at least in part, to the depreciation of the pound versus the euro, as the United Kingdom was no longer the most expensive country for buying a car in euro terms in May 2003. A comparison based on a pre-tax basis shows that car prices were lowest in Denmark, Greece and the Netherlands in May 2003. Within the euro-zone, Germany and Austria were the countries where prices were among the highest.

⁽⁴⁾ For further information concerning the survey, see the Competition Directorate-General of the European Commission at:
http://europa.eu.int/comm/competition/index_en.html.

LABOUR AND PRODUCTIVITY

Apparent labour productivity in the EU-15 sale and repair of motor vehicles sector was EUR 39 000 per person employed in 2001. For the same year, average personnel costs were EUR 27 100 per employee in the EU-15 and EUR 25 100 per employee in the EU-25. Those values were slightly higher than average personnel costs for the whole of the distribution sector. Value added represented 144.0 % of personnel costs in the sector in EU-15, less than the ratio for the retail sale of automotive fuel (NACE Group 50.5, 163.1 %), but very close to the average for the whole of the distribution sector.

Table 16.5
Sale, maintenance and repair of motor vehicles (NACE Groups 50.1 to 50.4)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Sale, maintenance and repair of motor vehicles	39.0	144.0	27.1
Sale of motor vehicles	48.4	164.7	29.4
Maintenance and repair of motor vehicles	27.3	119.7	22.8
Sale of motor vehicle parts and accessories	37.4	135.5	27.6
Sale, maintenance and repair of motorcycles and related parts and accessories	30.8	127.8	24.1

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

16.2: RETAIL SALE OF AUTOMOTIVE FUEL

This specialist 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.

Activity within this sector is highly influenced by the price of raw materials (essentially crude oil) from upstream suppliers and government decisions concerning taxes. When the price of crude oil fluctuates, the price paid by retailers and consumers is also likely to change. One of the most significant changes in the retail sale of automotive fuel sector has been the evolution from the sale of a single product to a diverse range of products, such as fresh food, beverages, newspapers and other services (car washing, cash withdrawal).

STRUCTURAL PROFILE

The value added generated in the EU-25's retail sale of automotive fuel sector was EUR 11.4 billion in 2001, which represented 9.0 % of total value added in the motor trades sector. For comparison, the equivalent value for the EU-15 was EUR 9.5 billion, leading to a share of 8.0 % of the EU-15's value added in the motor trades sector. In the EU-15, the number of persons employed in the retail sale of automotive fuel sector reached 329 800, which represented 10.5 % of the motor trades total. There were 321 600 employees in the retail sale of automotive fuel sector in the EU-25, representing an 11.0 % share of the total number of employees in the motor trades sector.

Table 16.6
Retail sale of automotive fuel (NACE Group 50.5)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (2.7)	Lithuania (634)	United Kingdom (63.0)
2	Italy (1.5)	Poland (396)	Italy (60.0)
3	Poland (1.3)	Latvia (378)	Spain (47.9)
4	Spain (1.3)	Slovenia (357)	Germany (36.8)
5	France (0.7)	Czech Republic (268)	Poland (30.8)

(1) Germany and Greece, not available.

(2) Germany, Greece, Cyprus and the Netherlands, not available.

(3) Greece and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

The United Kingdom registered the highest value added in 2001 (EUR 2.7 billion) while relatively low figures were observed in France, Germany (data available for 2000), and to some extent, Austria. Among the 10 new Member States, Poland (EUR 1.3 billion) registered value added that was equivalent to half the level recorded in the United Kingdom. In terms of employment the United Kingdom also had the largest share, with 63 000 persons employed in the retail sale of automotive fuel sector. Nonetheless, Italy (60 000) and Spain (47 900) registered relatively high levels of employment in this sector, while they recorded only about half as much value added as the United Kingdom.

Annual short-term statistics show that while the EU-25's turnover index for the whole of the motor trades sector rose between 2000 and 2002, there was a decline in turnover during the same period in the retail sale of automotive fuel sector. Indeed, the indices for the EU-25 and EU-15 were both at lower levels in 2002 than they had been in 2000 (falling respectively by around 4 and 6 percentage points). For comparison, turnover in the whole of the motor trades sector increased between 2000 and 2002 by about 5 percentage points in the EU-25 and by 4 points in the EU-15. Looking across countries, turnover in the retail sale of automotive fuel sector appeared to increase in the majority of the 10 new Member States, whereas it fell in most of the EU-15 countries. Nevertheless, France, Luxembourg, the Netherlands and, to a lesser extent, Sweden, reported rising turnover indices on the basis of a comparison between 2000 and 2002.

Turnover per enterprise (as shown in Figure 16.5) provides an indication of the average size of each enterprise. Slovenia, Slovakia and Luxembourg were at the top of the country ranking ⁽⁵⁾, indicating larger enterprises, on average, in these countries than elsewhere in the EU-25. Low figures registered in Germany (data for 2000) and Austria can in part be explained by some retailers acting as agents rather than resellers, so only their commissions are counted in turnover, not the value of the fuel that is sold. In the case of France, a high proportion of automotive fuel is sold by hypermarkets and supermarkets, in other words stores that are not specialised in the retail sale of motor fuels. For these enterprises, their turnover is considered as part of their main activity (which is normally retail trade).

⁽⁵⁾ Germany, 2000; Greece, not available.

In terms of enterprise size-classes, the retail sale of automotive fuel had a majority of micro (with less than 10 persons employed) and small enterprises (between 10 and 49 persons employed), more so than the motor trades sector as a whole. Indeed, in some countries more than 60 % of total value added was generated by these two size-classes in 2001. In particular, micro enterprises tended to dominate the sector, and their contribution to value added was particularly high in Cyprus, Italy, Austria and Finland. In Italy micro and small enterprises together generated almost all of the value added and in Cyprus there were no medium-sized (between 50 and 249 persons employed) or large enterprises (with 250 or more persons employed) in this sector. In contrast, in Denmark and Lithuania, micro enterprises generated a smaller share of value added in this sector than in motor trades as a whole.

In terms of employment, the dominance of micro and small enterprises was confirmed by the fact that around 80 % of the EU-25's employment in the retail sale of automotive fuel sector was found in these two size-classes.

LABOUR AND PRODUCTIVITY

Apparent labour productivity was EUR 28 900 per person employed in the EU-15's retail sale of automotive fuel sector in 2001. Across countries, Luxembourg registered the highest apparent labour productivity in the retail sale of automotive fuel (6). Average personnel costs were EUR 15 700 per employee in the EU-25 and EUR 17 700 in the EU-15 in 2001 in the retail sale of automotive fuel sector. The highest average personnel costs per employee were recorded in Sweden and the lowest in Lithuania (7). Among the 10 new Member States, Slovenia was the only country to report higher average personnel costs than the EU-25 and the EU-15 averages.

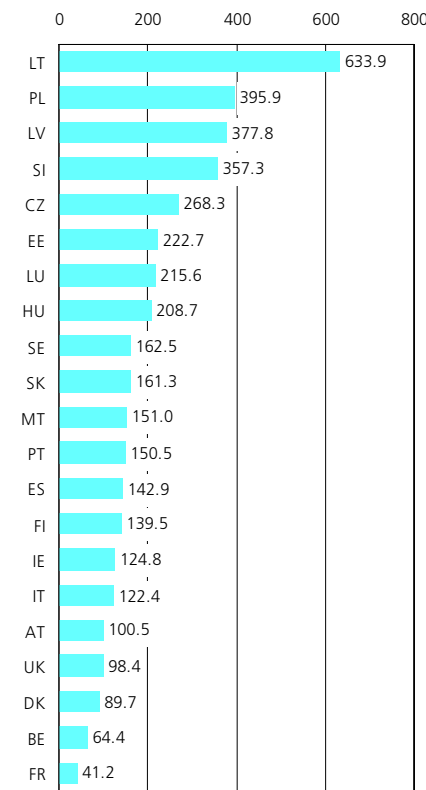
Wage adjusted labour productivity was 163.1 % in the EU-15. This ratio (which represents the ratio of value added to personnel costs) was comparable to that recorded for the sale of motor vehicles (NACE Group 50.1) and was higher than that recorded for other activities in the motor trades sector. The lowest wage adjusted labour productivity ratios were recorded in France (110.2 %) and Italy (122.9 %) (8).

(6) Germany, 2000; Greece and Slovenia, not available.

(7) Germany, 2000; Greece, not available.

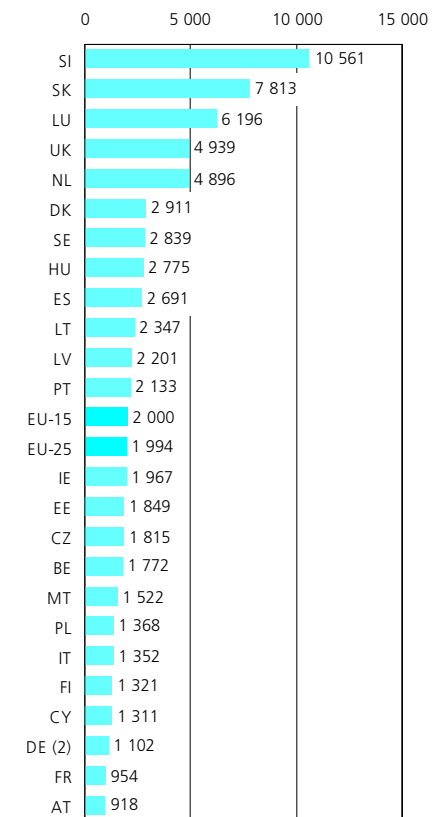
(8) Germany, 2000; Greece and Slovenia, not available.

Figure 16.4
Retail sale of automotive fuel (NACE Group 50.5)
Value added specialisation ratio relative to non-financial services, 2001 (EU-25=100) (1)



(1) Germany, Greece, Cyprus and the Netherlands, not available.
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 16.5
Retail sale of automotive fuel (NACE Group 50.5)
Turnover per enterprise, 2001 (EUR thousand) (1)



(1) Greece, not available.
(2) 2000.
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms).

Table 16.7

Sale, maintenance and repair of motor vehicles (NACE Division 50)
Main indicators, 2001

	BE	CZ	DK	DE (1)	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	50 720	8 297	18 859	143 211	1 172	:	83 080	132 220	13 823	134 398	1 320	968	1 454	3 395
Value added at factor cost (EUR million)	3 485	633	2 282	24 550	104	:	9 518	16 158	1 145	12 125	199	126	160	317
Purchases of goods and services (EUR million)	47 460	7 572	14 486	116 810	1 090	:	74 869	117 075	12 512	125 096	1 002	871	1 306	3 079
Gross investment in tangible goods (EUR million)	789	239	265	2 447	32	:	2 022	1 905	196	1 907	29	64	50	:
Number of persons employed (thousands)	81	85	64	608	11	:	350	450	31	455	8	16	30	6
App. labour productivity (EUR thous./pers. emp.)	43.2	7.4	35.4	40.4	9.6	:	27.2	35.9	36.4	26.6	23.9	8.1	5.3	49.0
Average personnel costs (EUR thous./employee)	35.4	6.9	27.9	26.6	5.3	:	19.7	29.8	23.6	23.1	18.1	2.9	2.5	29.9
Wage adjusted labour productivity (%)	121.8	107.7	126.8	151.6	181.5	:	137.7	120.4	154.2	115.1	132.3	275.7	211.2	163.6
Gross operating rate (%)	2.8	3.0	3.6	6.7	4.1	:	4.5	2.7	3.8	5.0	6.4	8.5	6.3	4.2
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	6 421	465	66 157	24 069	16 162	25 044	3 824	2 386	13 242	29 510	217 827	1 640	2 826	:
Value added at factor cost (EUR million)	508	79	6 442	2 984	4 485	2 283	271	172	1 633	3 291	32 844	175	337	:
Purchases of goods and services (EUR million)	5 938	431	57 139	21 036	12 936	23 180	3 506	2 217	11 565	26 454	186 049	1 477	2 574	:
Gross investment in tangible goods (EUR million)	176	12	877	365	415	801	144	102	237	634	3 352	107	186	:
Number of persons employed (thousands)	41	4	157	80	206	125	:	13	35	80	609	35	73	:
App. labour productivity (EUR thous./pers. emp.)	12.4	21.2	41.0	37.4	21.7	18.2	:	12.8	46.0	41.2	53.9	5.0	4.6	:
Average personnel costs (EUR thous./employee)	5.7	11.2	28.2	29.7	6.6	13.1	13.3	5.2	31.0	33.3	27.0	1.8	2.1	:
Wage adjusted labour productivity (%)	217.5	189.4	145.2	126.1	328.6	138.8	:	244.8	148.6	123.8	199.9	275.0	214.9	:
Gross operating rate (%)	4.3	11.4	4.1	3.4	22.8	3.6	1.9	4.3	5.0	3.4	8.4	7.5	6.1	:

(1) 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 16.8

Sale, maintenance and repair of motor vehicles (NACE Groups 50.1 to 50.4)
Main indicators, 2001

	BE	CZ	DK	DE (1)	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	46 720	5 831	16 416	137 163	:	:	69 153	126 648	12 008	102 225	1 009	470	851	2 050
Value added at factor cost (EUR million)	3 285	462	2 079	23 350	:	:	8 242	15 458	1 003	10 662	182	72	96	253
Purchases of goods and services (EUR million)	43 662	5 283	12 233	112 074	:	:	62 301	112 182	10 831	94 369	713	420	768	1 800
Gross investment in tangible goods (EUR million) (2)	687	146	245	2 388	:	:	1 701	1 801	164	1 704	28	45	29	:
Number of persons employed (thousands)	75	75	52	565	:	:	302	423	24	395	7	11	23	5
App. labour productivity (EUR thous./pers. emp.)	43.8	6.1	40.1	41.3	:	:	27.3	36.5	42.1	27.0	24.7	6.8	4.1	50.7
Average personnel costs (EUR thous./employee)	36.0	7.0	32.0	27.5	:	:	20.1	30.2	26.6	23.5	18.9	2.7	2.2	31.7
Wage adjusted labour productivity (%)	121.7	87.2	125.3	150.0	:	:	135.7	120.9	158.5	115.0	130.6	251.3	185.0	160.2
Gross operating rate (%)	2.8	2.2	3.8	6.6	:	:	4.8	2.8	3.9	5.5	7.8	9.6	6.0	5.3
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	5 222	334	58 348	22 400	11 461	20 735	2 166	1 800	11 758	23 702	187 783	649	1 830	:
Value added at factor cost (EUR million)	421	68	6 007	2 722	3 170	2 076	206	144	1 438	2 765	30 174	65	292	:
Purchases of goods and services (EUR million)	4 823	305	49 766	19 631	8 731	19 076	1 949	1 663	10 272	21 111	158 782	610	1 599	:
Gross investment in tangible goods (EUR million)	140	11	856	337	264	761	97	82	213	562	3 068	32	125	:
Number of persons employed (thousands)	35	3	141	70	175	109	:	12	29	66	546	22	59	:
App. labour productivity (EUR thous./pers. emp.)	11.9	19.8	42.5	38.8	18.1	19.0	:	12.4	49.5	41.6	55.2	3.0	4.9	:
Average personnel costs (EUR thous./employee)	5.8	11.2	29.2	30.8	6.8	13.7	11.9	5.3	32.8	34.6	28.2	1.7	2.2	:
Wage adjusted labour productivity (%)	206.4	176.1	145.3	125.7	267.1	139.2	:	233.8	150.9	120.5	196.0	175.6	223.9	:
Gross operating rate (%)	4.2	13.2	4.3	3.2	22.0	4.1	2.4	4.6	5.1	3.4	8.8	5.8	8.8	:

(1) 2000.

(2) The Czech Republic, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 16.9

Retail sale of automotive fuel (NACE Group 50.5)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	4 000	2 466	2 443	5 506	425	:	13 928	5 573	1 815	32 173	311	497	603	1 345
Value added at factor cost (EUR million) (1)	201	172	203	1 201	20	:	1 276	701	142	1 463	17	54	63	65
Purchases of goods and services (EUR million) (1)	3 799	2 288	2 252	4 736	403	:	12 569	4 893	1 681	30 727	289	452	538	1 279
Gross investment in tangible goods (EUR million) (1)	102	82	20	59	12	:	321	104	31	203	1	19	21	:
Number of persons employed (thousands)	6	10	12	37	3	:	48	27	8	60	1	5	7	2
App. labour productivity (EUR thous./pers. emp.) (1)	35.1	17.6	16.3	27.9	6.8	:	26.6	25.8	18.6	24.4	17.7	10.7	9.2	43.1
Average personnel costs (EUR thous./employee) (1)	24.9	6.2	12.4	14.1	4.2	:	17.8	23.4	14.1	19.8	12.9	3.4	3.3	23.8
Wage adjusted labour productivity (%) (1)	140.7	282.0	131.1	198.0	164.3	:	149.5	110.2	131.6	122.9	137.4	317.1	276.6	181.0
Gross operating rate (%) (1)	3.2	4.9	2.3	11.1	1.9	:	3.3	1.9	3.0	3.2	1.8	7.5	6.7	2.5
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	1 199	131	7 809	1 669	4 702	4 309	1 658	586	1 484	5 808	30 044	991	996	:
Value added at factor cost (EUR million)	87	12	435	263	1 315	208	66	28	195	527	2 670	110	46	:
Purchases of goods and services (EUR million)	1 116	126	7 373	1 406	4 205	4 105	1 558	555	1 293	5 343	27 267	867	974	:
Gross investment in tangible goods (EUR million)	36	2	21	28	151	40	47	20	24	71	284	75	61	:
Number of persons employed (thousands)	6	0	16	10	31	16	:	2	6	14	63	13	14	:
App. labour productivity (EUR thous./pers. emp.)	15.3	36.9	27.5	27.4	42.7	12.9	:	15.9	30.4	38.9	42.4	8.3	3.3	:
Average personnel costs (EUR thous./employee)	5.2	11.2	19.1	20.0	6.0	10.1	21.9	4.9	23.4	27.6	16.6	2.0	1.9	:
Wage adjusted labour productivity (%)	295.4	329.8	144.2	137.2	710.3	128.3	:	326.0	129.9	141.1	255.1	422.0	170.2	:
Gross operating rate (%)	4.8	6.8	2.3	6.3	25.0	1.2	1.2	3.3	3.5	3.0	5.8	8.6	1.2	:

(1) Germany, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

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 type of product traded: agricultural products, consumer goods, intermediate goods, machinery and equipment and other products.

In the supply chain, wholesalers are located between producers and users, providing know-how and knowledge in markets for which they have expertise. Doing so, wholesalers therefore undergo pressure both from producers and from retailers. Their way of competing with other wholesalers is by providing more and more sophisticated value added services, for example using electronic exchange of data with their partners for stock management. The services they can provide range from basic storage and break of bulk, sorting, grading and logistics to pre- and post-production operations (for instance, labelling, packaging, bottling and installation). Nevertheless, manufacturers may try to increase their margins by limiting the intervention of intermediaries, and reaching the consumer directly; this trend has been helped by the development of e-commerce.

STRUCTURAL PROFILE

Value added in the wholesale trade sector was EUR 416.5 billion in the EU-25 and EUR 381.1 billion in the EU-15 in 2001, respectively 47.5 % and 46.2 % of total value added in the whole of the distribution sector. The employment level was 7.3 million employees in the EU-25 and 1 million less in the EU-15 (again in 2001). Adding working proprietors and unpaid family workers, there were 8.5 million persons employed in the EU-25's wholesale trade sector ⁽¹⁾ and 7.3 million working in the EU-15. For comparison, this equated to 31.5 % of the total workforce in the distribution sector in the EU-25 ⁽²⁾ and 31.1 % of the total in the EU-15 (lower shares than those recorded in terms of value added).

⁽¹⁾ Slovenia, number of employees.

⁽²⁾ Slovenia, number of employees.

The activities in NACE Division 51 cover all wholesale trade except that concerning motor trade. 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;
- 51.6: wholesale of machinery, equipment and supplies;
- 51.7: other wholesale.

Table 17.1 Wholesale trade and commission trade, except of motor and motorcycles (NACE Division 51)

Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (83.7)	Poland (212)	United Kingdom (1 237.3)
2	France (55.1)	Latvia (175)	Italy (1 054.7)
3	Italy (43.5)	Czech Republic (148)	France (1 024.2)
4	Spain (33.2)	Slovakia (142)	Spain (968.8)
5	Netherlands (29.4)	Portugal (138)	Poland (644.9)

(1) Germany and Greece, not available.

(2) Germany, Greece, Cyprus and the Netherlands, not available.

(3) Germany, Greece and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

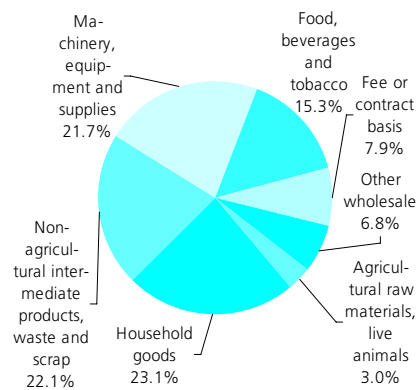
Among the activities that compose the wholesale trade sector, own-account wholesale trade accounted for 92.1 % of the EU-25's wholesale trade value added, and wholesale on a fee or contract basis for the remainder. Within own-account wholesaling, the wholesale of household goods (NACE Group 51.4), non-agricultural intermediate products, waste and scrap (NACE Group 51.5), and machinery, equipment and supplies (NACE Group 51.6) each accounted for slightly more than one fifth of turnover in the EU-25.

Among the Member States, wholesale trade value added was highest in the United Kingdom (EUR 83.7 billion, which equated to 20.1 % of the EU-25 total in 2001), Germany (2000: EUR 71.9 billion, 18.6 %) and France (EUR 55.1 billion, 13.2 %). Among the 10 new Member States, Poland had the largest wholesale trade sector generating EUR 25.8 billion of value added (6.2 % of the EU-25 total). In terms of employment, the five largest Member States each accounted for similar shares of total EU-25 employment in 2001, ranging from 11.4 % in Spain to 14.6 % in Germany (2000), while Poland accounted for 7.6 % of those employed in the EU-25.

Annual short-term statistics for the wholesale trade sector showed modest or no growth in recent years. Indeed, turnover increased at a subdued rate, while employment was declining. The EU-25's turnover index for wholesale trade grew by just over half a percent in 2001 and 2002, having grown by just over 10 % in 2000. Wholesale trade activities whose downstream clients were other enterprises tended to be hit hardest by the slowdown in economic activity in 2001 and 2002, while wholesale activities dealing with consumer goods tended to report positive rates of growth for turnover during the same period.

After several years of growth in excess of 1 %, the EU-25's employment index for wholesale trade decreased by 1.5 % in both 2001 and 2002. For comparison, the employment index for the whole of the distribution sector increased by 0.8 % in 2001 and by 1.0 % in 2002, extending a long run of positive year-on-year growth rates.

Figure 17.1
Wholesale trade and commission trade, except of motor and motorcycles (NACE Division 51)
Share of value added at factor cost, EU-25, 2001



Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Micro and small enterprises (with less than 50 persons employed) generated more than half of the value added in the EU-25's wholesale sector in 2001. Small enterprises (with between 10 and 49 persons employed) accounted for slightly more of the sector's value added than any other enterprise size-class and for a higher proportion than in the two other distribution activities (motor trades and retail trade). Indeed, small enterprises generated almost 30 % of the value added in the wholesale sector, whereas other size-classes accounted for a quarter or less. Among the Member States, more than half of the value added in the Italian wholesale trade sector was generated by micro enterprises, a situation similar to the Italian motor and retail trade sectors. In terms of employment, the picture was different as micro and small enterprises accounted together for more than 60 % of the total number of persons employed in the EU-25, more than their share of value added. Micro enterprises accounted for one third of the persons employed in the EU-25; nonetheless, in Italy almost two thirds of employment was in this enterprise size-class.

LABOUR AND PRODUCTIVITY

According to LFS data, there were some notable differences in the employment characteristics of the wholesale trade sector when compared with the characteristics observed in the two other distribution sectors. Men accounted for more than two thirds of the persons employed in the EU-15's wholesale trade sector in 2002, and in none of the Member States⁽³⁾ 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 full-time employment rate in the EU-15 wholesale trade sector (89.5 %) was almost the same as in the motor trade sector (90.7 %) and much higher than for retail trade (69.1 %), the latter situation being repeated in every Member State for which data are available⁽⁴⁾. The share of employees in total employment in the EU-15's wholesale trade sector (83.0 %) was higher than the rates observed in the two other distributive trade sectors. This pattern was repeated in the vast majority of countries, with the only exceptions being Germany, Ireland, Austria, Slovenia, and the United Kingdom⁽⁵⁾. In Greece, Lithuania and Malta, the share of employees in the number of persons employed was more than 23 percentage points higher in wholesale trade than in retail trade.

Apparent labour productivity was EUR 52 600 per person employed in the EU-15's wholesale trade sector in 2001, higher than in the other distribution activities, and, in fact, more than double the level in retail trade. The wholesale of machinery and equipment (NACE Group 51.6) registered the highest apparent labour productivity of all the NACE groups within the distribution sector, at EUR 60 900 per person employed. The lowest level of labour productivity within the wholesale subsectors was registered by agricultural wholesaling (NACE Group 51.2), at EUR 42 700 of value added per person employed.

⁽³⁾ Poland, not available.

⁽⁴⁾ Austria and Poland, not available.

⁽⁵⁾ Poland, not available.

Table 17.2
Wholesale trade and commission trade, except of motor and motorcycles (NACE Division 51)
Value added at factor cost and persons employed, by enterprise size-class, 2001 (% of total)

	Micro enterprises		Small enterprises		Medium-sized enterprises		Large enterprises	
	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed
EU-25	24.0	33.4	29.2	28.7	22.1	19.9	24.7	17.9
EU-15	24.4	32.0	28.3	29.0	21.5	19.9	25.8	19.1

Source: Eurostat, Structural Business Statistics (theme4/sbs/sizclass).

Average personnel costs in the wholesale trade sector were EUR 30 800 per employee in the EU-25 and EUR 34 400 in the EU-15 in 2001. In the EU-15 they were higher in the wholesale of machinery, equipment and supplies (NACE Group 51.6), at EUR 42 500, than in any other NACE group within the distribution sector and were as low as EUR 27 800 for the wholesale of food, beverages and tobacco (NACE Group 51.3).

Value added represented 152.7 % of EU-15 personnel costs (adjusted by the ratio of persons employed to employees) in the wholesale trade sector in 2001, the highest ratio recorded among the three distribution activities. The wholesale of intermediate products (NACE Group 51.5) recorded a ratio of 165.4 % and the wholesale of household goods (NACE Group 51.4) a ratio of 162.2 %, but both of these were lower than the 174.2 % recorded for the miscellaneous wholesale activity (NACE Group 51.7). Wholesale on a fee or contract basis (NACE Group 51.1) recorded a wage adjusted labour productivity ratio of 122.5 %, the lowest figure in the EU-15 among the NACE groups that make up the wholesale trade sector.

Among the Member States, Latvia and Poland recorded the highest wage adjusted labour productivity ratios in 2001 ⁽⁶⁾ within the wholesale trade sector, as added value exceeded personnel costs by more than four times.

⁽⁶⁾ Germany, 2000; Greece and Slovenia, not available.

Table 17.3
Wholesale trade and commission trade, except of motor and motorcycles (NACE Division 51)
Labour force characteristics, 2002

	Share of men		Share of full-time		Share of employees	
	Value (%)	Index (services=100)	Value (%)	Index (services=100)	Value (%)	Index (services=100)
EU-25	:	:	:	:	:	:
EU-15	68.3	121.2	89.5	111.7	83.0	102.8
BE	62.7	105.9	84.8	103.7	82.6	106.6
CZ	58.8	110.7	96.6	102.6	73.1	97.0
DK	69.2	116.0	93.3	117.8	88.1	100.5
DE	64.0	124.8	84.5	112.7	85.7	101.0
EE	55.9	107.8	98.5	104.1	93.6	102.2
EL	70.5	114.7	98.3	102.0	69.7	120.5
ES	71.7	124.2	96.8	106.4	80.2	107.8
FR	67.8	119.3	92.7	109.3	92.4	104.1
IE	73.1	138.1	89.0	112.3	82.0	97.3
IT	69.3	112.0	92.9	102.9	59.5	99.0
CY	62.6	118.4	93.9	100.9	78.3	103.6
LV	65.9	142.0	97.2	104.6	95.3	104.1
LT	64.3	123.1	92.6	101.3	92.6	110.2
LU	69.1	123.0	92.1	104.1	92.3	102.7
HU	58.9	109.4	97.0	101.0	85.5	106.0
MT	74.9	107.9	95.8	108.5	86.3	106.7
NL	70.8	120.7	75.5	130.3	92.5	105.4
AT	63.2	127.7	:	:	88.4	101.8
PL	:	:	:	:	:	:
PT	72.6	130.2	94.6	102.0	75.4	106.7
SI	50.8	96.3	96.2	101.7	82.9	95.5
SK	58.7	113.1	99.4	101.5	84.3	98.0
FI	67.4	126.9	93.9	112.8	88.8	101.8
SE	72.1	121.7	89.5	113.0	86.6	101.4
UK	68.9	122.9	87.1	121.4	87.9	100.3

Source: Eurostat, Labour Force Survey.

Table 17.4
Wholesale trade and commission trade, except of motor and motorcycles (NACE Division 51)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Wholesale trade and commission trade, except of motor and motorcycles	52.6	152.7	34.4
Wholesale on a fee or contract basis	43.1	122.5	35.2
Wholesale of agricultural raw materials, live animals	42.7	146.1	29.3
Wholesale of food, beverages and tobacco	43.0	154.9	27.8
Wholesale of household goods	55.3	162.2	34.1
Wholesale of non-agricultural intermediate products, waste and scrap	56.4	165.4	34.1
Wholesale of machinery, equipment and supplies	60.9	143.3	42.5
Other wholesale	51.5	174.2	29.6

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

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; it does not reflect the value of the goods that they trade.

STRUCTURAL PROFILE

In 2001 value added for wholesale on a fee or contract basis was EUR 33.0 billion in the EU-25 (EUR 31.1 billion in the EU-15) and represented around 8 % of total value added in the wholesale trade sector. Using this measure, wholesale on a fee or contract basis was the third smallest NACE group in the wholesale trade sector, ahead of agricultural wholesaling and the residual sector of other wholesale. Wholesale on a fee or contract basis had 857 800 persons employed ⁽⁷⁾ in the EU-25 in 2001 and 723 200 in the EU-15, equivalent to 10.0 % of the total number of persons employed in the wholesale sector.

Among the nine NACE classes that compose this sector, agents involved in the sale of machinery, industrial equipment, ships and aircraft (NACE Class 51.14) represented 15.0 % of EU-15 value added; this was the third largest activity. The two residual categories of specialised agents not elsewhere classified (NACE Class 51.18, 25.0 %) and unspecialised agents (NACE Class 51.19, 15.3 %) were respectively the largest and second largest activities.

Italy had by far the largest wholesale on a fee or contract basis sector among the Member States, with EUR 10.9 billion of value added, representing one third of the EU-25 total in 2001.

⁽⁷⁾ Slovenia, number of employees.

Table 17.5
Wholesale on a fee or contract basis (NACE Group 51.1)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	Italy (10.9)	Slovenia (518)	Italy (333.2)
2	United Kingdom (4.6)	Slovakia (486)	France (74.8)
3	France (4.6)	Italy (314)	Spain (71.1)
4	Spain (2.2)	Estonia (132)	United Kingdom (67.4)
5	Netherlands (1.1)	Malta (122)	Poland (39.9)

(1) Germany and Greece, not available.

(2) Germany, Greece, Cyprus and the Netherlands, not available.

(3) Germany, Greece and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

LABOUR AND PRODUCTIVITY

Apparent labour productivity was EUR 43 100 per person employed in the EU-15's wholesale trade on a fee or contract basis in 2001, one of the lowest levels when compared with the other NACE groups within the wholesale trade sector. 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. In Germany, for example, in 2000, 31.0 % of employees worked part-time in the wholesale on a fee or contract basis sector, according to SBS data, compared with 19.7 % in the wholesale trade sector as a whole. Apparent labour productivity ⁽⁸⁾ was particularly high in Luxembourg and the Netherlands (respectively EUR 80 700 per person employed and EUR 79 100). For the Netherlands, the level of apparent labour productivity in the wholesale trade on a fee or contract basis sector was the highest for all wholesale NACE groups in the Netherlands. In contrast a very low level of apparent labour productivity was registered in Lithuania (EUR 3 200), the lowest of all wholesale NACE groups in that country.

⁽⁸⁾ Germany, 2000; Greece and Slovenia, not available.

Average personnel costs in 2001 were EUR 29 100 per employee in the EU-25 and EUR 35 200 in the EU-15, very close to the wholesale trade averages. Belgium and the Netherlands had the highest average personnel costs per employee ⁽⁹⁾, and in the case of the Netherlands, this average was again the highest among all wholesale NACE groups in that country.

Wage adjusted labour productivity in this sector showed that value added represented 122.5 % of personnel costs in the EU-15 in 2001, after adjusting personnel costs for the ratio of persons employed to paid employees. This percentage was the lowest of all NACE groups in the wholesale trade sector by some margin, as there were more than 20 percentage points difference before the next lowest ratio. Nonetheless, Denmark, Germany (2000), France, Lithuania, Luxembourg and the Netherlands ⁽¹⁰⁾ all reported a higher ratio for this sector than for wholesale trade as a whole.

⁽⁹⁾ Germany, 2000; Greece, not available.

⁽¹⁰⁾ Greece and Slovenia, not available.

Table 17.6

Wholesale on a fee or contract basis (NACE Group 51.1)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Wholesale on a fee or contract basis, (agents involved in the sale of)	43.1	122.5	35.2
Agricultural & textile raw materials, live animals & semi-finished goods	42.4	156.7	27.0
Fuels, ores, metals and industrial chemicals	64.0	160.9	39.8
Timber and building materials	45.1	159.9	28.2
Machinery, industrial equipment ships and aircraft	71.7	128.2	55.9
Furniture, household goods, hardware and ironmongery	40.3	142.6	28.3
Textiles, clothing, footwear and leather goods	39.7	140.3	28.3
Food, beverages and tobacco	40.9	132.0	31.0
Particular products or ranges of products n.e.c.	38.4	107.3	35.8
A variety of goods	35.5	115.7	30.7

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

17.2: AGRICULTURAL WHOLESALING

NACE Group 51.2 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.

STRUCTURAL PROFILE

This sector was the smallest within own-account wholesale trade, whether measured in terms of turnover or employment. Indeed, the turnover generated by agricultural wholesaling was EUR 174.5 billion in the EU-25 and EUR 169.3 billion in the EU-15 in 2001, which represented around 5 % of total turnover for the wholesale trade sector. There were 313 000 persons employed in the EU-25 ⁽¹⁾ and 280 900 in the EU-15, some 4.1 % of the total number of persons employed in own-account wholesaling in the EU-25 (slightly less than the turnover share).

Among the five NACE classes that compose this sector, the wholesale of grain, seeds and animal feeds (NACE Class 51.21) accounted for the largest proportion of turnover in the EU-15 (62.3 %) while the second largest subsector was the wholesale of live animals (NACE Class 51.23, 22.0 %).

⁽¹⁾ Slovenia, number of employees.

Table 17.7

Wholesale of agricultural raw materials, live animals (NACE Group 51.2)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	France (2.8)	Austria (219)	France (56.8)
2	Netherlands (1.8)	Slovakia (192)	Germany (49.8)
3	Spain (1.1)	Denmark (175)	Spain (38.1)
4	United Kingdom (1.1)	France (149)	Netherlands (34.9)
5	Italy (0.9)	Hungary (143)	Italy (27.5)

(1) Germany and Greece, not available.

(2) Germany, Greece, Cyprus and the Netherlands, not available.

(3) Greece and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

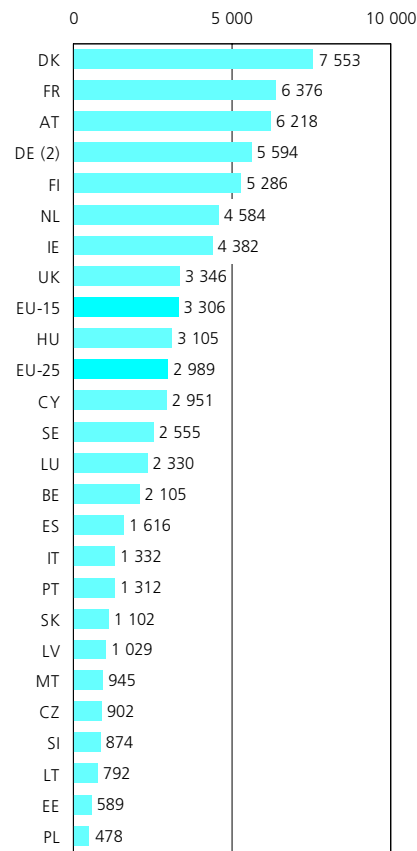
Among the Member States, France generated more than one quarter of the EU-25's turnover in the agricultural wholesale sector in 2001, the largest share of any country and also the largest own-account wholesaling NACE group in France. Germany was the second largest country accounting for slightly less than one fifth of the EU-25's turnover, followed by the Netherlands and Spain with just over 10 % of the total.

According to annual short-term statistics, after growth of 3.8 % in 2000, there was a decrease in turnover in the agricultural wholesaling sector in 2001 and 2002 in the EU-25. The pace of the decrease quickened as the index of turnover fell by 0.4 % in 2001 and by 2.5 % in 2002. For comparison, in the EU-15 the same index was unchanged between 2000 and 2001, with a more pronounced reduction (-2.7 %) between 2001 and 2002.

Figure 17.2 shows the average size of enterprises in terms of turnover in 2001. Poland and Estonia had the lowest average turnover per enterprise ⁽¹²⁾, reflecting their low specialisation in this activity: Poland accounted for 1.3 % of the EU-25's turnover and Estonia for less than 0.1 %. Of the 10 new Member States, only Cyprus and Hungary reported enterprises with an average turnover larger than some of the EU-15 Member States. Denmark recorded the highest average turnover per enterprise, EUR 7.6 million.

⁽¹²⁾ Germany, 2000; Greece, not available.

Figure 17.2
Wholesale of agricultural raw materials, live animals (NACE Group 51.2)
Turnover per enterprise, 2001
(EUR thousand) (1)



(1) Greece, not available.

(2) 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms).

LABOUR AND PRODUCTIVITY

In 2001 the apparent labour productivity of the agricultural wholesaling sector was EUR 42 700 per person employed in the EU-15, the lowest value among the NACE groups that make up the wholesale trade, but not far from the values reported in the wholesale of food, beverages and tobacco sector (NACE Group 51.3).

Average personnel costs were EUR 29 300 per employee in the EU-15, the second lowest value among the NACE groups within wholesale trade, but nevertheless higher than the distribution average. For comparison, average personnel costs in the EU-25 were EUR 27 200.

According to the wage adjusted labour productivity ratio, value added represented 146.1 % of adjusted personnel costs in the EU-15, the lowest share among the groups that make up the own-account wholesale trade sector, and some 9.3 percentage points below the average for own-account wholesaling. However, in several Member States the agricultural wholesaling sector recorded higher wage adjusted labour productivity than national own-account wholesaling averages ⁽¹³⁾, notably in Malta, where the ratio was more than double the average, and Slovakia, where it was more than 70 % higher.

⁽¹³⁾ Germany, 2000; Greece and Slovenia, not available.

Table 17.8
Wholesale of agricultural raw materials, live animals (NACE Group 51.2)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Wholesale of agricultural raw materials, live animals	42.7	146.1	29.3
Wholesale of grain, seeds and animal feeds	47.8	153.5	31.1
Wholesale of flowers and plants	35.5	133.9	26.5
Wholesale of live animals	34.6	130.9	26.4
Wholesale of hides, skins and leather	52.3	181.3	28.9
Wholesale of unmanufactured tobacco	57.3	159.4	35.9

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

17.3: WHOLESALING OF CONSUMER GOODS

The wholesaling of consumer products covers NACE Groups 51.3 and 51.4. The first of these groups includes food, beverages and tobacco and the latter 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 products, these activities also include the wholesaling of food and beverage products as inputs for further processing.

STRUCTURAL PROFILE

The wholesaling of consumer goods generated EUR 1.4 trillion of turnover in 2001 in the EU-25 and EUR 69.4 billion less in the EU-15, representing 41.1 % of the EU-25's own-account wholesaling. In terms of the number of persons employed, this sector provided employment to 3.4 million persons ⁽¹⁴⁾ in the EU-25, equivalent to 44.2 % of the own-account wholesale total, and therefore slightly more than the turnover share.

In all of the Member States this sector (defined as the aggregate of NACE Groups 51.3 and 51.4) was the largest within own-account wholesale trade ⁽¹⁵⁾, except in the United Kingdom, Finland and Latvia, where the wholesale of intermediate products was larger (in terms of turnover). No single country dominated activity in this sector, as Germany (2000) had the highest share of value added, accounting for some 18.3 % of the EU-25 total, with the United Kingdom (16.0 %) and France (14.6 %) just a few percentage points lower. Several of the southern Member States were relatively specialised in this sector, most notably Malta, Portugal, Cyprus and Italy.

Among the two NACE groups that compose this sector, the wholesale of household goods (NACE Group 51.4) contributed slightly more (51.3 %) to total turnover in the EU-25 in 2001 than the wholesale of food, beverages and tobacco (NACE Group 51.3). Nevertheless, several countries showed the opposite pattern ⁽¹⁶⁾, most notably Ireland, Malta and Luxembourg, where the wholesale of food, beverages and tobacco subsector accounted for more than 60 % of the turnover generated within the consumer goods wholesaling sector. In contrast, less than one third of the turnover in Slovenia was derived from food, beverages and tobacco wholesaling.

⁽¹⁴⁾ Slovenia, number of employees.
⁽¹⁵⁾ Germany, 2000; Greece, not available.
⁽¹⁶⁾ Germany, 2000; Greece, not available.

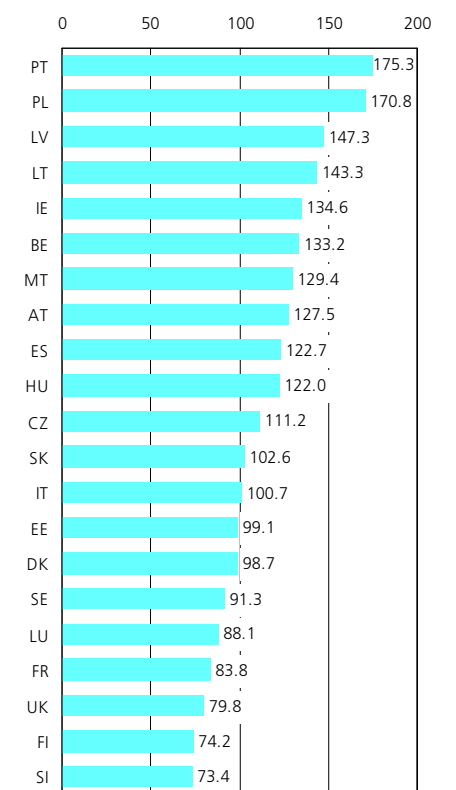
Table 17.9 Wholesale of food, beverages, tobacco and household goods (NACE Groups 51.3 and 51.4) Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (30.4)	Portugal (175)	Germany (526.6)
2	France (20.0)	Poland (171)	Spain (502.9)
3	Italy (16.9)	Latvia (147)	United Kingdom (499.0)
4	Spain (15.4)	Lithuania (143)	Italy (390.9)
5	Netherlands (11.1)	Ireland (135)	France (376.5)

(1) Germany and Greece, not available.
 (2) Germany, Greece, Cyprus and the Netherlands, not available.
 (3) Greece and Slovenia, not available.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

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. The turnover index registered gains for both of these activities in 2001 and 2002. Compared with the general trend of moderately rising turnover within the wholesale trade sector, both of these activities recorded more pronounced growth, particularly the wholesaling of household goods. For the wholesale of food, beverages and tobacco there was more rapid turnover growth in 2001 (4.8 %) in the EU-25 than in 2002 (0.9 %), while the wholesaling of household goods recorded growth in excess of 3 % in both 2001 and 2002. The relatively low turnover growth rates registered in the wholesale of food, beverages and tobacco activity in 2002 resulted, in part, from a contraction of activity in the Netherlands (-1.7 %), the United Kingdom (-1.6 %) and Germany (-0.3 %). Among the 10 Member States with data available for the wholesale of household goods, Germany (-2.9 %) was one of only two that registered a negative evolution for turnover in 2002.

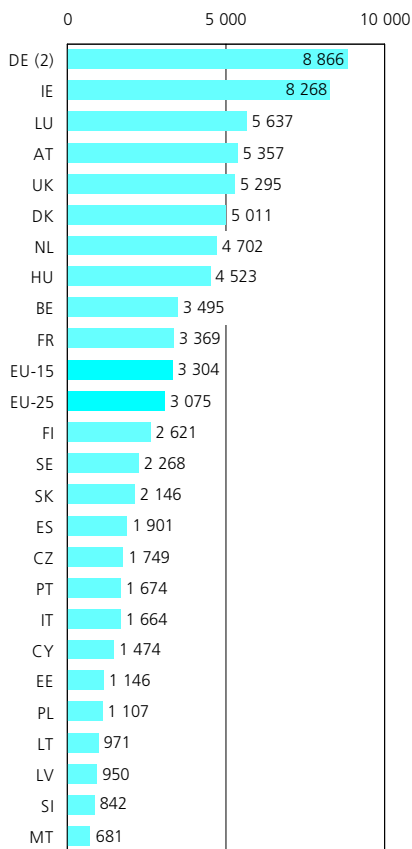
Figure 17.3 Wholesale of food, beverages, tobacco and household goods (NACE Groups 51.3 and 51.4) Value added specialisation ratio relative to non-financial services, 2001 (EU-25=100) (1)



(1) Germany, Greece, Cyprus and the Netherlands, not available.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 17.4

Wholesale of food, beverages, tobacco and household goods (NACE Groups 51.3 and 51.4)
Turnover per enterprise, 2001 (EUR thousand) (1)



(1) Greece, not available.

(2) 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms).

Figure 17.4 shows average enterprise size in terms of turnover in the wholesaling of consumer goods sector in 2001 ⁽¹⁷⁾. In food, beverages and tobacco wholesaling (EUR 3.7 million per enterprise) the average size of enterprises in the EU-25 was above the average for own-account wholesaling (EUR 3.4 million), while in the wholesaling of household goods (EUR 2.6 million) it was below average. Germany (2000) and Ireland had by far the largest enterprises (using this measure), with an average turnover per enterprise that exceeded EUR 8.0 million.

LABOUR AND PRODUCTIVITY

Apparent labour productivity for consumer goods wholesaling was EUR 50 000 per person employed in the EU-15 in 2001, less than the average for own-account wholesaling. Ireland distinguished itself from the other Member States by virtue of its very high apparent labour productivity in this sector (EUR 76 500 per person employed), higher than in any of the other NACE groups that make up the Irish wholesale trade sector.

Average personnel costs were EUR 28 500 per employee in the EU-25, once again less than the own-account wholesaling average. For comparison, the average for the EU-15 was EUR 31 400.

⁽¹⁷⁾ Germany, 2000; Greece, not available.

The result of these relatively low ratios for both apparent labour productivity and average personnel costs was a wage adjusted labour productivity ratio (adjusted for the ratio of persons employed to paid employees) of 159.4 % in the EU-15 in 2001. This was 4.1 percentage points higher than the own-account wholesaling average.

In several countries ⁽¹⁸⁾, notably the Baltic States and the Czech Republic, wage adjusted labour productivity in this sector was below the national own-account wholesaling average. However, in Ireland, high apparent labour productivity fed through into a high wage adjusted labour productivity ratio, with a value of 209.0 % compared with an own-account wholesaling average of 160.8 %.

⁽¹⁸⁾ Germany, 2000; Greece and Slovenia, not available.

17.4: WHOLESALING OF INTERMEDIATE GOODS

The wholesaling of intermediate products (NACE Group 51.5) covers all products used as materials, except for agricultural products (which are treated in Subchapter 17.2). It includes, for example, the wholesaling of fuels, construction materials, hardware, chemical products, as well as the wholesaling of scrap.

Table 17.10

Wholesale of non-agricultural intermediate products, waste and scrap (NACE Group 51.5) Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (17.1)	Latvia (418)	Germany (317.5)
2	France (11.1)	Lithuania (197)	United Kingdom (258.8)
3	Italy (8.3)	Poland (195)	France (213.5)
4	Spain (7.5)	Estonia (177)	Spain (188.5)
5	Netherlands (5.4)	Czech Republic (173)	Italy (172.2)

(1) Germany and Greece, not available.

(2) Germany, Greece, Cyprus and the Netherlands, not available.

(3) Greece and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

STRUCTURAL PROFILE

Turnover in the EU-25's wholesaling of intermediate goods sector was EUR 997.9 billion in 2001, compared with EUR 944.7 billion in the EU-15. This level of turnover corresponded to just less than one third (30.3 %) of total turnover in own-account wholesaling, making the wholesaling of intermediate goods the largest sector among the NACE Groups that make up own-account wholesale trade. In terms of employment, there were 1.7 million persons employed in the EU-25 ⁽¹⁹⁾ and 1.5 million in the EU-15, more than one fifth of the own-account wholesaling total.

The wholesale of solid, liquid and gaseous fuels and related products (NACE Class 51.51) represented the largest part (42.3 %) of the EU-15's turnover in this sector. Across the Member States ⁽²⁰⁾, this was not the case in France, Latvia, Malta and the Netherlands, where the wholesale of wood, construction materials and sanitary equipment (NACE Class 51.53) was larger. The picture was different in terms of employment: the wholesale of solid, liquid and gaseous fuels and related products accounted for less than 10 % of the total number of persons employed in this sector in the EU-15. The two activities that accounted for most of the EU-15's employment in this sector were the wholesale of wood, construction materials and sanitary equipment (NACE Class 51.53, 39.6 %) and the wholesale of hardware, plumbing and heating equipment and supplies (NACE Class 51.54, 21.8 %).

The United Kingdom accounted for just less than one quarter (24.0 %) of the EU-25's turnover in the wholesaling of intermediate goods sector and Germany for just over one fifth (20.9 %). All other countries recorded shares that were below 10 % of the EU-25 total. Among the 10 new Member States, Poland registered the highest contribution to turnover (2.5 % of the EU-25 total). Latvia, Estonia and the United Kingdom were the most specialised in this type of wholesale trade.

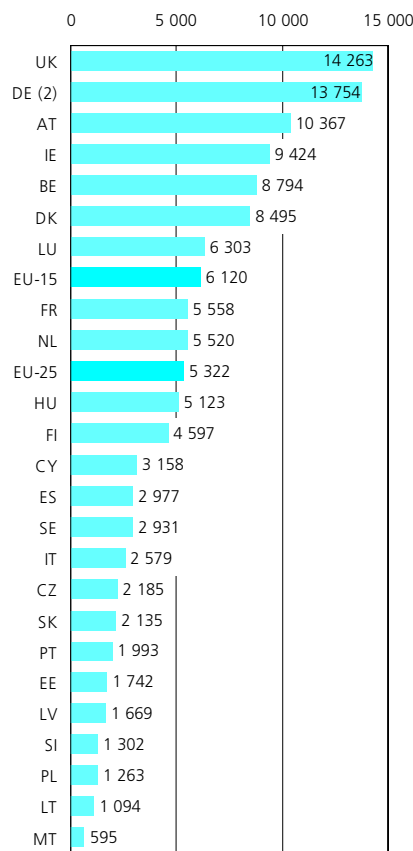
Annual short-term statistics provide information on the evolution of the turnover index for the wholesale of intermediate goods. This sector generally experienced declining turnover in 2001 and 2002. The decrease was larger in the EU-15 than it was in the EU-25, as turnover fell by 2.6 % in 2001 (compared with 2.4 % in the EU-25) and by 1.6 % in 2002 (compared with -1.0 % in the EU-25). These two successive years of contraction in turnover followed growth of over 20 % in 2000. Among the larger Member States, very different developments were observed in 2001 and

2002. In Germany, the turnover index for the wholesaling of intermediate goods fell by 9.1 % in 2002, while in the United Kingdom it grew by 5.4 %. France (-0.5 %) and Italy (1.4 %) recorded more modest rates of change.

Figure 17.5 shows the average enterprise size in terms of turnover in 2001 ⁽²¹⁾, highlighting the fact that enterprises in the wholesale of intermediate products sector were relatively large. The two Member States with the largest intermediate goods wholesaling sectors, the United Kingdom and Germany (2000), also had the biggest enterprises, in terms of turnover per enterprise.

⁽²¹⁾ Greece, not available.

Figure 17.5
Wholesale of non-agricultural intermediate products, waste and scrap (NACE Group 51.5)
Turnover per enterprise, 2001 (EUR thousand) (1)



(1) Greece, not available.

(2) 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms).

LABOUR AND PRODUCTIVITY

Apparent labour productivity in the EU-15 was EUR 56 400 per person employed in the wholesaling of intermediate goods sector in 2001, higher than the own-account wholesaling average and the second highest value among the NACE groups that make up the wholesale trade sector, behind machinery and equipment wholesaling. Average personnel costs were EUR 31 000 per employee in the EU-25 and EUR 34 100 in the EU-15, which was slightly higher than the own-account wholesaling average.

The relatively high apparent labour productivity, combined with fairly typical - for own-account wholesaling - average personnel costs, resulted in this sector having the second highest wage adjusted labour productivity ratio in the EU-15 own-account wholesaling sector. With value added at 165.4 % of adjusted personnel costs, the productivity ratio in the wholesaling of intermediate goods sector was 10.0 percentage points above the own-account wholesaling ratio. Only in Ireland ⁽²²⁾ was wage adjusted labour productivity in this sector below the national average for the own-account wholesaling as a whole, while in Latvia it was one and a half times higher than the national average for own-account wholesaling.

⁽²²⁾ Germany, 2000; Greece and Slovenia, not available.

⁽¹⁹⁾ Slovenia, number of employees.

⁽²⁰⁾ Germany, 2000, the Czech Republic and Greece, not available.

Table 17.11

Wholesale of non-agricultural intermediate products, waste and scrap (NACE Group 51.5)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Wholesale of non-agricultural intermediate products, waste and scrap	56.4	165.4	34.1
Wholesale of solid, liquid and gaseous fuels and related products	127.1	290.6	43.7
Wholesale of metals and metals ores	61.0	162.1	37.6
Wholesale of wood, construction materials and sanitary equipment	43.7	146.7	29.8
Wholesale of hardware, plumbing and heating equipment and supplies	44.0	135.3	32.5
Wholesale of chemical products	71.7	168.5	42.5
Wholesale of other intermediate products	61.7	152.7	40.4
Wholesale of waste and scrap	47.6	175.3	27.1

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

17.5: WHOLESALING OF MACHINERY AND EQUIPMENT

The wholesaling of machinery and equipment (NACE Group 51.6) concerns the wholesaling of all capital goods, except for 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.

STRUCTURAL PROFILE

Turnover in the EU-25's wholesaling of machinery and equipment sector was EUR 580.9 billion in 2001, and EUR 568.9 billion in the EU-15. For the EU-25 this represented 16.7 % of the wholesale trade total and 17.6 % of the own-account wholesaling total, a smaller share than wholesaling of intermediate goods or the two consumer goods wholesaling NACE groups. The number of persons employed by the wholesaling of machinery and equipment sector reached 1.5 million persons in the EU-25 ⁽²³⁾, corresponding to just over one fifth of the own-account wholesaling total, which was above the corresponding share of turnover.

⁽²³⁾ Slovenia, number of employees.

Table 17.12

Wholesale of machinery, equipment and supplies (NACE Group 51.6)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (22.9)	Denmark (190)	France (293.4)
2	France (16.2)	Finland (179)	United Kingdom (262.1)
3	Netherlands (8.6)	Belgium (164)	Germany (199.9)
4	Spain (6.7)	Austria (144)	Spain (161.5)
5	Italy (5.8)	Luxembourg (126)	Netherlands (149.2)

(1) Germany and Greece, not available.

(2) Germany, Greece, Cyprus and the Netherlands, not available.

(3) Greece and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Wholesale of office machinery and equipment (NACE Class 51.64) and wholesale of other machinery for use in industry, trade and navigation (NACE Class 51.65) each accounted for around 43 % of the turnover generated in the EU-15's wholesaling of machinery and equipment sector. The other NACE classes that make up this activity each accounted for 6 % or less of total turnover. Almost half (49.8 %) of the persons employed in the EU-15's wholesaling of machinery and equipment sector were working in the wholesale of other machinery for use in industry, trade and navigation, more than this activity's turnover share, while less than one third (32.3 %) were working in the wholesale of office machinery and equipment.

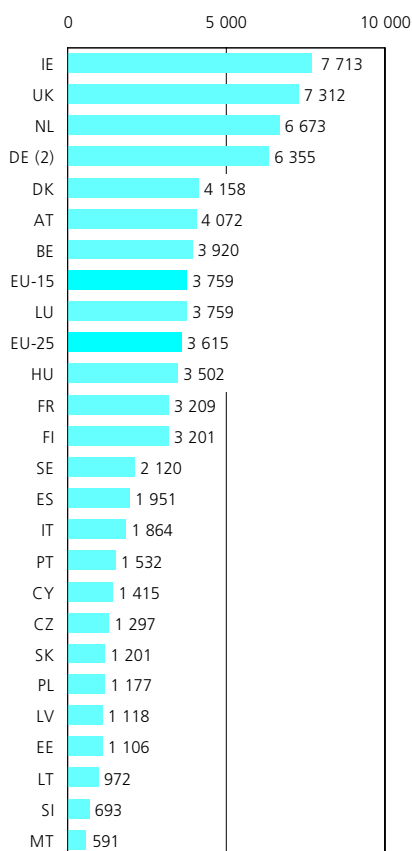
France and the United Kingdom each accounted for 19.0 % of the turnover generated in the EU-25's wholesaling of machinery and equipment sector, while the Netherlands accounted for 13.6 % of the total and Germany for 12.1 %. The contribution to total turnover in all other remaining countries was below 8 %. In terms of specialisation relative to the wholesale sector as a whole, the high EU-25 share of the Netherlands was indicative of this being the most specialised Member State ⁽²⁴⁾, followed by the three Nordic Member States of Finland, Denmark and Sweden. Poland and Slovenia were the least specialised countries in the wholesaling of machinery and equipment.

⁽²⁴⁾ Germany, 2000; Greece and Cyprus, not available.

The evolution of turnover in the wholesale of machinery and equipment sector followed a negative evolution in 2001 and 2002. The EU-25 turnover index decreased by 4.3 % in 2001 and by a further 1.3 % in 2002. Corresponding growth rates for the EU-15

Figure 17.6

Wholesale of machinery, equipment and supplies (NACE Group 51.6)
Turnover per enterprise, 2001
(EUR thousand) (1)



(1) Greece, not available.

(2) 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms).

were similar (respectively -4.7 % and -1.5 %), following five consecutive years of growth, particularly during the period 1996 to 1998, when year-on-year growth exceeded 5 %. The negative rates of change in 2001 and 2002 were quite similar to those registered for the wholesale of intermediate goods (NACE Group 51.5), but were contrary to the positive growth rates recorded for the wholesale trade sector in general. Among the Member States with a large machinery and equipment wholesaling sector, France and Germany recorded slight contractions in turnover in 2002, although at a pace that was less than the EU-25 average, while the United Kingdom and Italy recorded growth. The decline in EU-25 turnover in 2002 was strongly influenced by the 6.6 % reduction in turnover in the Netherlands, the third largest Member State in this sector, and to a lesser extent by the -5.1 % change in Finland, one of the most specialised Member States.

Figure 17.6 provides information on the average size of enterprises in this sector in terms of their 2001 turnover ⁽²⁵⁾. The average size of each enterprise in the EU-25 was slightly larger than the own-account wholesale average. Ireland, the United Kingdom, the Netherlands and Germany all recorded average sizes that were notably above the EU-25 average.

LABOUR AND PRODUCTIVITY

This sector had the highest apparent labour productivity in 2001 (EUR 60 900 per person employed) of the NACE groups that make up the EU-15's wholesale trade sector. For comparison, apparent labour productivity was EUR 53 500 on average in own-account wholesaling and EUR 56 400 for the wholesale of intermediate products.

⁽²⁵⁾ Germany, 2000; Greece, not available.

Average personnel costs per employee in this sector were the highest of the wholesale NACE groups, and well above the average for own-account wholesaling which was EUR 30 900 in the EU-25. Indeed, at EUR 41 100 per employee in the EU-25 and EUR 42 500 in the EU-15, average personnel cost in the wholesaling of machinery and equipment sector were more than EUR 7 000 higher than in any other wholesale trade NACE group. In the vast majority of Member States ⁽²⁶⁾ this sector reported the highest average personnel costs within own-account wholesaling. In Estonia and Slovakia, the differences between average personnel costs per employee in this sector and those for own-account wholesale trade were largest.

In the EU-15, value added represented 143.3 % of personnel costs (adjusted for the ratio of the number of persons employed compared with the number of employees). Whereas apparent labour productivity per person employed in this sector was the highest among NACE groups within the wholesale trade sector, the wage adjusted labour productivity ratio was below the own-account wholesaling average of 155.4 %. In fact, wholesaling of machinery and equipment recorded the lowest wage adjusted labour productivity of all of the own-account wholesale trade NACE groups, the result of the particularly high average personnel costs. Only in the Czech Republic, Cyprus, Lithuania and Hungary was the wage adjusted labour productivity ratio of this sector higher than the own-account wholesaling average ⁽²⁷⁾. In Ireland, value added did not cover adjusted personnel costs, as wage adjusted labour productivity was 42.1 %, the only country where the value of this ratio was below 100 %.

⁽²⁶⁾ Germany, 2000; Greece, not available.

⁽²⁷⁾ Germany, 2000; Greece and Slovenia, not available.

Table 17.13

Wholesale of machinery, equipment and supplies (NACE Group 51.6)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Wholesale of machinery, equipment and supplies	60.9	143.3	42.5
Machine tools	57.2	150.3	38.1
Construction machinery	59.0	154.0	38.3
Machinery for the textile industry and of sewing and knitting machines	46.0	146.7	31.3
Office machinery and equipment	70.3	140.2	50.2
Other machinery for use in industry, trade and navigation	59.0	145.7	40.5
Agricultural machinery and accessories and implements, including tractors	39.7	134.8	29.5

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

17.6: OTHER WHOLESale

The other wholesale sector (NACE Group 51.7) covers specialised own-account wholesaling of products not covered in other parts of NACE Division 51, as well as non-specialised wholesaling, where enterprises resell a variety of products.

STRUCTURAL PROFILE

Turnover was EUR 188.2 billion in the EU-25 in this sector in 2001, which represented less than 6 % of the total generated in own-account wholesale trade, making this the second smallest NACE group within the own-account wholesaling sector, slightly larger than agricultural wholesaling. However, in this sector, Poland and Slovenia registered their highest shares of national turnover in own-account wholesale trade (respectively 40.3 % and 32.4 %). The difference in turnover (EUR 56.9 billion) between the EU-15 and the EU-25 value represented 30.2 % of the EU-25 value, and resulted from the importance of this sector in Polish wholesaling. In terms of employment, there were 691 000 persons employed ⁽²⁸⁾ in the EU-25 and less than half this number in the EU-15 (315 300). The total number of persons employed in other wholesale activities corresponded to less than 10 % of the total number of persons employed in the EU-25's own-account wholesale sector and less than 5 % of the total in the EU-15; again the large disparity between the EU-15 and EU-25 values resulted from the very high specialisation of Poland (and Slovenia) in this wholesaling sector.

The United Kingdom accounted for almost one quarter of the EU-25's turnover in this sector, while Poland and Germany each accounted for more than one fifth of the total: all three of these Member States were relatively specialised in other wholesaling activities, relative to own-account wholesaling.

Annual short-term statistics for the other wholesale sector showed relatively little change in EU-25 turnover in 2001 (-0.1 %) and modest growth in 2002 (+0.3 %). In contrast, turnover in the EU-15 declined, with a 0.6 % reduction in 2001, accelerating to -1.6 % in 2002.

⁽²⁸⁾ Slovenia, number of employees.

Table 17.14
Other wholesale (NACE Group 51.7)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	Poland (10.5)	Poland (1 267)	Poland (270.4)
2	United Kingdom (7.6)	Czech Republic (496)	United Kingdom (125.8)
3	Netherlands (1.4)	Slovenia (413)	Germany (84.8)
4	Czech Republic (0.8)	Hungary (345)	Czech Republic (45.6)
5	Italy (0.6)	Slovakia (323)	Netherlands (24.9)

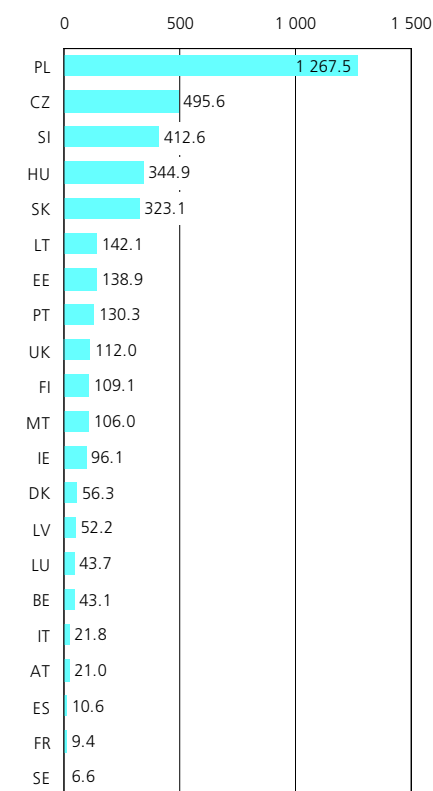
(1) Germany and Greece, not available.

(2) Germany, Greece, Cyprus and the Netherlands, not available.

(3) Greece and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

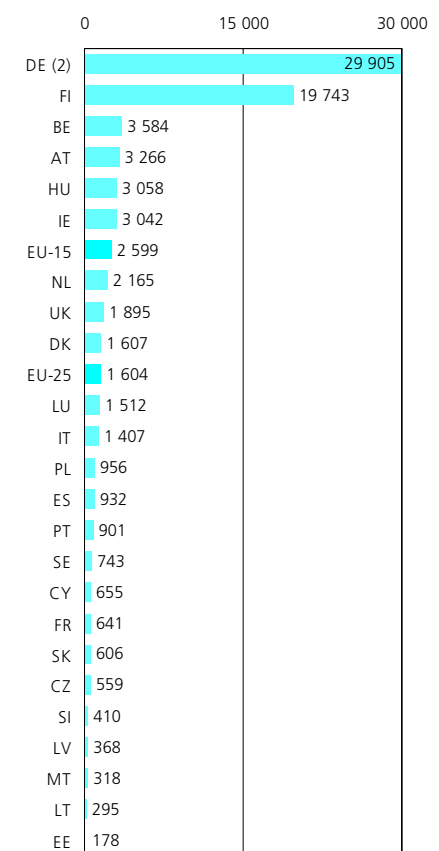
Figure 17.7
Other wholesale (NACE Group 51.7)
Value added specialisation ratio relative to non-financial services, 2001 (EU-25=100) (1)



(1) Germany, Greece, Cyprus and the Netherlands, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 17.8
Other wholesale (NACE Group 51.7)
Turnover per enterprise, 2001 (EUR thousand) (1)



(1) Greece, not available.

(2) 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms).

Figure 17.8 shows average turnover per enterprise ⁽²⁹⁾, providing one measure of enterprise size. The EU averages for this ratio are particularly influenced by the high values reported in Germany and (to a lesser extent) Finland. Leaving these two countries aside, the average size of enterprises in the rest of the EU-25 was about 40 % of the average size of all own-account wholesaling enterprises.

LABOUR AND PRODUCTIVITY

Apparent labour productivity was EUR 51 500 per person employed in the EU-15's other wholesaling sector in 2001. This was slightly under the average for own-account wholesaling. In most Member States ⁽³⁰⁾ this pattern was repeated, as apparent labour productivity for other wholesaling activities was lower than national averages for own-account wholesaling. Nonetheless, this pattern was not observed in Luxembourg, where there was a EUR 13 100 difference between the apparent labour productivity of the other wholesaling sector (EUR 87 500) and the average for own-account wholesaling (EUR 74 400).

⁽²⁹⁾ Germany, 2000; Greece, not available.

⁽³⁰⁾ Germany, 2000; Greece and Slovenia, not available.

Average personnel costs in the other wholesaling sector were EUR 19 100 per employee in the EU-25, equivalent to around two thirds of the EU-15 average (EUR 29 600). This very large difference was mainly due to the impact of relatively low average personnel costs in Poland. EU-25 personnel costs per employee in the other wholesale sector were less than two thirds of their average level for own-account wholesaling, and this sector clearly recorded the lowest average personnel costs within the wholesale trade sector. However, average personnel costs for the EU-15 were much closer to the own-account wholesaling average, and at a comparable level with those recorded for agricultural wholesaling and the wholesaling of food, beverages and tobacco. In some countries ⁽³¹⁾, average personnel costs per employee in the other wholesaling sector surpassed the average for own-account wholesale. This was the case in the Czech Republic, Spain, Italy, Luxembourg, Hungary, Poland and Portugal, with differences that varied between EUR 600 and EUR 2 600. Poland, which had the largest share of employment in this sector, recorded average personnel costs of EUR 9 200 per employee, considerably below the EU-25 average, but higher than the Polish own-account wholesaling average.

⁽³¹⁾ Germany, 2000; Greece, not available.

Wage adjusted labour productivity measures the ratio of value added to personnel costs, adjusted by the share of paid employees in total employment. In the EU-15, value added generated in the other wholesaling activities in 2001 was 174.2 % higher than personnel costs, which was the highest such ratio across all wholesaling NACE groups. This difference with respect to the analysis for apparent labour productivity comes from relatively low average personnel costs. In Ireland and the United Kingdom ⁽³²⁾, wage adjusted labour productivity ratios for other wholesaling were considerably above the average for own-account wholesaling, in both cases by more than 20 %. In contrast, the other wholesale trade sector in Poland recorded a lower wage adjusted productivity ratio than the Polish average for own-account wholesaling, with more substantial differences being registered in Italy, Hungary and Sweden.

⁽³²⁾ Germany, 2000; Greece and Slovenia, not available.

Table 17.15

Wholesale on a fee or contract basis (NACE Group 51.1)
Main indicators, 2001

	BE	CZ	DK	DE (1)	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	6 708	1 537	2 426	6 847	251	:	3 587	94 957	283	22 932	104	10	43	293
Value added at factor cost (EUR million)	548	226	407	5 113	34	:	2 208	4 598	80	10 877	54	3	10	53
Purchases of goods and services (EUR million)	6 129	1 257	2 109	1 429	223	:	1 391	88 210	206	12 557	13	8	33	239
Gross investment in tangible goods (EUR million)	73	33	57	121	27	:	224	456	9	1 681	3	1	1	:
Number of persons employed (thousands)	15	34	7	90	4	:	71	75	3	333	2	0	3	1
App. labour productivity (EUR thous./pers. emp.)	36.7	6.7	61.3	57.0	7.8	:	31.0	61.4	29.4	32.6	32.4	11.8	3.2	80.7
Average personnel costs (EUR thous./employee)	53.0	12.2	40.9	26.3	4.4	:	24.9	42.6	22.4	26.5	23.7	2.1	1.3	40.7
Wage adjusted labour productivity (%)	69.3	54.9	149.9	217.2	175.5	:	124.5	144.3	131.4	123.1	136.6	556.4	249.3	198.4
Gross operating rate (%)	4.6	5.2	6.9	55.9	7.0	:	43.5	1.6	13.3	43.2	15.3	25.1	17.0	12.3
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	1 810	117	3 862	1 028	4 108	2 106	1 908	2 946	952	2 799	15 091	100	1 463	:
Value added at factor cost (EUR million)	131	27	1 122	446	834	357	276	243	283	466	4 646	26	225	:
Purchases of goods and services (EUR million)	1 707	98	4 548	589	3 029	1 732	1 614	2 713	684	2 407	10 498	79	1 249	:
Gross investment in tangible goods (EUR million)	51	3	82	24	46	60	36	52	25	40	464	13	47	:
Number of persons employed (thousands)	10	2	14	10	40	23	:	25	5	10	67	6	32	:
App. labour productivity (EUR thous./pers. emp.)	12.8	17.4	79.1	46.3	20.9	15.3	:	9.6	51.9	48.0	68.9	4.5	7.1	:
Average personnel costs (EUR thous./employee)	7.0	10.8	50.4	44.5	10.2	14.7	13.3	5.2	37.0	39.7	42.5	2.7	1.5	:
Wage adjusted labour productivity (%)	183.5	161.4	157.1	103.9	205.3	104.6	:	185.8	140.3	120.7	162.1	164.8	461.8	:
Gross operating rate (%)	3.3	15.8	14.1	22.0	15.9	8.5	4.5	4.0	12.9	5.9	16.3	18.0	12.3	:

(1) 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 17.16

Wholesale of agricultural raw materials, live animals (NACE Group 51.2)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	6 081	1 245	5 182	34 515	39	:	18 518	47 365	784	13 820	133	100	124	254
Value added at factor cost (EUR million) (1)	290	80	438	2 378	3	:	1 079	2 812	82	931	14	8	10	22
Purchases of goods and services (EUR million) (1)	5 790	1 179	4 792	29 094	37	:	17 478	44 799	708	13 043	164	96	115	237
Gross investment in tangible goods (EUR million) (1)	81	18	92	300	1	:	247	662	10	153	2	2	3	:
Number of persons employed (thousands)	7	7	8	50	0	:	38	57	2	28	0	1	1	0
App. labour productivity (EUR thous./pers. emp.) (1)	42.6	11.1	54.0	48.7	8.5	:	28.3	49.5	42.9	33.8	44.9	12.6	7.2	57.0
Average personnel costs (EUR thous./employee) (1)	35.3	7.9	36.2	29.9	4.1	:	17.6	34.6	23.2	24.6	25.8	3.2	2.4	33.9
Wage adjusted labour productivity (%) (1)	120.7	140.1	149.2	162.7	207.3	:	160.7	143.0	185.4	137.7	174.2	393.2	306.4	168.3
Gross operating rate (%) (1)	2.6	2.8	3.1	3.3	4.5	:	3.1	1.9	5.4	4.5	4.8	6.2	5.6	4.5
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	922	29	22 415	6 194	2 272	2 859	118	214	1 538	2 435	10 563	557	737	:
Value added at factor cost (EUR million)	66	5	1 800	633	369	152	11	37	98	250	1 054	27	102	:
Purchases of goods and services (EUR million)	857	29	20 244	5 579	2 042	2 718	104	182	1 455	2 227	9 494	557	767	:
Gross investment in tangible goods (EUR million)	16	0	187	77	29	33	3	6	8	40	143	18	59	:
Number of persons employed (thousands)	5	0	35	16	15	8	:	2	2	7	24	6	18	:
App. labour productivity (EUR thous./pers. emp.)	14.5	57.2	51.6	38.5	24.8	19.1	:	16.1	45.7	38.4	43.5	4.4	5.6	:
Average personnel costs (EUR thous./employee)	6.6	11.4	36.5	28.3	7.1	11.4	14.2	4.8	31.3	33.8	24.9	1.6	2.1	:
Wage adjusted labour productivity (%)	219.0	503.3	141.3	136.0	351.0	166.7	:	336.2	146.3	113.7	175.2	269.4	263.8	:
Gross operating rate (%)	3.9	15.0	3.4	3.1	13.6	2.7	2.8	12.1	2.2	2.0	5.0	3.4	8.3	:

(1) Germany, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 17.17

Wholesale of food, beverages, tobacco and household goods (NACE Groups 51.3 and 51.4)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	57 879	13 959	29 818	247 286	1 606	:	143 784	196 993	14 610	155 086	1 677	2 198	2 711	5 547
Value added at factor cost (EUR million) (1)	5 825	1 000	3 141	29 838	125	:	15 401	20 024	2 143	16 917	286	297	201	371
Purchases of goods and services (EUR million) (1)	51 578	12 920	26 644	218 040	1 507	:	130 442	176 843	12 543	140 690	1 295	1 968	2 539	5 182
Gross investment in tangible goods (EUR million) (1)	810	161	307	2 165	33	:	2 733	1 802	171	1 756	50	52	53	:
Number of persons employed (thousands)	96	76	58	527	12	:	503	377	28	391	11	21	28	5
App. labour productivity (EUR thous./pers. emp.) (1)	60.4	13.1	53.9	56.9	10.4	:	30.6	53.2	76.5	43.3	27.0	14.0	7.3	69.9
Average personnel costs (EUR thous./employee) (1)	41.2	8.1	36.5	34.5	6.0	:	20.8	36.7	36.6	28.4	16.2	3.4	4.0	33.4
Wage adjusted labour productivity (%) (1)	146.6	162.0	147.6	165.0	172.7	:	147.1	145.0	209.0	152.2	166.8	408.1	183.5	209.0
Gross operating rate (%) (1)	4.4	3.2	3.8	5.0	3.5	:	4.2	3.3	8.0	6.1	7.1	10.3	3.6	3.8
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	9 250	809 101	097 32	794 32	099 30	668 1	776 1	3 279 12	229 36	530 216	464 3	768 9	983 :	
Value added at factor cost (EUR million)	713	141	11 062	4 684	7 968	3 397	190	249	1 456	4 156	30 444	164	677	:
Purchases of goods and services (EUR million)	8 521	707	85 845	26 881	27 607	27 653	1 566	3 053	10 961	32 828	181 333	3 745	9 745	:
Gross investment in tangible goods (EUR million)	143	11	896	575	419	606	46	47	122	398	2 760	102	413	:
Number of persons employed (thousands)	48	5	180	85	188	118	:	23	24	84	499	53	135	:
App. labour productivity (EUR thous./pers. emp.)	14.9	27.8	61.3	55.0	42.4	28.9	:	10.9	59.5	49.7	61.0	3.1	5.0	:
Average personnel costs (EUR thous./employee)	7.7	11.5	36.4	36.0	7.6	16.3	15.3	5.7	36.9	39.5	32.5	1.5	2.4	:
Wage adjusted labour productivity (%)	194.3	242.5	168.4	152.9	554.9	176.7	:	190.9	161.3	125.9	187.9	206.4	209.8	:
Gross operating rate (%)	3.8	11.3	5.0	5.4	21.5	5.3	3.4	3.7	4.7	3.3	7.0	2.6	3.5	:

(1) Germany, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 17.18

Wholesale of non-agricultural intermediate products, waste and scrap (NACE Group 51.5)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	55 984	13 445	21 679	208 359	1 573	:	85 722	98 367	7 492	88 931	1 033	2 287	1 772	3 656
Value added at factor cost (EUR million) (1)	3 124	894	2 266	19 762	129	:	7 548	11 064	911	8 314	123	485	159	251
Purchases of goods and services (EUR million) (1)	51 151	12 568	17 220	190 832	1 444	:	76 494	86 714	6 587	75 207	851	1 851	1 615	3 408
Gross investment in tangible goods (EUR million) (1)	541	186	376	2 107	33	:	2 048	1 220	161	1 942	24	74	53	:
Number of persons employed (thousands)	44	52	37	318	7	:	188	214	13	172	3	13	14	3
App. labour productivity (EUR thous./pers. emp.) (1)	70.5	17.1	61.2	61.4	17.8	:	40.0	51.8	68.1	48.3	40.0	36.6	11.5	86.3
Average personnel costs (EUR thous./employee) (1)	45.4	8.9	38.8	36.9	6.9	:	21.8	36.8	43.1	28.5	21.2	4.3	3.6	36.1
Wage adjusted labour productivity (%) (1)	155.2	191.7	157.6	166.3	258.4	:	183.5	140.7	158.1	169.3	189.0	844.1	315.5	239.3
Gross operating rate (%) (1)	2.5	3.7	4.0	3.9	5.1	:	4.4	3.3	4.8	5.4	5.8	18.7	6.2	4.2
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	4 831	155 46	395 30	033 24	563 24	317 13	1 648 1	1 858 12	522 29	971 239	882 4	707 2	924 :	
Value added at factor cost (EUR million)	317	30	5 415	2 990	5 246	1 390	161	116	1 174	3 140	17 054	216	211	:
Purchases of goods and services (EUR million)	4 519	127	37 269	24 619	20 347	11 584	1 459	1 737	11 366	27 147	202 490	4 596	2 841	:
Gross investment in tangible goods (EUR million)	76	4	665	441	393	621	47	51	250	391	1 866	178	171	:
Number of persons employed (thousands)	16	1	87	42	112	45	:	9	16	55	259	29	33	:
App. labour productivity (EUR thous./pers. emp.)	20.3	26.9	61.9	71.0	46.7	31.1	:	12.9	72.9	57.0	65.9	7.5	6.4	:
Average personnel costs (EUR thous./employee)	8.7	11.1	38.5	40.2	8.3	16.0	15.3	6.1	39.4	40.7	36.1	2.1	2.1	:
Wage adjusted labour productivity (%)	232.4	241.9	161.0	176.4	563.1	193.8	:	211.5	185.1	139.8	182.5	360.9	301.4	:
Gross operating rate (%)	3.8	12.2	4.9	4.6	18.5	5.4	3.5	3.3	4.4	3.6	3.4	3.5	4.5	:

(1) Germany, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 17.19

Wholesale of machinery, equipment and supplies (NACE Group 51.6)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	28 566	4 061	18 809	70 247	567	:	43 466	110 601	5 507	37 515	219	703	515	2 913
Value added at factor cost (EUR million) (1)	4 048	472	3 417	10 766	72	:	6 695	16 181	194	5 829	52	104	60	302
Purchases of goods and services (EUR million) (1)	24 689	3 591	15 533	61 566	494	:	36 836	94 919	5 314	32 358	157	639	459	2 596
Gross investment in tangible goods (EUR million) (1)	639	87	386	925	10	:	1 018	1 223	60	656	7	22	17	:
Number of persons employed (thousands)	62	24	57	200	4	:	161	293	11	112	1	5	5	4
App. labour productivity (EUR thous./pers. emp.) (1)	65.7	19.7	59.7	60.7	18.9	:	41.5	55.2	17.3	52.1	37.2	21.8	12.1	72.3
Average personnel costs (EUR thous./employee) (1)	53.7	11.2	47.7	42.8	9.6	:	27.7	43.1	41.0	38.2	18.8	5.6	5.1	45.0
Wage adjusted labour productivity (%) (1)	122.3	176.4	125.2	141.8	196.7	:	149.9	127.8	42.1	136.3	197.4	389.0	235.5	160.6
Gross operating rate (%) (1)	3.9	5.8	4.0	4.7	6.4	:	5.9	3.3	-4.4	7.1	11.7	11.0	6.8	4.3
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	1 464	85	79 172	16 290	3 171	7 556	264	923	11 774	21 595	110 078	799	860	:
Value added at factor cost (EUR million)	168	17	8 646	2 996	933	1 224	32	112	1 990	3 235	22 920	59	118	:
Purchases of goods and services (EUR million)	1 323	70	67 362	13 440	2 347	6 432	226	825	9 902	18 800	86 139	773	754	:
Gross investment in tangible goods (EUR million)	41	2	666	301	72	256	12	24	214	352	2 145	21	26	:
Number of persons employed (thousands)	7	1	149	44	19	41	:	7	30	61	262	12	10	:
App. labour productivity (EUR thous./pers. emp.)	22.4	22.0	58.0	67.6	48.6	29.6	:	16.7	66.5	52.7	87.4	4.9	12.2	:
Average personnel costs (EUR thous./employee)	10.5	13.0	40.2	47.5	12.5	18.7	16.3	8.7	44.2	47.3	51.9	2.5	3.8	:
Wage adjusted labour productivity (%)	213.8	168.3	144.4	142.3	388.1	158.3	:	190.8	150.4	111.4	168.4	194.1	323.6	:
Gross operating rate (%)	6.1	8.9	3.9	6.3	23.3	6.2	4.0	5.9	5.9	2.5	8.8	4.3	9.5	:

(1) Germany, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 17.20

Other wholesale (NACE Group 51.7)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	3 623	6 305	1 885	42 399	259	:	1 786	3 922	1 804	7 626	137	92	264	401
Value added at factor cost (EUR million) (1)	333	788	317	4 059	31	:	235	396	271	647	25	19	35	33
Purchases of goods and services (EUR million) (1)	3 287	5 521	1 595	38 504	236	:	1 578	3 546	1 525	7 031	103	82	233	371
Gross investment in tangible goods (EUR million) (1)	43	96	27	338	25	:	20	39	17	148	6	4	10	:
Number of persons employed (thousands)	7	46	6	85	5	:	7	9	4	19	1	1	6	0
App. labour productivity (EUR thous./pers. emp.) (1)	49.0	17.3	54.0	48.4	5.7	:	34.8	43.4	61.6	34.1	31.3	17.8	6.4	87.5
Average personnel costs (EUR thous./employee) (1)	35.0	10.4	37.9	31.0	2.7	:	24.8	35.0	29.2	30.9	17.0	3.3	2.9	39.4
Wage adjusted labour productivity (%) (1)	139.9	165.8	142.5	156.2	209.4	:	140.4	124.0	211.0	110.4	184.3	532.5	220.5	222.2
Gross operating rate (%) (1)	3.6	6.9	6.0	3.5	6.8	:	5.6	2.4	8.7	3.6	8.7	16.5	7.8	5.5
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	4 413	116	8 304	2 375	41 989	2 977	1 822	1 553	8 173	330	45 222	625	2 951	:
Value added at factor cost (EUR million)	356	20	1 373	136	10 456	447	189	138	379	53	7 552	40	355	:
Purchases of goods and services (EUR million)	4 071	99	6 342	2 257	33 874	2 665	1 598	1 434	8 302	281	37 421	594	2 815	:
Gross investment in tangible goods (EUR million)	80	2	107	12	798	84	33	31	90	9	842	15	175	:
Number of persons employed (thousands)	21	1	25	3	270	17	:	16	7	1	126	8	44	:
App. labour productivity (EUR thous./pers. emp.)	17.2	25.0	55.2	41.4	38.7	26.7	:	8.7	54.3	40.5	60.0	4.9	8.2	:
Average personnel costs (EUR thous./employee)	11.1	10.8	35.5	29.7	9.2	17.4	13.9	5.0	35.1	38.9	27.4	2.5	1.9	:
Wage adjusted labour productivity (%)	155.2	230.9	155.3	139.6	418.8	153.5	:	175.5	154.6	104.0	218.9	201.0	418.6	:
Gross operating rate (%)	2.9	12.3	7.0	2.3	20.4	6.3	3.1	4.0	1.7	3.6	10.5	3.7	8.8	:

(1) Germany, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Retail trade



The retail trade sector generally deals with private consumers as its main set of clients. Traditionally, the retail trade sector, in conjunction with the wholesale trade sector, acts as the interface between manufactures and final consumers. In terms of the activities that are carried out within the retail trade sector, most involve bundling the demand and wishes of the final consumer, in order to offer a demand-oriented range of goods, and balancing this with the offer from suppliers.

The adoption of new technology may allow retailers to automate their stock control, reordering and delivery procedures, and also permit them to be more precise and rapid in responding to information on changes to consumer preferences. Furthermore, for example through the Internet, information technology has expanded the range of possibilities available to retailers, thus reducing geographical barriers.

Another trend which can be observed since the development of the Internet is the increasing use of commerce via the web. As such, there has been a gradual shift from traditional methods of purchasing from stores or markets to purchasing remotely. According to the household survey on ICT usage and e-commerce that was carried out in 2002, between 5 % (Greece) and 43 % (the United Kingdom) of persons using the Internet made Internet purchases ⁽¹⁾. Buying books (including magazines and e-learning material) was particularly common: in Luxembourg 72.7 % of those persons making e-purchases through the Internet bought books, while in Germany the proportion was 47.9 %. The ICT survey classified persons making Internet purchases according to the amount that they spent during a three-month period on Internet e-commerce; in most countries for which data are available the highest proportion of persons made purchases totalling between EUR 30 and EUR 99.

However, home shopping is not new as other remote formats, notably door-to-door and catalogue sales, have existed for a long time. Not all business-to-customer (B2C) Internet sales are part of the retail sector, as some manufacturers sell direct, alongside specialist Internet retailers and more traditional retailers using e-sales to complement their traditional store formats.

On 13 January 2004, the European Commission proposed a directive to reduce administrative barriers to improve the competitiveness of Europe in several service sectors, including retail trade. The directive is designed to create a general legal framework to make it easier to offer services across borders, as well as to set up an enterprise in other Member States - see Chapter 22 for more details.

STRUCTURAL PROFILE

EU-25 retail trade generated turnover of EUR 1 768 billion in 2001. In comparison, in the EU-15, turnover was EUR 1 676 billion, and employment some 12.8 million persons. Added value in the EU-15 retail trade sector was EUR 320.9 billion in 2001, some EUR 9.1 billion less than the EU-25 total. As such, the retail trade sector accounted for 38.9 % of value added in the EU-15's distribution sector (NACE Section G) and for 54.7 % of employment.

Among the Member States ⁽²⁾, the highest proportions of distributive trade employment accounted for by retail trade were recorded in the United Kingdom (62.4 %), Ireland (59.4 %), Latvia (58.8 %) and Germany (57.4 %, 2000), while the lowest proportions were registered in Slovakia (40.4 %), Sweden (44.2 %) and Denmark (45.7 %).

⁽²⁾ Greece and Slovenia, not available.

Division 52 of NACE covers retail trade, as well as the repair of personal and household goods. The retail trade of motor vehicles and motorcycles (covered by NACE Division 50) is excluded (see Chapter 16). 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. In the overview for this chapter, repair (NACE Group 52.7) is not included in the coverage of the retail trade sector, unless expressly mentioned.

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.

⁽¹⁾ Belgium, Denmark, Germany, France, Ireland and the Netherlands, not available.

Table 18.1

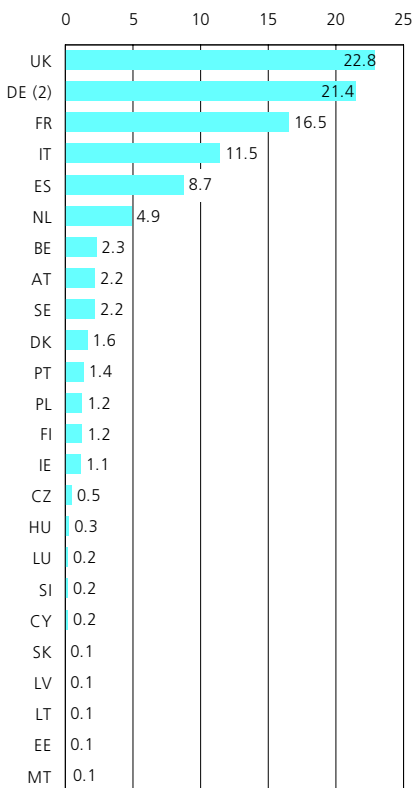
Retail trade, except of motor vehicles, motorcycles; repair of personal and household goods (NACE Division 52)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (76.3)	Portugal (112)	United Kingdom (3 154.1)
2	France (55.3)	Ireland (112)	Italy (1 709.3)
3	Italy (38.3)	Slovenia (111)	France (1 635.4)
4	Spain (29.2)	Spain (111)	Spain (1 509.0)
5	Netherlands (16.5)	France (111)	Poland (1 096.0)

(1) Germany and Greece, not available.
 (2) Germany, Greece, Cyprus and the Netherlands, not available.
 (3) Germany, Greece and Slovenia, not available.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 18.2

Retail trade, except of motor vehicles, motorcycles; repair of personal and household goods (NACE Division 52)
Share of EU-25 value added, 2001 (%) (1)

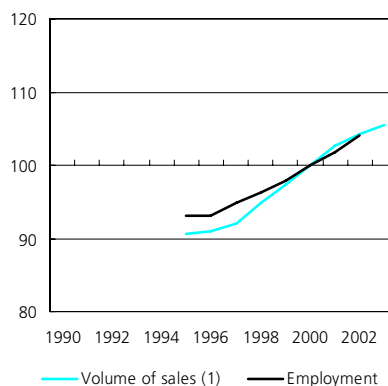


(1) Greece, not available.
 (2) 2000.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

A breakdown of retail trade activity shows that 51.0 % of retail trade turnover was generated by in-store non-food retailing (NACE Class 52.12 and Groups 52.3 to 52.5) in 2001, followed by in-store food retailing (NACE Class 52.11 and Group 52.2) with 43.8 % and retail sale not in stores (NACE Group 52.6) with 5.2 %. This pattern was reproduced in most of the Member States for which data are

Figure 18.3

Retail trade, except of motor vehicles, motorcycles; repair of personal and household goods (NACE Division 52)
Main indicators, EU-25 (2000=100)



(1) Excluding Group 52.7.
 Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

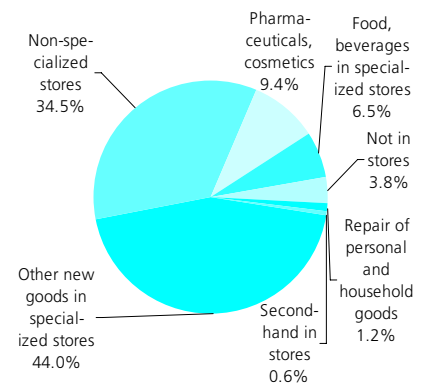
available⁽³⁾, with the exception of France, Ireland, Lithuania and Slovenia, where in-store food retailing dominated. In terms of employment, the distribution between these three subsectors that make up the retail trade sector was similar to that for turnover. There was a relatively high proportion of employment within the activities that make up in-store food retailing in Lithuania, Ireland and Hungary, where almost 50 % of the retail trade workforce was employed.

The highest shares of EU-25 retail trade turnover were recorded in the United Kingdom (20.5 %), followed by Germany (18.4 %), France (17.9 %) and Italy (12.4 %). For value added Poland stood out from the other Member States, with retail trade accounting for just 11.7 % of the value added generated in the whole of distribution, whereas all other

⁽³⁾ Germany, 2000; the Czech Republic and Greece, not available.

Figure 18.1

Retail trade, except of motor vehicles, motorcycles; repair of personal and household goods (NACE Division 52)
Share of value added at factor cost, EU-25, 2001



Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

countries⁽⁴⁾ reported shares in the range of 26.7 % (Latvia) to 43.1 % (France).

Annual short-term statistics for the volume of sales index in the EU-25's retail trade sector recorded increasing annual growth rates between 1996 (0.3 %) and 1998 (2.9 %). Since then, growth rates stabilised between 2.6 and 2.9 % through to 2001, while 2002 marked a slowdown, as turnover expanded by 1.7 %, which was confirmed in 2003, as turnover rose by 1.2 %. In the EU-15 a similar situation was observed, although annual growth was slightly lower in each of the three years to 2002. Whereas several of the EU-15 Member States recorded a fall in their respective volume of sales indices in 2002, Cyprus was the only one of the new Member States⁽⁵⁾ in this position, whereas the Baltic States reported growth close to, or above, 10 %.

⁽⁴⁾ Germany, 2000; Greece, not available.
⁽⁵⁾ Malta and Poland, not available.

Table 18.2

Retail trade, except of motor vehicles, motorcycles; repair of personal and household goods (NACE Division 52)
Value added at factor cost and persons employed, by enterprise size-class, 2001 (% of total)

	Micro enterprises		Small enterprises		Medium-sized enterprises		Large enterprises	
	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed
EU-25	30.1	42.5	17.3	14.7	11.7	7.1	41.0	35.7
EU-15	30.9	39.6	16.7	14.8	11.3	6.7	41.1	38.9

Source: Eurostat, Structural Business Statistics (theme4/sbs/sizclass).

A size-class analysis for the whole of NACE Division 52 covering retail trade and repair shows that in 2001 value added in the EU-25 was split 41.0 % for large enterprises and 59.0 % for SMEs (with less than 250 persons employed). Among the SMEs, the highest proportion of value added was generated by micro enterprises (with less than 10 persons employed), which accounted for 30.1 % of those employed in the retail trade and repair sector. SMEs in retail trade and repair contributed a smaller proportion of value added than the corresponding proportions recorded by SMEs in either motor trades or wholesale trades.

In employment terms, some 35.7 % of those persons employed in the EU-25's retail trade and repair sector were employed by large enterprises in 2001. This figure could be contrasted with a 42.5 % share of total employment that was registered for micro enterprises. As with value added, SMEs in the retail trade and repair sector employed a lower proportion of the total number of persons employed than SMEs in the other distribution activities.

LABOUR AND PRODUCTIVITY

LFS data show that the EU-15's retail trade and repair sector had a higher share of female employment (59.7 % of the total). This result stands out from the average (43.7 %) for the whole of the services sector (NACE Sections G to K) and also from the average (47.1 %) for the whole of distributive trades (NACE Section G). Compared with all other NACE divisions in the business economy, retail trade had the second highest proportion of women in employment, after the manufacture of wearing apparel/dressing/dyeing of fur (NACE Division 18, 76.2 %).

An analysis by Member State ⁽⁶⁾ confirmed this pattern of high female employment, as every country except Malta, Italy and Greece reported that there were more women than men working in the retail trade and repair sector. This was most evident in Sweden, where the share of women in total employment reached 63.9 %, compared with a services' average in that country of 40.8 %. The smallest difference was registered in Cyprus, where 54.1 % of those employed in the retail trade and repair sector were women, compared with an average of 47.1 % for the whole of services.

⁽⁶⁾ Poland, not available.

Table 18.3

Retail trade, except of motor vehicles, motorcycles; repair of personal and household goods (NACE Division 52)
Labour force characteristics, 2002

	Share of men		Share of full-time		Share of employees	
	Value (%)	Index (services=100)	Value (%)	Index (services=100)	Value (%)	Index (services=100)
EU-25	:	:	:	:	:	:
EU-15	40.3	71.5	69.1	86.2	75.3	93.2
BE	42.4	71.6	73.6	90.0	66.1	85.3
CZ	30.7	57.9	91.2	96.9	71.4	94.8
DK	47.6	79.8	61.4	77.5	85.7	97.7
DE	31.2	60.9	61.4	81.8	85.9	101.2
EE	36.4	70.1	96.4	101.9	87.2	95.3
EL	52.1	84.8	96.0	99.6	43.7	75.6
ES	40.7	70.5	89.5	98.3	63.6	85.5
FR	40.6	71.5	74.9	88.3	82.2	92.7
IE	37.3	70.4	65.3	82.4	86.1	102.2
IT	53.6	86.6	89.8	99.4	46.0	76.5
CY	45.9	86.8	88.5	95.1	63.6	84.1
LV	24.1	51.9	91.5	98.4	88.8	97.0
LT	33.2	63.6	90.2	98.6	68.6	81.7
LU	35.9	63.9	81.7	92.4	83.7	93.0
HU	36.5	67.8	94.2	98.2	73.9	91.7
MT	60.9	87.7	86.9	98.5	60.5	74.8
NL	39.7	67.7	34.8	60.0	86.7	98.8
AT	29.5	59.7	:	:	87.7	101.0
PL	:	:	:	:	:	:
PT	42.5	76.2	89.7	96.8	57.3	81.1
SI	39.2	74.4	94.7	100.1	89.7	103.3
SK	31.0	59.7	97.4	99.5	81.7	95.1
FI	32.8	61.7	67.2	80.7	84.6	96.9
SE	36.1	60.9	58.8	74.2	82.8	96.9
UK	39.8	70.9	49.5	69.0	89.6	102.2

Source: Eurostat, Labour Force Survey.

A breakdown of employment into full-time and part-time work shows that 69.1 % of those persons employed in the EU-15's retail trade and repair sector worked on a full-time basis in 2002, some 11 percentage points lower than the corresponding figure for the services sector (80.1 %). Retail trade and repair showed the lowest proportion of full-time employment of any division in the EU-15's business economy, due at least in part to the need to provide staff across extended shopping hours, as well as at weekends. In almost all Member States ⁽⁷⁾ the proportion of full-time employment was lower in the retail trade and repair sector than the services' average. Exceptions to this rule were Estonia and Slovenia, where full-time employment rates in the retail trade and repair sector were comparable to those recorded in services. Differences in terms of full-time employment rates between the retail trade and repair sector and the services' average were largest in the Netherlands, where 58.0 % of those employed in services worked on a full-time basis, compared with just 34.8 % in the retail trade and repair sector.

⁽⁷⁾ Austria and Poland, not available.

The proportion of paid employees in the total number of persons employed was lower in the retail trade and repair sector than it was in the services sector in the EU-15 in 2002. While 80.8 % of those employed in the EU-15's services sector were employees, this proportion was 75.3 % in the retail trade and repair sector.

This pattern of a lower proportion of paid employees (and consequently a higher proportion of self-employed and family workers) in the retail trade and repair sector was recorded in almost every Member State ⁽⁸⁾ in 2002, with the exception of Germany, Ireland, Austria, Slovenia and the United Kingdom. Malta, Lithuania, Greece, Italy and Portugal reported the largest differences in terms of having a lower proportion of paid employees in the retail trade and repair sector compared with the services' average.

⁽⁸⁾ Poland, not available.

The retail trade sector (excluding repair activities) recorded a lower apparent labour productivity than either motor trades or wholesale trade in 2001. Apparent labour productivity per person employed was EUR 25 100 in the EU-15's retail trade sector, compared to EUR 38 000 for motor trades and EUR 52 600 for wholesale trade. Average personnel costs in the retail trade sector (EUR 18 700 per employee) were also lower than those registered for motor trades (EUR 26 100) and wholesale trade (EUR 34 400) in the EU-15. The lower values in terms of apparent labour productivity and average personnel costs may result, among other things, from the relatively high proportion of part-time workers within the retail trade sector. An analysis of wage adjusted labour productivity compensates for this to some extent, showing that in 2001 wage adjusted labour productivity was 134.4 % in the retail trade sector in the EU-15, compared with somewhat higher values that were posted in the other distribution activities; motor trades (145.4 %) and wholesale trade (152.7 %). Within most of the Member States with data available ⁽⁹⁾, the lowest wage adjusted labour productivity ratios (among distribution activities) were registered in the retail trade sector, although this was not the case in France or the Netherlands.

⁽⁹⁾ Germany, 2000; Greece and Slovenia, not available.

Table 18.4

Retail trade, except of motor vehicles, motorcycles; repair of personal and household goods (NACE Division 52)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Retail trade, except of motor vehicles, motorcycles; repair of personal & household goods	25.0	134.2	18.7
Retail sale in non-specialized stores	25.1	139.5	18.0
Retail sale of food, beverages, tobacco in specialized stores	18.1	127.2	14.3
Retail sale of pharmaceuticals and medical goods, cosmetic and toilet articles	34.1	161.0	21.2
Other retail sale of new goods in specialized stores	25.2	132.3	19.0
Retail sale of second-hand goods in stores	26.4	132.7	19.9
Retail sale not in stores	24.4	105.5	23.1
Repair of personal and household goods	19.9	94.2	21.1

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

18.1: RETAIL TRADE OF FOOD ITEMS IN-STORE

These activities cover the retail sale of food, beverages and tobacco, either in specialised stores (NACE Group 52.2) or in non-specialised stores which have a predominance of these products (NACE Class 52.11). These activities are referred to as specialised food retailing and non-specialised food retailing within this subchapter.

Specialised food retailing (NACE Group 52.2) includes fruit and vegetable shops, bakers, butchers and fishmongers. These specialised food retailers are generally small and independent retail outlets that do not belong to national or international chains. They may be exposed to competitive pressures from non-specialised food retailers which offer consumers the opportunity to buy different kinds of products at a sole point of purchase (supermarkets and hypermarkets), and often at more favourable prices. Non-specialised food retailers may have greater price flexibility by being able to accept lower margins on certain products, as well as being able to exert greater purchasing power on their suppliers; furthermore, they may even have their own integrated wholesale activities.

STRUCTURAL PROFILE

There were 472 500 enterprises in specialised food retailing in the EU-25 in 2001. Together they generated EUR 111.4 billion of turnover, an average of EUR 235 700 per enterprise. The EU-15 had 433 600 enterprises, 91.8 % of the EU-25 total, and a slightly higher (94.4 %) proportion of EU-25 turnover, such that average turnover per enterprise in the EU-15 was EUR 242 400.

In non-specialised food retailing there were 239 500 enterprises in the EU-15 in 2001, which generated EUR 628.4 billion of turnover, at an average of EUR 2.6 million per enterprise. Total turnover for non-specialised food retailing in the EU-25 (10) was EUR 655.1 billion.

As such, although there were relatively high numbers of specialised food retailers, their importance in terms of their contribution to turnover was less substantial, as non-specialised food retailing accounted for 85.7 % of the total turnover generated by in-store food retailing in the EU-15.

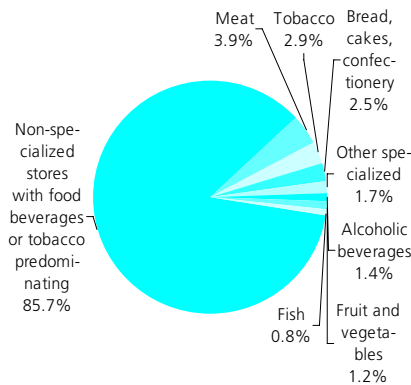
(10) The Czech Republic, not available.

Table 18.5 Retail sale of food beverages or tobacco (NACE Class 52.11 and Group 52.2) Structural profile, 2001

Rank	Largest turnover (EUR billion) (1)	Largest number of persons employed (thousands) (2)
1	France (168.2)	United Kingdom (1 260.3)
2	United Kingdom (157.8)	France (673.9)
3	Italy (90.6)	Italy (571.9)
4	Spain (66.5)	Spain (569.1)
5	Netherlands (27.6)	Netherlands (262.3)

(1) The Czech Republic, Germany and Greece, not available.
 (2) The Czech Republic, Germany, Greece, Poland and Slovenia, not available.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 18.4 Retail sale of food beverages or tobacco (NACE Class 52.11 and Group 52.2) Share of turnover, EU-15, 2001

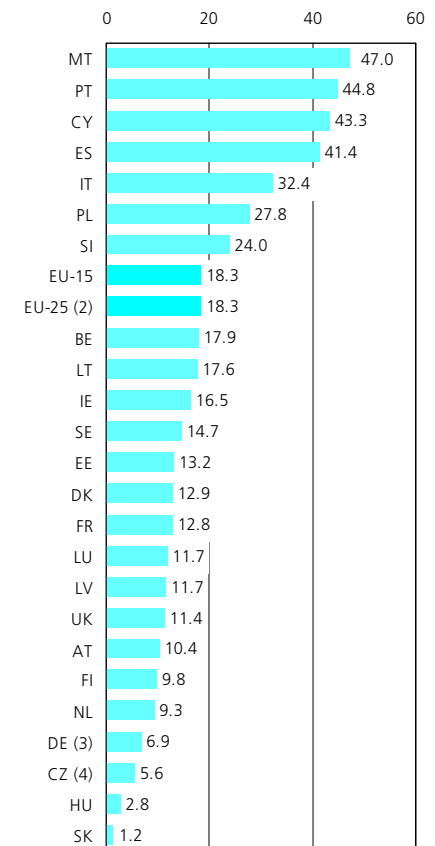


Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

In terms of employment, there were 4.1 million persons employed (11) in the non-specialised food retailing sector in the EU-25 in 2001, which was more than three times higher than the number of persons employed (12) in specialised food retailing activities (1.3 million). As such, the relative importance of non-specialised food retailing in the EU-25 was less pronounced than in terms of turnover.

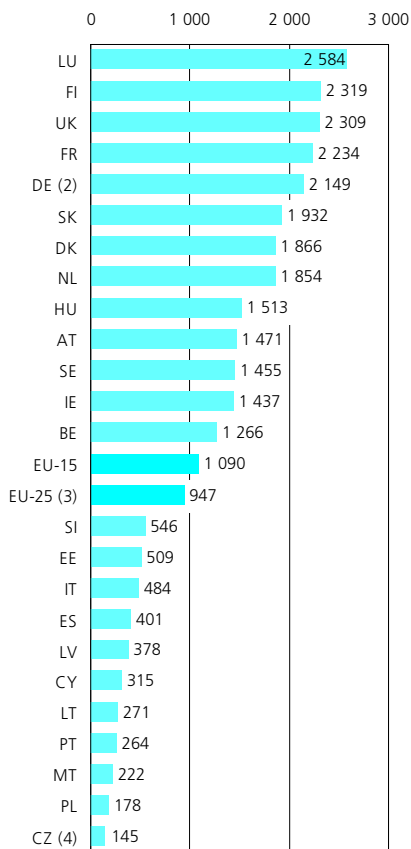
(11) Poland and Slovenia, number of employees; the Czech Republic, not available.
 (12) Slovenia, number of employees.

Figure 18.5 Retail sale of food beverages or tobacco (NACE Class 52.11 and Group 52.2) Enterprises per 10 000 inhabitants, 2001 (units) (1)



(1) Greece, not available.
 (2) The Czech Republic, excluding NACE Class 52.12.
 (3) 2000.
 (4) Excluding NACE Class 52.11.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms) and Demography (theme3/demo/dgen/gind).

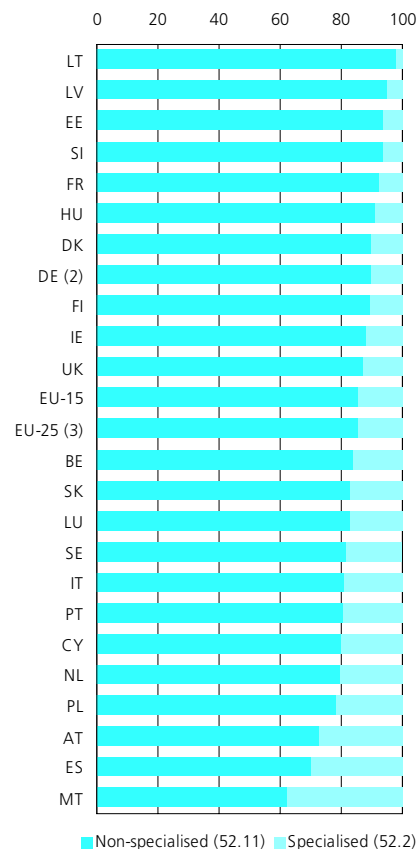
Figure 18.6
Retail sale of food beverages or tobacco
(NACE Class 52.11 and Group 52.2)
Turnover per enterprise, 2001
(EUR thousand) (1)



(1) Greece, not available.
 (2) 2000.
 (3) The Czech Republic, excluding NACE Class 52.11.
 (4) Excluding NACE Class 52.11.
 Source: Eurostat, Structural Business Statistics
 (theme4/sbs/enterpr/enter_ms).

Beyond the basic split between specialised and non-specialised food retailing, NACE provides a more detailed breakdown of specialised food retailing according to particular product specialisation. In the EU-15, the highest share of turnover in specialised food retailing activities was accounted for by enterprises that were specialised in the sale of meat and meat products (NACE Class 52.22, 27.1 %) and the sale of tobacco products (NACE Class 52.26, 20.0 %). A similar analysis in terms of employment confirms the retail sale of meat and meat products as the largest subsector (28.8 % of specialised food retailing), followed by the retail sale of bread, cakes, flour, confectionery and sugar confectionery (NACE Class 52.24, 15.8 %).

Figure 18.7
Breakdown of turnover of in-store food
retailing, 2001 (%) (1)



(1) The Czech Republic and Greece, not available.
 (2) 2000.
 (3) Excluding the Czech Republic.
 Source: Eurostat, Structural Business Statistics
 (theme4/sbs/enterpr/enter_ms).

While the number of food retailers is related to the size of population in each country, there are other characteristics that influence the distribution of enterprises, such as the demographic profile of the population and the shopping patterns of consumers. In 2001, more than 50 % of the specialised food retailers in the EU-25 were located in Spain or Italy: Spain contributed 130 200 enterprises (27.6 % of the EU-25 total) and Italy 117 600 (24.9 % of the EU-25 total). In Poland there were 77 900 non-specialised food retailing enterprises, the highest number among the Member States ⁽¹³⁾. Italy with 69 800 non-specialised food retailing enterprises, and considerably further behind, Spain with 35 900 enterprises, followed in the ranking.

⁽¹³⁾ Germany, 2000; the Czech Republic and Greece, not available.

An alternative measure is the density of in-store food retailing enterprises relative to the population of each country. The highest density of food retailers in 2001 was recorded in the southern Member States, where values above 40 food retailers per 10 000 inhabitants were registered, for example, Malta (46.8), Cyprus (44.9), Portugal (44.6) and Spain (41.3). Note that these density figures are based on the number of enterprises, not the number of outlets. A low density may, for example, indicate that there are few shops, but that they are generally large, or that enterprises with multiple outlets (chains) are more common.

Comparing the number of specialised and non-specialised food retailers, the Baltic Member States ⁽¹⁴⁾ recorded the lowest proportion of specialised food retailers. The proportion of specialised food retailers in the total number of food retailers was 4.1 % in Lithuania, 6.1 % in Latvia and 9.7 % in Estonia. Spain (78.4 %) and the Netherlands (76.9 %) marked the other end of the range, registering by far the highest proportion of specialised food retailers.

A similar analysis in terms of turnover confirmed the relatively low importance of specialised food retailers in the Baltic States; in 2001, as 2.2 % of turnover in Lithuania was generated by specialised food retailers, 5.1 % in Latvia, and 6.2 % in Estonia ⁽¹⁵⁾. Austria (27.3 %), Spain (29.8 %), and Malta (38.0 %) recorded the highest proportion of turnover generated by specialised food retailers. In contrast to the analysis by the number of enterprises, turnover data show that in all Member States non-specialised food retailing activities were more important than specialised food retailing activities.

The working day adjusted volume of sales index for the EU-25's food retailing sector rose year on year throughout the second half of the 1990s and through until 2003. In 2002, the rate of turnover growth for food retailing rose by 1.7 %, having grown by 2.0 % or more in each of the four previous years. In 2003 turnover expanded by a further 1.9 %.

⁽¹⁴⁾ Germany, 2000; the Czech Republic and Greece, not available.

⁽¹⁵⁾ Germany, 2000; the Czech Republic and Greece, not available.

LABOUR AND PRODUCTIVITY

The apparent labour productivity of the EU-15's specialised food retailing sector was EUR 18 100 per person employed in 2001 and was hence EUR 6 900 lower than the apparent labour productivity of the non-specialised food retailing sector.

Average personnel costs for enterprises within the non-specialised food retailing sector were higher, at EUR 17 800 per employee in the EU-15 in 2001, than for the specialised food retailing sector, where they stood at EUR 14 300 per employee.

The wage adjusted labour productivity ratio of non-specialised food retailing was 140.2 % in the EU-15 in 2001 and was therefore 13.0 percentage points higher than in specialised food retailing (127.2 %). When combined, the wage adjusted labour productivity ratio for the food retailing sector as a whole in the EU-15 was slightly lower (134.9 %) than the corresponding figure for non-food retailing (136.2 %) in 2001.

Table 18.6
Retail sale of food beverages or tobacco (NACE Class 52.11 and Group 52.2)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Retail sale of food beverages or tobacco	23.4	134.9	17.3
Retail sale in non-specialized stores with food beverages or tobacco predominating	25.0	140.2	17.8
Retail sale of fruit and vegetables	14.9	118.7	12.6
Retail sale of meat and meat products	18.7	117.1	15.9
Retail sale of fish, crustaceans and molluscs	15.5	112.5	13.8
Retail sale of bread, cakes, flour confectionery and sugar confectionery	16.3	121.2	13.5
Retail sale of alcoholic and other beverages	18.9	123.2	15.4
Retail sale of tobacco products	25.0	176.2	14.2
Other retail sale of food, beverages and tobacco in specialized stores	15.9	133.7	11.9

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

18.2: RETAIL TRADE OF NON-FOOD ITEMS IN-STORE

One of the activities covered by this subchapter is retail sale in non-specialised stores that do not have a predominance of food, beverages or tobacco (NACE Class 52.12). In particular this activity includes department stores with a general line of merchandise. Also covered by this subchapter are three NACE groups covering specialised non-food retailing: dispensing chemists, as well as specialised retailers of medical, orthopaedic, cosmetic and toilet articles (NACE Group 52.3); other specialised stores selling new goods (NACE Group 52.4), for example shops selling clothes, shoes, furniture, books or electrical items; and retail sale of second hand products (NACE Group 52.5), for example shops selling antiques, second-hand books or second-hand clothes.

Note that the retail sale of motor vehicles (see Chapter 16), whether new or second hand, is not covered by this subchapter, nor is renting and hiring of personal and household goods to the general public (see Chapter 22).

While food retailing, by definition, predominantly covers consumer non-durable goods, this subchapter deals with retailing of non-durables, semi-durables and durables. Examples of non-durable goods are pharmaceuticals, cosmetics and toilet articles. The retailing of new durable goods is mainly covered in NACE Group 52.4, but this also covers semi-durables like clothes and non-durables like newspapers; furthermore, it also includes living goods like pets. By definition, the retailing of second-hand goods covers only semi-durable and durable goods.

In contrast to the food retailing sector, where products are generally essential items, the retail trade of non-food items covers both essential and non-essential items. While clothes, and shoes are in their basic characteristic essential (covered by NACE Classes 52.42 and 52.43), electrical household appliances, and radio and television equipment (NACE Class 52.45) are rather non-essential and concern labour-saving or entertainment devices. Therefore, non-food retailing may be more strongly influenced by the general economic cycle, particularly for durable and other non-essential goods.

Alongside frequently (sometimes daily) purchased products like newspapers and magazines, the sale of non-food items also includes products with a strong seasonal component to their demand. In the period leading up to Christmas, higher turnover is often recorded and a general slack period in terms of sales can be observed in the first two months of the year and in August.

STRUCTURAL PROFILE

In-store non-food retailing in the EU-25 ⁽¹⁶⁾ was carried out by 1.8 million enterprises in 2001, equivalent to 57.0 % of the retail trade total. These enterprises generated EUR 900.2 billion of turnover and EUR 200.1 billion of value added, which was equivalent to 50.9 % of retail trade turnover and 60.6 % of retail trade value added. In 2001 the resulting average turnover per enterprise within the non-food retailing in stores sector was EUR 510 800 in the EU-25. In the EU-15, in-store non-food retailers generated an average turnover of EUR 567 500 per enterprise.

Within the EU-25, 7.9 million persons were employed ⁽¹⁷⁾ in the non-food retailing sector, of which 7.3 million were working in the EU-15. This was 57.1 % of all retail trade employment in the EU-15 in 2001, while the average enterprise employed 4.8 persons.

In 2001 Italy had the highest number of enterprises in non-food retailing among the Member States, with 412 200 enterprises. As such, almost one in four non-food retailing enterprises in the EU-25 ⁽¹⁸⁾ were in Italy. Studying the density of enterprises in comparison to the population, there were approximately 40 non-food retailers ⁽¹⁹⁾ for every 10 000 inhabitants in the EU-25. In 2001, the highest density among the Member States for which data are available, was registered in Malta (96 non-food retailers per 10 000 inhabitants), followed by Slovenia (77) and Spain (73). The lowest density was recorded in Hungary and Slovakia, where there were respectively six and eight non-food retailers per 10 000 inhabitants. As with the analysis for food retailing, it should be noted that these density figures are based on the number of enterprises, not the number of retail outlets.

A breakdown of in-store non-food retailing by activity ⁽²⁰⁾ shows that the retail sale of other new goods in specialised stores (NACE Group 52.4) was by far the largest subsector in the in-store non-food retailing sector in the EU-25. In 2001 it accounted for 73.0 % of total turnover compared with 16.1 % for the retail sale of pharmaceuticals, medical goods, cosmetics and toilet articles (NACE Group 52.3) and 10.0 % for non-food retail sale in non-specialised stores (NACE Class 52.12). Retail sale of second-hand goods in stores (NACE

⁽¹⁶⁾ The Czech Republic, Class 52.12, not available.

⁽¹⁷⁾ The Czech Republic, excluding NACE Class 52.12; Poland and Slovenia, number of employees.

⁽¹⁸⁾ The Czech Republic, NACE Class 52.12, not available.

⁽¹⁹⁾ The Czech Republic, NACE Class 52.12, not available.

⁽²⁰⁾ The Czech Republic, not available.

Table 18.7

Retail sale of non food products in stores (NACE Class 52.12 and Groups 52.3, 52.4 and 52.5) Structural profile, 2001

Rank	Largest turnover (EUR billion) (1)	Largest number of persons employed (thousands) (2)
1	United Kingdom (177.0)	United Kingdom (1 732.6)
2	Germany (165.8)	Italy (944.0)
3	France (125.3)	France (842.9)
4	Italy (107.4)	Spain (835.1)
5	Spain (73.1)	Netherlands (436.1)

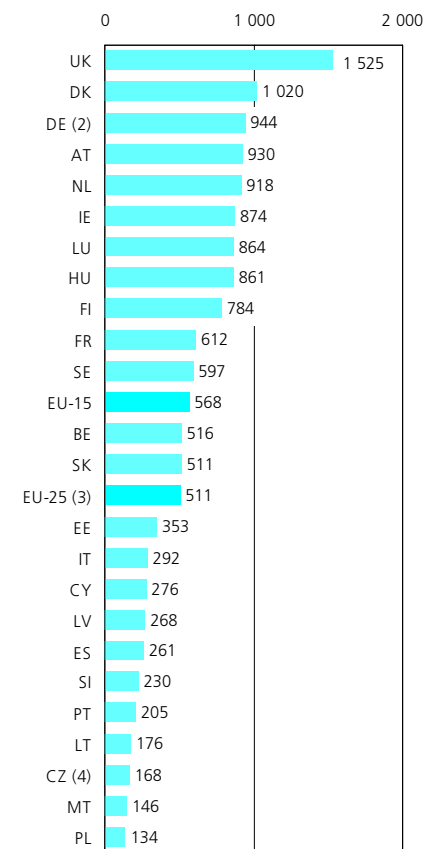
(1) The Czech Republic, Germany and Greece, not available.

(2) The Czech Republic, Germany, Greece, Poland and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 18.8

Retail sale of non-food items (NACE Class 52.12 and Groups 52.3 to 52.5) Turnover per enterprise, 2001 (EUR thousand) (1)



(1) Greece, not available.

(2) 2000.

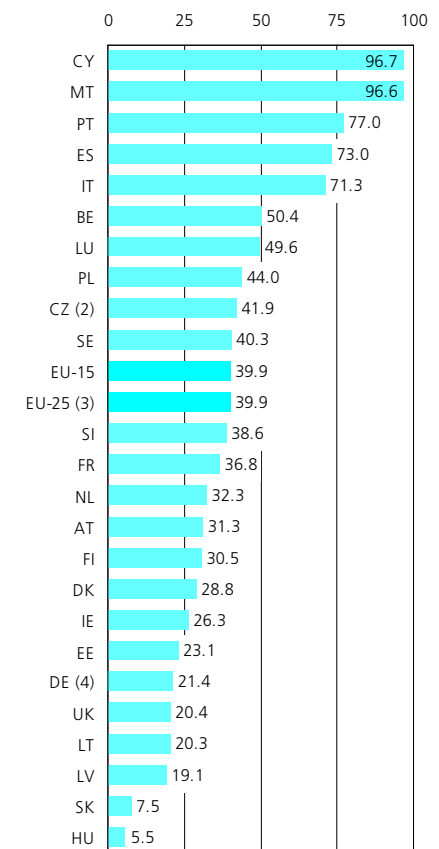
(3) The Czech Republic, excluding NACE Class 52.12.

(4) Excluding NACE Class 52.12.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms).

Figure 18.9

Retail sale of non-food items (NACE Class 52.12 and Groups 52.3 to 52.5) Enterprises per 10 000 inhabitants, 2001 (units) (1)



(1) Greece, not available.

(2) Excluding NACE Class 52.12.

(3) The Czech Republic, excluding NACE Class 52.12.

(4) 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms) and Demography (theme3/demo/dgen/gind).

Group 52.5) made the smallest contribution to turnover, accounting for just 0.8 % of the in-store non-food retailing total. Almost the same breakdown was observed when analysing the distribution across subsectors in terms of employment, although the retail sale of other new goods in specialised stores accounted for a

higher share than for turnover, mainly at the expense of the retail sale of pharmaceuticals, medical goods, cosmetics and toilet articles.

Figure 18.10
Retail sale of non food products in stores
(NACE Class 52.12 and Groups 52.3, 52.4
and 52.5)



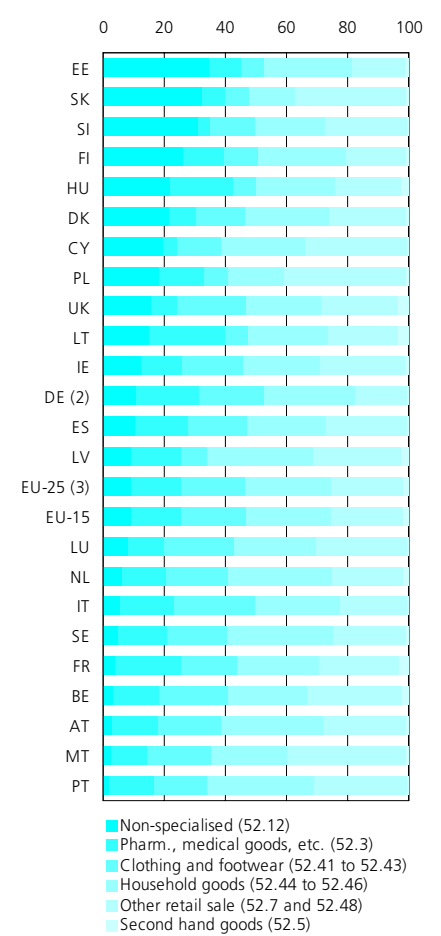
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

A more detailed analysis of turnover for the two largest groups, namely 52.3 and 52.4, provides a profile of the various types of products sold in such stores in the EU-15. The retail sale of household equipment in specialised stores (NACE Classes 52.44 to 52.46) generated 28.0 % of in-store non-food retail turnover in 2001. The retail sale of books, newspapers and other items in specialised stores (NACE Classes 52.47 and 52.48) generated one quarter (23.9 %) of total turnover, while the retailing of clothing, footwear and leather goods in specialised stores (NACE Classes 52.41 to 52.43) provided a slightly lower contribution (21.5 %). Dispensing chemists (NACE Class 52.31) was the largest activity in NACE Group 52.3, with 12.5 % of in-store non-food retail turnover, while the retail sale of medical, orthopaedic, cosmetic and toilet articles (NACE Classes 52.32 and 52.33) together generated 3.7 %.

An investigation of relative specialisation ratios within the in-store non-food retailing sector can be done for most Member States ⁽²¹⁾. In Estonia, Slovakia, Slovenia and Finland the non-specialised part of in-store non-food retailing (NACE Class 52.12) generated more than one quarter of in-store non-food retailing turnover, which was more than double the EU-25 average; non-specialised in-store food retailing accounted for 2.5 % or less of all in-store non-food retailing turnover in Portugal and Malta. The retail sale of pharmaceutical and medical goods, cosmetics and toilet articles (NACE Group 52.3) was relatively important in Lithuania, France and Hungary, where it generated between one fifth and one quarter of in-store non-food retail turnover, whereas in Slovenia and Cyprus it generated less than 5 %.

⁽²¹⁾ Germany, 2000; the Czech Republic and Greece, not available.

Figure 18.11
Breakdown of turnover of in-store
non-food retailing, 2001 (%) (1)



(1) The Czech Republic and Greece, not available.
 (2) 2000.
 (3) Excluding the Czech Republic.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms).

As already noted, the other retail sale of new goods in stores (NACE Group 52.4) was the largest activity in every Member State, always accounting for more than half of in-store non-food retail turnover. The retailing of clothing, footwear and leather goods in specialised stores (NACE Classes 52.41 to 52.43) generated more than one quarter (26.7 %) of in-store non-food retail turnover in Italy, and was also relatively important in the United Kingdom and Belgium; this sector, however, generated less than 10 % of in-store non-food retail turnover in all of the new Member States with data available ⁽²²⁾, except for Malta, Slovenia and Cyprus. The retail sale of household equipment in specialised stores (NACE Classes 52.44 to 52.46) generated one third or more of in-store non-food retail

⁽²²⁾ Estonia also not available.

turnover in Latvia, Portugal, Sweden, the Netherlands and Austria, but its share was below one fifth in Slovakia and Poland. The share of the retail sale of books, newspapers and other items in specialised stores ⁽²³⁾ (NACE Classes 52.47 and 52.48) was above one third of total turnover for in-store non-food retail turnover in Poland, Malta, Slovakia and Cyprus, while it was just under one fifth of the total in Finland. Finally, the retail trade of second-hand goods (Group 52.5) was a small activity in every Member State, but was relatively important in the United Kingdom, Lithuania and France, where it generated between 1.5 and 1.7 % of total in-store non-food retailing turnover.

The volume of sales index of the EU-25's non-food retailing sector, including also retail sales not in stores (NACE Group 52.6) ⁽²⁴⁾, grew on average by 2.7 % per annum in the five years to 2002. Only in 2002 did the growth rate fall below 2.5 %, as deflated turnover rose by 1.8 % compared with the year before. This pattern continued in 2003, as the EU-25 growth rate for the volume of sales slowed to 0.7 %. Growth in 2002 was fairly widespread among the EU-25 Member States ⁽²⁵⁾, although two of the larger Member States, Germany (-4.0 %) and Italy (-1.2 %), recorded a contraction in their respective indices of the volume of sales, as did Austria (-1.8 %). For 2003 a sales index is available for about half of the Member States and this shows that in Germany this sector continued to contract, as the index fell by 2.3 %, while Spain and the United Kingdom continued to report growth, both between 3 and 4 %. In 2003 the pattern of slowing growth rates in 2002 and 2003 was reproduced across most subsectors, while the retail sale of household equipment (NACE Classes 52.44 to 52.46) recorded stronger growth in the EU-25 in 2003.

⁽²³⁾ Estonia also not available.

⁽²⁴⁾ This activity accounted for 9.2 % of non-food retail sales (NACE Class 52.12 and Groups 52.3 to 52.6) in the EU-15 in 2001.

⁽²⁵⁾ Belgium, Cyprus, Malta and Poland, not available.

LABOUR AND PRODUCTIVITY

Apparent labour productivity for in-store non-food retailing activities in the EU-15 was EUR 26 300 per person employed in 2001. This was 4.8 % higher than the corresponding figure for the whole of the retail trade sector. This pattern was reproduced across the majority of the Member States for which data are available ⁽²⁶⁾, with the exception of Belgium and Finland, where there was little difference between the two levels. The highest relative difference was recorded in the Baltic States, where apparent labour productivity in non-food retailing was 36.1 % higher than the retail trade average in Lithuania, 22.1 % higher in Estonia and 17.2 % higher in Latvia.

⁽²⁶⁾ Germany, 2000; the Czech Republic, Greece, Poland and Slovenia, not available.

Average personnel costs per employee in 2001 were EUR 19 300 for the EU-15 within non-food retailing activities, and therefore 3.4 % higher than the retail trade average. As well as Denmark and the Netherlands, the Baltic countries again recorded the biggest deviations between non-food retailing and the retail trade average ⁽²⁷⁾.

Wage adjusted labour productivity gives a more comparable picture of productivity, looking at value added compared with personnel costs, rather than as a simple head-count, thus reducing the impact of differences in part-time work. The ratio also takes account of the share of employees in persons employed and hence adjusts for the proportion of employment

⁽²⁷⁾ Germany, 2000; the Czech Republic and Greece, not available.

whose compensation does not figure in personnel costs. Wage adjusted labour productivity in non-food retailing was 136.2 % in the EU-15 in 2001, which was a little higher (1.8 percentage points) than the average for the whole of the retail trade sector. Latvia accounted for the highest wage adjusted labour productivity ratio among the Member States in 2001 ⁽²⁸⁾, namely 209.2 %, followed by the United Kingdom with 163.7 % and Lithuania (160.6 %). The lowest levels of wage adjusted labour productivity were reported in Italy (106.9 %) and Sweden (109.6 %). All of the 10 new Member States registered higher levels of wage adjusted labour productivity than the EU-15 average.

⁽²⁸⁾ Germany, 2000; the Czech Republic, Greece, Poland and Slovenia, not available.

Table 18.8

**Retail sale of non food products in stores (NACE Class 52.12 and Groups 52.3, 52.4 and 52.5)
Labour productivity and personnel costs, EU-15, 2001**

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Retail sale of non food products in stores	26.3	136.2	19.3
Other retail sale in non-specialized stores	25.7	136.4	18.8
Retail sale of pharmaceuticals and medical goods, cosmetic and toilet articles	34.1	161.0	21.2
Retail sale of textiles, clothing, footwear and leather goods	23.7	138.6	17.1
Retail sale of household equipment	29.0	132.3	22.0
Retail of books, newspapers and other	23.3	126.6	18.4
Retail sale of second-hand goods in stores	26.4	132.7	19.9

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

18.3: RETAIL SALE NOT IN STORES

These activities cover retail sales via stalls, markets, and door to door, as well as remote retail sales via mail order, mobile sales and sales from 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.

Retail sales via the Internet or home-shopping channels are comparatively new forms of retail sale. In particular, Internet retailing to consumers experienced rapid growth during the late 1990s and the beginning of the 21st century, although far less than business-to-business Internet sales. It should be noted that Internet retailing by enterprises whose principal activity is manufacturing or in-store retailing are not classified within NACE Group 52.6.

A specialised part of NACE Class 52.63 is concerned with direct selling, which is characterised as the retail trade of consumer goods or services taking place on a person-to-person basis away from a permanent retail outlet, which usually means within the home or the workplace. Party selling, home-delivery selling and order collectors are examples of direct selling. According to the Federation of European Direct Selling Associations (FEDSA) ⁽²⁹⁾, the turnover generated by direct selling in the EU-15 was EUR 6.3 billion in 2002, with 43.1 % of this figure being accounted for by clothes, jewellery and personal care products, 28.7 % by household equipment and 16.0 % by food (including supplements and similar items) and fitness products. Employment among FEDSA members in the EU-15 was 80 % female and 90 % worked part-time.

⁽²⁹⁾ <http://www.fedsa.be>.

STRUCTURAL PROFILE

Retail sale not in stores generated EUR 92.1 billion of turnover in 2001, which equated to 5.2 % of the retail trade total in the EU-25. The 10 new Member States had a combined turnover of EUR 4.9 billion within the activity of retail sale not in stores, which was 5.3 % of the EU-25 total. There were 684 200 persons employed in the EU-15's retail sale not in stores sector in 2001, equivalent to 5.4 % of the retail trade total.

In 2001, retail sale via mail order houses (NACE Class 52.61) generated more than half (54.9 %) of the turnover within the EU-15 retail sale not in stores sector. Retail sales via stalls and markets (NACE Class 52.62) accounted for 16.9 % and other non-store retail trade (NACE Class 52.63) contributed the remaining 28.2 %. An analysis of the composition of this sector in the 10 new Member States showed a different picture, as none of the nine countries for which data are available ⁽³⁰⁾ had the majority of their turnover generated within the retail sale via mail order houses subsector. In the three Baltic Member States, as well as in Poland, more than half of the turnover generated in this sector was accounted for by retail sales via stalls and markets, while in the remaining new Member States, other non-store retailing accounted for more than half of the turnover generated within this sector.

A similar analysis in terms of employment shows that, unlike for turnover, retailing via mail order houses was less important as a provider of employment opportunities in the EU-15. It accounted for a 33.7 % share of employment among the retail sale not in stores sector in 2001, behind the contribution of retailing via stalls and markets (38.3 %). This is not surprising as many enterprises operating markets or stalls may do so for only a few hours a day or for a few days per week, or in particular seasons of the year, and this is reflected in their turnover but not in the simple head-count used for employment figures. Furthermore, the lack of face-to-face contact with clients in remote selling activities means that there may be a delay between interactions with clients and delivery of the final product, which would be less acceptable for retailing forms that are concerned with face-to-face interaction; this in turn means that a more efficient use can be made of personnel, hence reducing employment levels. Additionally, retailing via stalls and markets by definition requires a local presence of sales persons, whereas remote trading can be more automated and hence rely on lower personnel levels.

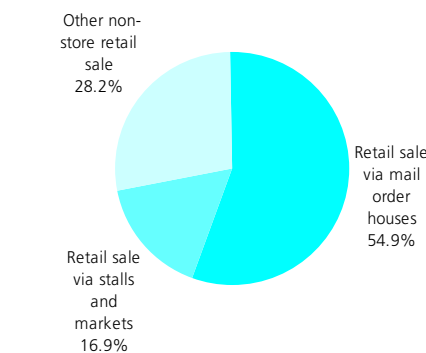
Non-store retailing enterprises in Germany, France and the United Kingdom together generated EUR 66.2 billion of turnover in 2001, contributing almost three quarters of the EU-25 total (71.9 %). For comparison, this contribution was considerably more than the equivalent share of these three countries in retail trade turnover (56.7 %). Germany alone contributed EUR 33.5 billion of turnover (36.3 % of the EU-25 total). The relative importance of retail trade not in stores was highest in Germany, Latvia, Malta and Poland, which were all relatively specialised in this form of trading ⁽³¹⁾.

Table 18.9
Retail sale not in stores (NACE Group 52.6)
Structural profile, 2001

Rank	Largest turnover (EUR billion) (1)	Largest number of persons employed (thousands) (2)
1	Germany (33.5)	Germany (164.8)
2	United Kingdom (17.6)	Poland (161.2)
3	France (15.2)	Italy (152.5)
4	Italy (8.3)	United Kingdom (129.1)
5	Spain (3.7)	France (89.3)

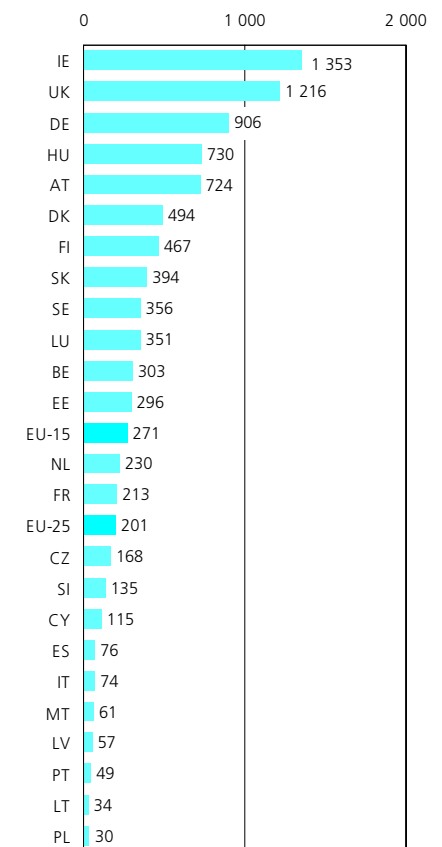
(1) Greece, not available.
(2) Greece and Slovenia, not available.
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 18.12
Retail sale not in stores (NACE Group 52.6)
Share of turnover, EU-15, 2001



Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 18.13
Retail sale not in stores (NACE Group 52.6)
Turnover per enterprise, 2001 (EUR thousand) (1)



(1) Greece, not available.
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms).

⁽³⁰⁾ The Czech Republic, not available.
⁽³¹⁾ Greece, not available.

LABOUR AND PRODUCTIVITY

The apparent labour productivity of the EU-15's non-store retailing sector was EUR 24 400 per person employed in 2001, while average personnel costs were EUR 23 100 per employee. For the EU-25, average personnel costs were EUR 2 000 less than for the EU-15.

Non-store retailing recorded the lowest wage adjusted labour productivity ratio in the EU-15 among all NACE groups within the retail trade sector (excluding repair), at 105.5 % in 2001. A similar situation was observed in more than half of the Member States ⁽³²⁾, with this productivity ratio often below 100 %.

⁽³²⁾ Germany, 2000; Greece and Slovenia, not available.

Table 18.10

Retail sale not in stores (NACE Group 52.6)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Retail sale not in stores	24.4	105.5	23.1
Retail sale via mail order houses	34.0	124.0	27.4
Retail sale via stalls and markets	13.6	109.5	12.5
Other non-store retail sale	27.6	126.5	21.8

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

18.4: 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 distribution or manufacturing activity. The repair of personal and household goods includes the repair of boots, shoes and leather articles (NACE Class 52.71), electrical household goods (NACE Class 52.72), watches, clocks and jewellery (NACE Class 52.73) and other repair, including bicycles, as well as the repair and alteration of clothing (NACE Class 52.74).

Production costs and the retail price of some products, notably electrical goods, may fall over time. This, combined with the increasing complexity of some electronic goods, may reduce the market for repairs, as consumers replace rather than repair broken goods. Furthermore, marketing campaigns, for example for new product launches, may take back old or broken products in exchange for a discount on sales of new products, again reducing the demand for repair services. Equally, when fashions change rapidly, for example with respect to clothing and footwear, goods may be replaced more rapidly and repaired less often. These factors all suppress demand for repair services.

STRUCTURAL PROFILE

In 2001 there were 116 000 enterprises classified within the repair of personal and household goods sector (hereafter referred to as repair). Together they generated EUR 4.0 billion of value added in the EU-25, and accounted for 3.6 % of enterprises and 1.2 % of the value added generated within the whole of retail trade and repair (NACE Division 52). The EU-15's repair sector employed 192 700 persons in 2001, equivalent to 1.5 % of the total retail and repair workforce. The average size of repair enterprises was 2.0 persons employed per enterprise in 2001, which was the second lowest value among retail and repair NACE groups, after retailing not in stores (NACE Group 52.6).

The repair of electrical household goods (NACE Class 52.72) was the largest contributor to the EU-15's repair sector in 2001, both in terms of value added and employment. It accounted for 47.3 % of value added and 44.6 % of employment within the repair sector. The miscellaneous repair activity (NACE Class 52.74) was the next largest subsector, generating 34.7 % of value added and providing 32.9 % of employment. The other two subsectors contributed together 18.0 % of value added and 22.5 % of employment.

Table 18.11
Repair of personal and household goods (NACE Group 52.7)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (0.9)	Slovenia (191)	Italy (40.9)
2	France (0.8)	Sweden (140)	United Kingdom (32.1)
3	Italy (0.5)	Spain (134)	Spain (30.7)
4	Spain (0.4)	Denmark (132)	France (29.2)
5	Netherlands (0.2)	France (127)	Poland (25.5)

(1) Germany and Greece, not available.

(2) Germany, Greece, Cyprus and the Netherlands, not available.

(3) Germany, Greece and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

As with other sectors within retail trade, value added in the EU-25's repair sector was dominated by the four largest countries; together they generated 71.0 % of EU-15 value added in 2000, slightly lower than their share of in-store food and non-food retailing and much lower than their share of retailing not in stores. The United Kingdom had the highest level of value added within the repair sector⁽³³⁾, at EUR 874.2 million. Cyprus, Poland and Sweden were all relatively specialised in the repair sector in terms of its contribution to the retail trade and repair sector's value added. In employment terms, Poland was the fifth largest Member State, with 25 500 persons employed in 2001, ahead of Germany (23 000, 2000).

⁽³³⁾ Germany, 2000; Greece, not available.

LABOUR AND PRODUCTIVITY

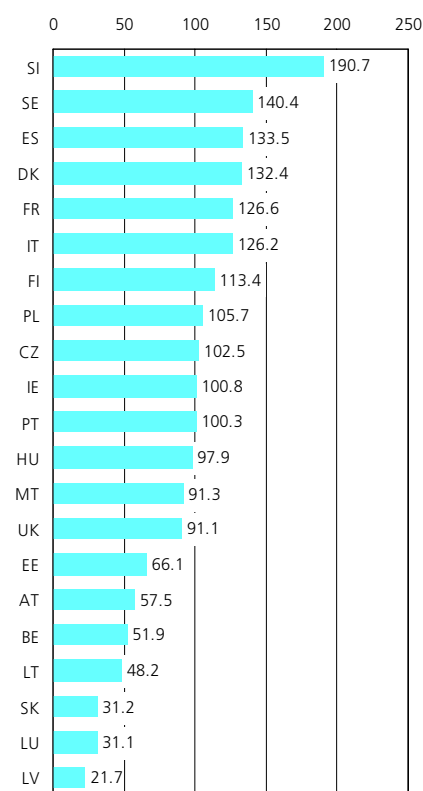
Apparent labour productivity in the EU-15's repair sector was lower than in most retail and repair NACE groups, but was higher than for specialised food retailing. In 2001 the apparent labour productivity of this sector was EUR 19 900 per person employed in the EU-15, EUR 5 100 below the average for the whole of the retail trade and repair sector.

Average personnel costs in 2001 were EUR 18 900 per employee in the EU-25's repair sector, EUR 2 200 less than the corresponding figure for the EU-15. These values, both for the EU-25 and the EU-15, were slightly higher than the respective averages for the whole of the retail and repair sector.

Wage adjusted labour productivity in the EU-15 was 94.2 % in 2001, indicating that value added did not fully cover personnel costs (after adjusting for the proportion of paid employees in the total number of persons employed). This was the only NACE group within the retail trade and repair sector to record a value below 100 % for this indicator. An analysis of the data by Member State⁽³⁴⁾ shows that wage adjusted labour productivity for the repair sector was extremely low in the Czech Republic (48.0 %) and Cyprus (45.9 %) in 2001.

⁽³⁴⁾ Germany, 2000; Greece and Slovenia, not available.

Figure 18.14
Repair of personal and household goods (NACE Group 52.7)
Value added specialisation ratio relative to non-financial services, 2001 (EU-25=100) (1)



(1) Germany, Greece, Cyprus and the Netherlands, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 18.12
Repair of personal and household goods (NACE Group 52.7)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Repair of personal and household goods	19.9	94.2	21.1
Repair of boots, shoes and other articles of leather	16.9	82.3	20.5
Repair of electrical household goods	21.2	91.5	23.1
Repair of watches clocks and jewellery	13.6	79.8	17.1
Repair n.e.c.	20.9	109.4	19.1

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 18.13

Retail trade, except of motor vehicles, motorcycles (NACE Division 52 excluding Group 52.7)

Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	51 212	18 168	28 879	324 865	2 104	:	146 799	316 262	18 130	219 248	3 277	2 482	2 981	3 281
Value added at factor cost (EUR million) (1)	7 792	1 533	5 253	67 899	228	:	28 761	54 496	3 677	37 767	534	380	292	606
Purchases of goods and services (EUR million) (1)	43 684	16 122	24 046	241 428	1 924	:	121 025	263 105	14 618	189 295	2 518	2 202	2 721	2 678
Gross investment in tangible goods (EUR million) (1)	1 772	560	509	6 493	94	:	5 281	7 602	1 103	7 197	115	138	88	:
Number of persons employed (thousands)	285	398	203	2 506	43	:	1 478	1 606	139	1 668	27	83	100	18
App. labour productivity (EUR thous./pers. emp.) (1)	27.4	3.9	25.9	26.8	5.3	:	19.5	33.9	26.5	22.6	19.5	4.6	2.9	33.7
Average personnel costs (EUR thous./employee) (1)	22.8	4.8	20.7	19.3	3.7	:	15.2	25.2	20.6	22.0	15.7	2.1	2.2	23.8
Wage adjusted labour productivity (%) (1)	120.3	79.9	125.5	139.3	142.5	:	127.9	134.6	128.2	102.7	124.2	215.5	130.6	141.9
Gross operating rate (%) (1)	6.3	1.7	5.1	7.3	3.5	:	9.5	5.7	6.8	10.2	6.3	8.5	3.2	7.2
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	9 339	1 059	78 575	37 216	44 883	28 881	4 451	3 463	24 588	41 921	361 719	2 195	8 451	:
Value added at factor cost (EUR million)	958	175	16 343	7 335	4 040	4 498	588	403	4 097	7 132	75 416	218	916	:
Purchases of goods and services (EUR million)	8 457	911	63 745	29 917	34 099	25 490	3 775	3 093	20 825	35 296	281 176	2 088	7 978	:
Gross investment in tangible goods (EUR million)	365	13	1 807	868	884	926	188	291	479	899	13 478	98	400	:
Number of persons employed (thousands)	146	13	721	277	1 071	365	:	65	119	241	3 122	201	431	:
App. labour productivity (EUR thous./pers. emp.)	6.5	13.2	22.7	26.5	3.8	12.3	:	6.2	34.4	29.6	24.2	1.1	2.1	:
Average personnel costs (EUR thous./employee)	5.0	8.7	15.0	21.1	5.3	10.8	11.0	4.0	24.4	26.8	15.4	1.2	1.4	:
Wage adjusted labour productivity (%)	130.1	152.9	150.7	125.5	71.6	114.5	:	155.9	140.9	110.7	157.2	92.1	152.4	:
Gross operating rate (%)	2.6	11.1	8.6	5.9	3.1	6.5	2.2	4.3	5.8	3.7	8.5	4.6	3.9	:

(1) Germany, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 18.14

Retail sale in non-specialized stores with food beverages or tobacco predominating (NACE Class 52.11)

Main indicators, 2001

	BE	CZ	DK	DE (1)	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	19 432	:	11 514	108 683	858	:	46 706	155 674	7 974	73 280	855	990	1 619	1 105
Value added at factor cost (EUR million)	2 518	:	1 507	16 373	73	:	7 077	19 019	1 390	11 115	98	143	106	138
Purchases of goods and services (EUR million)	16 993	:	10 064	89 411	798	:	41 644	137 169	6 640	65 663	723	883	1 541	964
Gross investment in tangible goods (EUR million)	470	:	156	1 696	38	:	2 144	2 795	818	3 485	17	78	43	:
Number of persons employed (thousands)	83	:	68	684	18	:	333	573	59	365	5	32	48	5
App. labour productivity (EUR thous./pers. emp.)	30.3	:	22.2	23.9	4.0	:	21.2	33.2	23.6	30.5	18.7	4.4	2.2	30.0
Average personnel costs (EUR thous./employee)	24.9	:	17.7	18.5	3.3	:	15.2	22.5	20.7	23.6	17.2	2.0	2.1	21.6
Wage adjusted labour productivity (%)	121.7	:	126.0	129.7	120.8	:	139.9	147.3	113.6	129.0	109.1	221.3	103.8	139.0
Gross operating rate (%)	3.3	:	3.2	3.8	1.7	:	5.6	4.1	3.6	6.8	4.7	7.9	0.9	3.9
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	3 876	253	21 906	8 999	14 728	9 747	2 442	1 060	10 542	15 495	137 543	608	2 905	:
Value added at factor cost (EUR million)	380	27	3 363	1 375	2 467	1 271	308	125	1 499	2 247	22 184	58	267	:
Purchases of goods and services (EUR million)	3 505	229	19 963	7 632	12 384	9 217	2 070	939	9 163	13 424	113 299	575	2 776	:
Gross investment in tangible goods (EUR million)	190	2	548	186	283	269	129	41	228	312	5 927	:	180	:
Number of persons employed (thousands)	64	2	210	61	:	86	:	23	43	75	993	62	160	:
App. labour productivity (EUR thous./pers. emp.)	5.9	14.1	16.0	22.7	:	14.7	:	5.5	34.5	29.9	22.3	0.9	1.7	:
Average personnel costs (EUR thous./employee)	5.0	8.5	11.4	18.2	4.9	10.8	12.5	3.8	22.9	24.9	14.7	1.1	1.2	:
Wage adjusted labour productivity (%)	118.6	167.2	140.8	124.5	:	136.4	:	145.3	150.9	120.0	151.6	83.2	133.9	:
Gross operating rate (%)	1.8	7.1	4.8	3.7	9.9	5.6	1.7	3.7	5.2	2.9	5.8	2.9	2.5	:

(1) 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 18.15

Other retail sale in non-specialized stores (NACE Class 52.12)

Main indicators, 2001

	BE	CZ	DK	DE (1)	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	903	:	3 400	17 921	376	:	8 147	5 192	1 096	6 448	415	118	190	152
Value added at factor cost (EUR million)	154	:	573	4 542	34	:	2 149	1 012	299	857	45	23	27	25
Purchases of goods and services (EUR million)	745	:	2 908	12 577	349	:	6 203	4 131	809	5 687	336	101	164	129
Gross investment in tangible goods (EUR million)	21	:	34	1 655	27	:	382	211	42	308	37	7	9	:
Number of persons employed (thousands)	5	:	26	159	5	:	61	28	9	37	2	5	8	0
App. labour productivity (EUR thous./pers. emp.)	29.7	:	21.8	28.6	6.7	:	35.1	35.8	31.6	23.3	18.4	4.9	3.4	53.3
Average personnel costs (EUR thous./employee)	24.7	:	18.8	23.3	3.8	:	23.4	27.5	26.4	24.1	12.4	2.3	2.2	23.5
Wage adjusted labour productivity (%)	120.1	:	115.9	122.6	174.1	:	150.0	130.0	119.7	96.4	148.1	212.9	156.1	226.8
Gross operating rate (%)	3.4	:	2.3	5.0	4.3	:	9.6	4.7	5.0	0.4	3.5	11.5	6.4	9.4
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	1 095	14	3 058	745	4 166	327	550	670	3 287	1 064	30 216	107	991	:
Value added at factor cost (EUR million)	114	2	783	147	882	54	77	68	569	209	7 160	15	118	:
Purchases of goods and services (EUR million)	987	12	2 280	597	3 443	287	469	605	2 765	858	22 498	96	925	:
Gross investment in tangible goods (EUR million)	27	0	109	13	52	9	16	180	90	24	1 280	:	39	:
Number of persons employed (thousands)	15	0	39	6	:	3	:	13	18	6	322	20	60	:
App. labour productivity (EUR thous./pers. emp.)	7.4	6.7	20.2	23.9	:	15.8	:	5.4	32.2	36.4	22.2	0.7	2.0	:
Average personnel costs (EUR thous./employee)	5.7	6.6	14.8	19.4	5.2	11.6	11.0	3.4	22.9	27.3	14.5	1.2	1.3	:
Wage adjusted labour productivity (%)	130.4	101.1	136.5	123.2	:	136.4	:	158.5	140.6	133.6	153.5	62.7	146.5	:
Gross operating rate (%)	2.5	13.0	6.9	5.7	14.3	6.7	2.0	3.9	5.0	5.2	8.9	7.1	3.7	:

(1) 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 18.16

Retail sale of food, beverages, tobacco in specialized stores (NACE Group 52.2)

Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	3 790	829	1 319	12 056	57	:	19 833	12 538	1 081	17 318	215	53	36	228
Value added at factor cost (EUR million) (1)	650	64	288	2 950	5	:	3 427	2 917	219	3 298	28	4	2	51
Purchases of goods and services (EUR million) (1)	3 126	713	1 035	9 172	53	:	16 403	9 533	866	14 506	172	48	33	177
Gross investment in tangible goods (EUR million) (1)	202	25	18	205	1	:	232	463	27	514	6	1	1	:
Number of persons employed (thousands)	31	21	13	137	1	:	236	100	9	207	2	1	1	2
App. labour productivity (EUR thous./pers. emp.) (1)	21.2	3.1	21.6	19.7	3.9	:	14.5	29.0	24.5	15.9	17.1	3.1	1.6	27.9
Average personnel costs (EUR thous./employee) (1)	16.9	4.0	16.6	13.3	2.2	:	11.6	24.6	13.3	18.7	23.3	2.5	1.9	22.8
Wage adjusted labour productivity (%) (1)	125.3	78.8	130.3	148.5	181.8	:	125.6	118.0	183.7	85.2	73.1	125.4	83.7	122.6
Gross operating rate (%) (1)	9.7	1.0	9.0	10.4	4.5	:	11.2	9.0	12.7	14.4	4.0	2.7	-0.2	7.0
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	388	155	5 661	3 371	4 131	2 378	168	215	1 255	3 470	20 267	209	891	:
Value added at factor cost (EUR million)	49	24	1 197	624	622	267	18	15	156	496	4 462	19	67	:
Purchases of goods and services (EUR million)	353	147	4 463	2 746	3 377	2 112	148	200	1 111	3 014	15 500	199	886	:
Gross investment in tangible goods (EUR million)	28	1	76	56	103	59	1	3	13	68	429	6	48	:
Number of persons employed (thousands)	7	1	53	20	92	43	:	4	3	19	267	20	48	:
App. labour productivity (EUR thous./pers. emp.)	6.6	16.4	22.7	31.1	6.7	6.2	:	3.6	44.6	26.0	16.7	1.0	1.4	:
Average personnel costs (EUR thous./employee)	3.7	11.0	14.7	19.2	4.5	8.5	7.4	3.2	33.2	23.6	10.7	1.0	1.1	:
Wage adjusted labour productivity (%)	179.1	149.5	154.6	161.8	148.5	72.8	:	114.2	134.6	110.5	156.3	95.2	125.5	:
Gross operating rate (%)	5.8	12.5	10.9	9.7	9.8	5.1	2.3	0.9	4.7	4.5	10.4	5.1	1.3	:

(1) Germany, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 18.17

Retail sale of pharmaceuticals and medical goods, cosmetic and toilet articles (NACE Group 52.3)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	4 057	1 095	1 447	37 508	106	:	13 078	29 243	1 189	21 585	99	197	315	222
Value added at factor cost (EUR million) (1)	807	125	311	8 250	17	:	3 019	7 055	287	4 049	16	39	42	58
Purchases of goods and services (EUR million) (1)	3 250	944	1 161	25 435	92	:	10 161	22 212	930	17 759	76	165	276	162
Gross investment in tangible goods (EUR million) (1)	153	22	16	413	3	:	227	489	38	356	2	8	7	:
Number of persons employed (thousands)	21	20	8	284	2	:	94	154	7	108	1	5	8	1
App. labour productivity (EUR thous./pers. emp.) (1)	38.1	6.2	38.6	30.1	7.2	:	32.0	45.8	41.0	37.5	19.4	8.0	5.2	58.9
Average personnel costs (EUR thous./employee) (1)	24.4	5.9	31.2	18.7	5.4	:	16.8	28.7	25.0	22.6	18.1	3.5	3.3	29.9
Wage adjusted labour productivity (%) (1)	156.3	105.1	123.6	160.6	134.3	:	190.7	160.0	164.0	166.2	107.1	229.8	156.6	196.9
Gross operating rate (%) (1)	10.6	2.8	5.2	10.2	4.4	:	14.9	10.7	11.0	13.8	4.9	11.3	5.3	14.6
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	992	66	6 899	3 493	3 367	2 365	65	165	1 630	3 420	15 346	225	500	:
Value added at factor cost (EUR million)	97	11	1 574	794	737	447	8	24	363	469	2 826	22	70	:
Purchases of goods and services (EUR million)	906	55	5 325	2 722	2 546	1 944	56	142	1 293	2 954	12 452	214	455	:
Gross investment in tangible goods (EUR million)	26	1	115	62	34	66	7	3	9	33	289	3	12	:
Number of persons employed (thousands)	12	1	46	27	49	16	:	2	8	13	110	12	18	:
App. labour productivity (EUR thous./pers. emp.)	7.8	14.6	34.3	29.1	15.2	28.3	:	12.0	45.4	35.0	25.6	1.8	3.9	:
Average personnel costs (EUR thous./employee)	6.1	8.1	19.5	21.9	7.5	16.1	3.4	5.9	28.4	35.0	17.0	1.5	2.6	:
Wage adjusted labour productivity (%)	127.7	180.9	175.2	133.2	202.9	176.2	:	202.2	159.7	100.0	150.6	118.9	148.1	:
Gross operating rate (%)	2.4	9.9	8.2	6.8	16.1	10.0	3.7	7.5	9.8	0.6	6.8	4.9	4.8	:

(1) Germany, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 18.18

Other retail sale of new goods in specialized stores (NACE Group 52.4)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	21 468	6 032	10 786	111 083	628	:	55 227	96 401	6 431	91 983	1 581	884	720	1 505
Value added at factor cost (EUR million) (1)	3 441	503	2 507	29 371	90	:	12 130	21 604	1 413	16 426	328	125	100	322
Purchases of goods and services (EUR million) (1)	18 214	5 250	8 520	77 736	560	:	43 769	75 270	5 082	78 782	1 125	806	622	1 187
Gross investment in tangible goods (EUR million) (1)	878	192	270	2 045	24	:	2 066	3 303	170	2 223	51	39	27	:
Number of persons employed (thousands)	133	126	84	1 091	14	:	676	646	52	794	16	25	25	10
App. labour productivity (EUR thous./pers. emp.) (1)	25.8	4.0	30.0	27.1	6.4	:	17.9	33.4	27.0	20.7	20.5	5.1	4.0	33.7
Average personnel costs (EUR thous./employee) (1)	21.6	5.3	23.4	19.5	4.2	:	15.0	26.4	19.6	20.7	14.6	2.5	2.3	24.5
Wage adjusted labour productivity (%) (1)	119.5	75.5	127.9	139.0	152.1	:	119.8	126.8	137.6	100.1	140.8	200.5	168.4	137.2
Gross operating rate (%) (1)	7.5	1.1	7.6	9.4	5.2	:	10.3	6.7	9.0	11.3	8.4	7.7	6.3	8.4
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	2 710	472	37 020	19 255	14 871	13 497	1 143	1 235	7 395	16 790	137 598	961	2 782	:
Value added at factor cost (EUR million)	287	95	8 532	4 151	3 643	2 378	164	148	1 444	3 478	34 475	94	355	:
Purchases of goods and services (EUR million)	2 457	384	28 573	15 125	10 879	11 432	963	1 112	6 068	13 558	101 030	927	2 568	:
Gross investment in tangible goods (EUR million)	87	9	933	534	306	508	32	60	133	427	4 984	41	108	:
Number of persons employed (thousands)	42	7	344	154	317	202	:	21	44	115	1 279	65	122	:
App. labour productivity (EUR thous./pers. emp.)	6.8	13.9	24.8	27.0	11.5	11.8	:	7.0	32.9	30.2	27.0	1.4	2.9	:
Average personnel costs (EUR thous./employee)	4.8	8.7	17.0	22.2	5.6	10.5	10.2	4.4	25.3	27.1	16.2	1.2	1.5	:
Wage adjusted labour productivity (%)	144.1	159.6	145.5	121.5	206.8	112.5	:	157.7	130.1	111.3	166.4	118.7	188.5	:
Gross operating rate (%)	3.4	12.4	10.0	6.2	19.0	6.7	3.1	4.6	6.5	5.0	11.1	5.0	6.2	:

(1) Germany, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 18.19

Retail sale of second-hand goods in stores (NACE Group 52.5)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	298	78	59	643	7	:	127	2 037	66	292	4	15	21	4
Value added at factor cost (EUR million) (1)	48	3	15	141	1	:	38	445	17	75	1	6	5	2
Purchases of goods and services (EUR million) (1)	259	69	45	284	7	:	92	1 935	49	237	2	10	16	3
Gross investment in tangible goods (EUR million) (1)	15	1	5	7	0	:	4	53	2	8	0	1	1	:
Number of persons employed (thousands)	3	4	1	9	0	:	3	15	1	5	0	2	3	0
App. labour productivity (EUR thous./pers. emp.) (1)	15.6	0.6	18.1	20.4	2.6	:	11.4	30.1	15.6	15.8	11.3	3.8	1.9	26.5
Average personnel costs (EUR thous./employee) (1)	16.6	4.3	19.2	11.1	2.1	:	15.8	29.0	16.2	24.4	33.3	1.3	1.4	22.8
Wage adjusted labour productivity (%) (1)	94.0	13.4	94.2	183.4	125.6	:	72.3	103.9	96.1	64.7	33.8	292.2	131.5	116.0
Gross operating rate (%) (1)	10.1	-4.7	15.5	19.4	5.0	:	10.9	9.7	7.6	18.7	3.9	25.3	11.6	22.2
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	61	2	388	120	83	51	4	7	60	98	3 146	9	86	:
Value added at factor cost (EUR million)	12	1	120	44	25	9	1	0	14	19	800	2	11	:
Purchases of goods and services (EUR million)	49	2	276	79	44	45	3	7	47	81	2 380	8	81	:
Gross investment in tangible goods (EUR million)	3	0	5	3	1	3	0	0	2	3	53	1	5	:
Number of persons employed (thousands)	2	0	7	2	13	1	:	0	1	2	21	2	6	:
App. labour productivity (EUR thous./pers. emp.)	6.7	9.0	17.5	23.7	1.9	8.9	:	0.9	20.4	9.9	38.4	0.9	1.9	:
Average personnel costs (EUR thous./employee)	5.6	7.1	10.6	18.5	4.0	12.2	7.2	2.8	25.4	17.4	20.4	0.8	1.5	:
Wage adjusted labour productivity (%)	118.7	126.6	164.7	128.0	48.8	72.5	:	32.3	80.5	57.2	188.2	109.9	128.3	:
Gross operating rate (%)	3.3	23.8	21.8	22.7	22.8	4.1	4.5	-10.5	11.7	12.3	16.0	10.0	3.6	:

(1) Germany, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 18.20

Retail sale not in stores (NACE Group 52.6)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	1 266	350	355	33 458	73	:	3 681	15 176	292	8 343	110	225	81	65
Value added at factor cost (EUR million) (1)	174	42	52	6 272	8	:	922	2 445	53	1 946	18	40	10	10
Purchases of goods and services (EUR million) (1)	1 098	309	313	26 812	66	:	2 752	12 854	242	6 662	83	189	70	56
Gross investment in tangible goods (EUR million) (1)	32	4	9	472	2	:	225	288	6	304	1	4	1	:
Number of persons employed (thousands)	8	12	3	165	2	:	74	89	1	152	1	13	7	0
App. labour productivity (EUR thous./pers. emp.) (1)	21.7	3.6	20.2	36.6	4.9	:	12.5	27.4	42.3	12.8	15.4	3.0	1.5	22.7
Average personnel costs (EUR thous./employee) (1)	23.9	7.1	24.5	23.7	2.9	:	11.9	30.0	24.5	24.4	47.4	1.2	1.3	24.2
Wage adjusted labour productivity (%) (1)	90.5	50.6	82.3	154.9	171.2	:	104.6	91.2	172.8	52.3	32.4	252.9	110.4	93.7
Gross operating rate (%) (1)	7.2	3.7	4.5	8.8	4.8	:	16.6	3.1	9.7	18.1	3.9	10.9	4.8	5.5
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	219	97	3 644	1 232	3 537	517	78	111	420	1 584	17 603	76	297	:
Value added at factor cost (EUR million)	19	15	773	200	-4 335	72	12	22	53	215	3 509	10	29	:
Purchases of goods and services (EUR million)	201	82	2 866	1 017	1 426	454	65	88	378	1 407	14 018	69	287	:
Gross investment in tangible goods (EUR million)	4	0	23	15	105	12	3	5	4	32	516	0	9	:
Number of persons employed (thousands)	3	2	23	8	161	13	:	2	2	10	129	20	17	:
App. labour productivity (EUR thous./pers. emp.)	6.1	8.3	33.8	26.6	-26.9	5.5	:	11.3	26.2	20.7	27.2	0.5	1.7	:
Average personnel costs (EUR thous./employee)	5.3	7.7	16.5	26.6	6.0	14.8	9.6	4.7	25.6	32.8	21.2	1.3	1.4	:
Wage adjusted labour productivity (%)	116.0	107.1	205.4	100.2	-448.7	37.1	:	238.7	102.2	63.2	128.2	36.5	123.5	:
Gross operating rate (%)	1.4	12.8	14.6	3.8	-126.2	8.0	3.9	11.7	2.8	0.2	6.0	7.5	3.3	:

(1) Germany, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 18.21

Repair of personal and household goods (NACE Group 52.7)

Main indicators, 2001

	BE	CZ	DK	DE (1)	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	164	173	264	1 345	6	:	896	1 720	90	1 438	26	5	3	11
Value added at factor cost (EUR million)	57	23	106	524	2	:	422	761	40	533	13	1	2	3
Purchases of goods and services (EUR million)	105	143	163	762	4	:	478	954	50	950	7	4	2	8
Gross investment in tangible goods (EUR million)	16	2	6	20	0	:	38	55	4	51	0	1	0	:
Number of persons employed (thousands)	3	8	3	23	0	:	31	29	2	41	1	1	1	0
App. labour productivity (EUR thous./pers. emp.)	21.9	2.8	33.3	22.8	4.3	:	13.7	26.0	22.0	13.0	14.4	1.2	1.9	15.7
Average personnel costs (EUR thous./employee)	29.9	5.9	30.6	18.6	2.9	:	15.4	28.5	20.2	18.9	31.3	1.2	1.7	22.2
Wage adjusted labour productivity (%)	73.1	48.0	108.9	122.8	149.9	:	89.0	91.3	109.2	69.2	45.9	94.2	112.1	70.6
Gross operating rate (%)	17.3	4.4	18.0	17.0	14.4	:	21.5	12.4	21.0	27.0	10.6	2.2	19.9	2.0
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	103	5	406	116	394	155	48	7	130	453	1 837	21	51	:
Value added at factor cost (EUR million)	14	3	190	53	124	49	12	2	56	161	874	7	15	:
Purchases of goods and services (EUR million)	92	3	213	63	166	108	34	6	75	296	930	15	38	:
Gross investment in tangible goods (EUR million)	6	0	8	6	4	8	1	0	5	10	104	1	3	:
Number of persons employed (thousands)	4	0	10	3	25	8	:	0	2	6	32	5	7	:
App. labour productivity (EUR thous./pers. emp.)	3.7	6.3	18.7	20.7	4.9	6.2	:	4.6	30.4	24.9	27.2	1.2	2.0	:
Average personnel costs (EUR thous./employee)	3.0	7.3	22.6	20.5	4.8	10.3	8.4	3.8	29.5	31.9	19.6	1.3	1.6	:
Wage adjusted labour productivity (%)	125.2	87.2	82.6	100.7	102.4	60.6	:	122.5	103.0	78.0	138.7	95.5	124.3	:
Gross operating rate (%)	3.0	37.7	29.1	19.2	24.7	13.2	6.6	5.8	20.1	10.1	19.2	17.7	7.4	:

(1) 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Tourism



Tourism is a market in a constant state of evolution in direct response to the changing demands of customers, influenced both by economic factors, such as the evolution of the general economic environment, exchange rates or disposable income, and more subjective factors like evolving trends in tourist destinations or perceived security, health and safety concerns (for example, SARS, bird flu or terrorist threats). These factors affect the pattern of tourism consumption, shaped by a series of parameters including the purpose of the trip (business, leisure or visiting friends), its duration and the type of destination (domestic/short distance or international/long distance). According to the experts panel of the World Tourism Organisation (WTO), a United Nations' specialised agency, recent years have been clearly marked by the reinforcement of demand in domestic and nearby markets, at the expense of long-haul destinations, and by the increasing trend for late bookings and self-organised holidays ⁽¹⁾.

⁽¹⁾ For further information, see the World Tourism Barometer, January 2004, available at <http://www.world-tourism.org>.

Recent trends in global flows of international tourists show that the sector lived through relatively difficult years in 2002 and 2003, mainly as a result of the conjunction of three negative factors: the war in Iraq, the outbreak of the SARS virus and the weak general economic environment. The WTO report states that the number of international tourist arrivals in the world decreased by 1.2 % in 2003 compared with the year before. Europe ⁽²⁾ confirmed its position as the most visited region in the world, representing 57.8 % of the world total.

⁽²⁾ Geographical Europe.

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. This chapter covers two activities which make up a significant part of the tourism market: hotels and restaurants (NACE Division 55) and travel agencies (NACE Group 63.3). It should be noted, however, that these activities may also provide services for purposes other than tourism, while there are other activities, notably transport services (see Chapter 20), that also contribute to tourism that are covered elsewhere in this publication.

NACE

- 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;
- 63.3: activities of travel agencies and tour operators; tourist assistance activities n.e.c.

Table 19.1

Top 10 tourism earners, 2002 (1)

	International tourism receipts (EUR billion)	Change 2002/2001 (%) (2)	Change to Q3-2003 (%) (3)
US	70.4	-7.4	-1.5
ES	35.5	-2.9	4.1
FR	34.2	1.5	-2.0
IT	28.5	-2.7	-2.6
CN	21.6	14.6	-17.1
DE	20.3	-1.5	-2.3
UK	18.6	3.2	0.6
AT	11.9	3.8	1.5
HK	10.7	-1.8	-20.9
EL	10.3	-2.8	-8.2

(1) CN: China; HK: Hong Kong.

(2) Change in local currency, except China (USD).

(3) China, Q4-2003.

Source: World Tourism Organisation.

Table 19.2

Top 10 tourism spenders, 2002 (1)

	International tourism expenditure (EUR billion)	Change 2002/2001 (%) (2)	Change to Q3-2003 (%) (3)
US	61.4	-3.6	-2.1
DE	56.3	-4.3	-6.4
UK	42.7	18.0	6.4
JP	28.2	3.3	-2.0
FR	20.6	2.6	1.7
IT	17.9	7.6	3.9
CN	16.3	:	:
NL	13.7	1.8	-3.7
HK	13.1	-0.6	-10.4
RU	12.7	21.5	10.3

(1) CN: China; HK: Hong Kong; RU: Russia.

(2) Change in local currency, except China (USD).

(3) China, Q4-2003.

Source: World Tourism Organisation.

According to the WTO, the EU numbered six Member States among the top 10 countries in the world welcoming the largest number of international tourists arrivals (note that these figures may be subject to some over-estimation due to double-counting)

Tourism can have a significant impact on national and regional economies and according to the World Travel and Tourism Council, some 11 % of the wealth created in the world in 2001 originated in activities related to tourism ⁽³⁾. Within the EU, receipts from international tourism in 2002 were highest in Spain (EUR 35.5 billion) and in France (EUR 34.2 billion), followed at a short distance by Italy (EUR 28.5 billion) – see Table 19.1. Two smaller Member States, Austria and Greece, also ranked among the top 10 tourism earners worldwide, with EUR 11.9 billion and EUR 10.3 billion of receipts respectively.

Looking at tourism expenditure, Germany and the United Kingdom were the second and third largest tourism spenders in the world in 2002 after the United States, with international expenditure of EUR 56.3 billion and EUR 42.7 billion respectively – see Table 19.2.

⁽³⁾ See <http://www.wttc.org>.

Turning to EU policies in the field of tourism, since 1991 (Maastricht Treaty) the Treaty establishing the European Community includes 'measures in the sphere of tourism' in the list of activities foreseen in support of the Community's overall objectives, thereby recognising the role of tourism in a wide range of policy areas, notably employment, regional development, environment, consumer protection, new technologies, transport or culture. The current Commission's policy in the field of tourism is based on the Council resolution of 21 May 2002 on the future of European tourism, aiming in particular at quality, competitiveness and sustainability in European tourism and its enterprises, with actions focusing on five key issues: information, training, quality, sustainable development, and new technologies.

Table 19.3

International tourist arrivals in the EU-15 by region of departure, 2002 (% of arrivals in hotels) (1)

EU-15	65.0
CZ, HU, PL, SK (2)	1.6
EFTA	4.7
Other Europe (3)	3.5
Americas	13.4
Africa (4)	1.0
Asia	7.2
Australia/Oceania (5)	1.6

(1) Portugal, 2001; Greece and Ireland, 2000.

(2) Excluding Denmark (for the Czech Republic, Hungary and Slovakia), Germany (for Slovakia), Ireland (for Hungary and Slovakia) and Portugal (for the Czech Republic and Slovakia).

(3) Excluding Denmark.

(4) Excluding Denmark and Sweden.

(5) Excluding Denmark; France, 2001.

Source: Eurostat, Tourism (theme4/tour/sect_b/b_3).

STRUCTURAL PROFILE

The sector of hotels and restaurants (NACE Division 55) emerges as one of the largest in the EU's business economy when looking at the various activities at the level of NACE divisions. There were 1.4 million enterprises active in this sector in the EU-25 in 2001 that generated a total value added of EUR 145.4 billion, or 6.0 % of the total value added of the non-financial services sector (NACE Sections G to I and K). There were 53 900 travel agencies ⁽⁴⁾ in the EU-25 in 2001, and value added in this sector was EUR 18.5 billion (see Subchapter 19.1), bringing to 6.7 % the total contribution of the activities covered by this chapter to the non-financial services total.

Furthermore, hotels and restaurants employed a total of 7.5 million persons ⁽⁵⁾ in the EU-25 in 2001, which constituted the fifth largest sectoral labour market in the EU business economy at the level of NACE divisions, corresponding to 11.6 % of total employment in non-financial services ⁽⁶⁾. Travel agencies accounted for an additional 448 700 persons employed ⁽⁷⁾ in the EU-25 in 2001.

In relative terms, tourism was relatively less developed in most of the 10 new Member States compared with the EU-15 Member States, as evidenced by the lesser importance of hotels and restaurants in the services economy of these countries, particularly in central and eastern Europe. On average, hotels and restaurants contributed only 2.7 % ⁽⁸⁾ to the total value added generated in non-financial services in the new Member States, against 6.1 % in the EU-15, with the lowest value being recorded in Poland (1.8 %). As a comparison, Denmark reported the lowest weight of hotels and restaurants in the non-financial services economy among EU-15 Member States ⁽⁹⁾ with a share of 3.8 %. Malta was a clear exception among the 10 new Member States with hotels and restaurants accounting for as much as 15.2 % of the non-financial services economy in that country, the highest share among available EU-25 countries. Note, however, that available SBS figures suggest an even greater role played by hotels and restaurants in the economy of Cyprus ⁽¹⁰⁾. Among EU-15 countries, the hotels and restaurants sector was most important in the economies of Ireland, Spain and Austria, where it accounted for between 9 and 10 % of the value added in non-financial services; in the Netherlands, Belgium, Germany (2000) and the Nordic countries, in contrast, the sector was under-represented, relative to the EU-15 average.

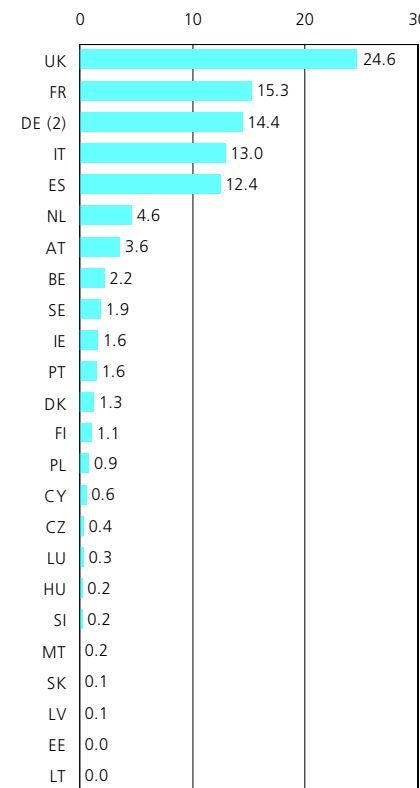
⁽⁴⁾ Cyprus, 2000; Poland, not available.
⁽⁵⁾ Slovenia, not available.
⁽⁶⁾ Cyprus and Slovenia, not available.
⁽⁷⁾ Poland and Slovenia, not available.
⁽⁸⁾ Cyprus, not available.
⁽⁹⁾ Germany, 2000; Greece, not available.
⁽¹⁰⁾ Cyprus, NACE Division 55 accounted for 40.6 % of the total value added of Sections G to I in 2001 (for comparison: EU-25, 10.5 %; Malta, 23.1 %).

Table 19.4
Hotels and restaurants (NACE Division 55)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (35.7)	Malta (254)	United Kingdom (1 792.1)
2	France (22.2)	Ireland (165)	Spain (1 073.7)
3	Italy (18.9)	Spain (158)	Germany (1 022.6)
4	Spain (18.1)	Austria (155)	Italy (905.0)
5	Netherlands (6.7)	Portugal (128)	France (796.4)

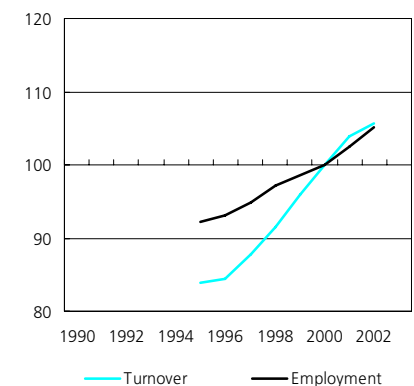
(1) Germany and Greece, not available.
 (2) Germany, Greece, Cyprus and the Netherlands, not available.
 (3) Greece and Slovenia, not available.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 19.1
Hotels and restaurants (NACE Division 55)
Share of EU-25 value added, 2001 (%) (1)



(1) Greece, not available.
 (2) 2000.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 19.2
Hotels and restaurants (NACE Division 55)
Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Within the sector of hotels and restaurants, the provision of food and beverages was clearly the dominant activity compared with accommodation services. The activities of restaurants, bars and catering enterprises, covered by NACE Groups 55.3 to 55.5 (see Subchapter 19.3), accounted in the EU-25 for approximately two thirds of the wealth creation (63.5 %) in NACE Division 55 in 2001, against only 36.5 % for accommodation services (see Subchapter 19.2). This breakdown was nevertheless subject to great variation across the EU, whereby accommodation services accounted for a clearly higher share of value added in NACE Division 55 in countries which are popular holiday destinations, such as Spain (40.0 %), Cyprus (51.9 %), Austria (56.3 %) and Malta (84.1 %), hence leading to a higher demand for lodging facilities. The breakdown was also weighted in favour of accommodation services in all central and eastern European countries, although in this case the reason was to be found in the relatively small size of the restaurants, bars and catering sector.

Table 19.5

Hotels and restaurants (NACE Division 55)**Value added at factor cost and persons employed, by enterprise size class, 2001 (% of total)**

	Micro enterprises		Small enterprises		Medium-sized enterprises		Large enterprises	
	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed
EU-25	38.4	45.7	24.3	24.4	12.7	10.2	24.6	19.7
EU-15	38.7	45.1	24.4	24.6	12.5	10.1	24.5	20.2

Source: Eurostat, Structural Business Statistics (theme4/sbs/sizclass).

A distinctive characteristic of the hotels and restaurants sector is the prominent role played by small and medium-sized enterprises. Almost two thirds of the value added generated in the sector in the EU-25 in 2001 originated from enterprises numbering less than 50 persons employed, while the corresponding proportion was around 50 % within the activities of distributive trades and business services, and only around one third within transport services.

Micro enterprises (less than 10 persons employed) accounted for as much as 38.4 % of the value added generated in the hotels and restaurants sector of the EU-25 in 2001, and small enterprises (10 to 49 persons employed) some 24.3 % of the total, respectively 11.9 percentage points and 4.2 percentage points above their corresponding shares in non-financial services as a whole. Micro enterprises were of particular importance in the restaurants, bars and catering subsector, where they accounted for almost half of the wealth creation, more than twice the level recorded in accommodation services. Large enterprises employing more than 250 persons generated approximately one quarter of the value added both in the accommodation services and restaurants, bars and catering subsectors.

A country-by-country analysis ⁽¹¹⁾ reveals that micro enterprises, in particular, were highly represented in France, Belgium and Austria when compared with the other non-financial services activities. In these three countries, the contribution of enterprises with less than 10 persons employed to the sector's value added was approximately twice as high as the national average for the non-financial services economy. In France, for example, micro enterprises generated 47.1 % of the value added within the hotels and restaurants sector, while the corresponding share in non-financial services was only 23.3 %. The opposite observation could be made in Latvia and Estonia, where the share of micro enterprises in sectoral value added was lower in hotels and restaurants than the national averages for non-financial services.

⁽¹¹⁾ The Netherlands, 2000; Germany, 1999; Greece and Slovakia, not available.

LABOUR AND PRODUCTIVITY

The tourism sector features irregular work patterns, generally influenced by a high seasonal component and atypical working hours, which require greater flexibility from the workforce. This is, for example, underlined by the Labour Force Survey results that show that as much as 26.2 % of the total number of persons in employment in hotels and restaurants in the EU-25 in 2002 worked part-time. This share was almost 8 percentage points above the average for services (18.3 %, NACE Sections G to K) and among the highest of all NACE divisions in the business economy. This pattern was evident both in the EU-15 and the 10 new Member States, where the share of part-time employment in hotels and restaurants reached 9.1 % against 7.3 % in services as a whole. Nationally, part-time employment was of particular importance in this sector in Denmark, Malta, Sweden and the United Kingdom, which reported the largest difference between the recourse to part-time employment in hotels and restaurants compared with the services economy as a whole. In contrast, in Germany, Hungary and the Czech Republic, the frequency of part-time employment in hotels and restaurants was closest to national services averages, while Cyprus and Portugal were the only countries where part-time employment was less frequent in hotels and restaurants than the average for services.

Hotels and restaurants reported a mostly female workforce, as women accounted for 54.3 % of their workforce in 2002 in the EU-25, practically 10 percentage points above the average for services as a whole (44.2 %). It could be noted that the difference was even more marked among the 10 new Member States, where women represented 62.2 % of persons employed in hotels and restaurants, against 47.4 % in services, a gap of 14.8 percentage points.

A further distinctive characteristic of the hotels and restaurants sector was the notable importance of family workers. These accounted for as much as 4.5 % of the workforce in the EU-25 in 2002, which was two and a half times more than the average of 1.8 % recorded in services as a whole. The difference was even higher in Germany and France, where the proportion of family workers was respectively three and four times greater than corresponding national averages for services. One fifth of the hotels and restaurants workforce was self-employed in 2002 (19.5 %), a proportion that was relatively close to the services average (17.6 %). Self-employment was relatively common in Belgium, France and Luxembourg (when compared with the other services activities in these countries), in contrast with the United Kingdom and most of the new Member States, where recourse to self-employment was significantly below the services average, particularly in Malta and Poland.

Average personnel costs in hotels and restaurants were generally lower than in other services sectors, which may to some degree be explained by the importance of part-time and seasonal employment, together with a high presence of low or unskilled manpower. In 2001, average personnel costs in hotels and restaurants were only EUR 14 300 per employee in the EU-25 (EUR 15 000 in the EU-15), which was not far from half the EUR 25 300 average recorded for non-financial services as a whole ⁽¹²⁾ (EUR 27 500 in the EU-15).

⁽¹²⁾ Slovenia, 2000; Cyprus, not available.

The level of apparent labour productivity matched the low figures recorded for average personnel costs. In 2001, each person employed in the hotels and restaurants sector generated an average of EUR 20 300 of value added, approximately half the non-financial services average (EUR 40 600). A more revealing comparison of productivity, however, needs to take into consideration the relative level of wages and salaries and the proportion of employees in the total number of persons employed. As such, wage adjusted labour productivity averaged 134.7 % in the hotels and restaurants sector in the EU-25 ⁽¹³⁾ in 2001 (135.7 % in the EU-15), which was still well below the level of 147.9 % recorded for non-financial services ⁽¹⁴⁾ (147.6 % in the EU-15). In most of the new Member States, with the notable exception of Malta, wage adjusted labour productivity in hotels and restaurants was significantly below the non-financial services average, while the only Member State displaying a higher wage adjusted labour productivity level in the hotels and restaurants sector compared with the average for non-financial services was Belgium ⁽¹⁵⁾.

Looking at the recent evolution of the labour market in the hotels and restaurants sector underlines its important contribution to job creation in the EU's business economy. In the five years to 2000, the number of persons employed in hotels and restaurants increased on average by 1.6 % per annum, while it went up by 2.5 % in 2001. As a comparison, only business services reported higher net job creation within the non-financial services sector, while a decrease of employment was recorded in the industrial economy. Among the Member States with data available, only Germany reported decreasing employment in the hotels and restaurants sector over the whole period, 1995–2000, before recording a net increase in employment in 2001 as the number of persons employed rose by 1.3 %. Note also that job creation in hotels and restaurants was faster in the new Member States than in the EU-15.

⁽¹³⁾ Cyprus and Slovenia, not available.

⁽¹⁴⁾ Cyprus and Slovenia, not available.

⁽¹⁵⁾ Germany, 2000; Greece, Cyprus and Slovenia, not available.

Table 19.6
Hotels and restaurants (NACE Division 55)
Labour force characteristics, 2002

	Share of men		Share of full-time		Share of employees	
	Value (%)	Index (services=100)	Value (%)	Index (services=100)	Value (%)	Index (services=100)
EU-25	:	:	:	:	:	:
EU-15	46.6	82.7	71.8	89.6	75.0	92.8
BE	48.6	82.0	72.5	88.6	61.8	79.7
CZ	44.9	84.6	94.1	99.9	76.6	101.8
DK	44.7	75.1	49.8	62.8	85.6	97.6
DE	42.8	83.6	70.5	93.9	76.1	89.7
EE	25.6	49.3	88.2	93.2	92.9	101.5
EL	53.8	87.6	93.9	97.4	57.4	99.3
ES	52.1	90.2	87.5	96.2	71.2	95.7
FR	50.8	89.5	77.2	91.0	77.7	87.5
IE	42.7	80.6	65.6	82.8	85.3	101.2
IT	52.1	84.1	84.1	93.1	56.1	93.4
CY	47.8	90.3	93.7	100.7	78.5	103.8
LV	20.8	44.7	88.0	94.7	98.7	107.8
LT	:	:	91.2	99.8	91.2	108.7
LU	49.4	87.9	83.0	93.9	81.4	90.6
HU	45.7	85.0	95.4	99.5	84.3	104.5
MT	62.2	89.6	74.6	84.5	90.0	111.3
NL	48.2	82.2	35.0	60.4	82.8	94.3
AT	36.5	73.7	:	:	78.4	90.3
PL	:	:	:	:	:	:
PT	39.2	70.3	93.7	101.0	66.2	93.6
SI	37.9	71.8	91.6	96.8	85.6	98.6
SK	39.1	75.3	96.7	98.8	89.1	103.7
FI	25.9	48.8	72.1	86.6	87.5	100.3
SE	44.9	75.8	62.8	79.3	81.7	95.6
UK	42.2	75.2	50.0	69.6	90.4	103.1

Source: Eurostat, Labour Force Survey.

19.1: TRAVEL AGENCIES

Travel agencies are enterprises that are engaged in arranging transport, accommodation and catering on behalf of travellers. The activity is covered by NACE Group 63.3 that encompasses providing travel information, advice and planning, arranging made-to-measure tours, accommodation and transportation for travellers and tourists, issuing tickets, the sale of packaged tours, and the activities of tour operators and tourist guides.

Travel agencies are specialised in bookings to medium and long-haul destinations, acting mainly as intermediaries for airlines, hotels, rental companies and tour operators, whereas domestic holidays and the bulk of rail and road transport bookings tend to bypass them. In recent years, travel agencies have faced increased competition from the development of direct sales, notably via the Internet. On the consumer side, the Internet has greatly facilitated the gathering of travel information, price comparisons and direct booking procedures. On the supplier side, fierce competition, notably on prices, has led travel providers (mainly airlines, hotels and tour operators) to find less expensive distribution channels and they have started to reduce or even suppress commissions paid to travel agents, while developing direct sales via the Internet. The Internet has also led to the emergence of purely online travel agencies, such as Expedia, Lastminute (both with approximately 3 million unique visitors per month in 2003) ⁽¹⁶⁾ or Opodo (approximately 2 million visitors per month in 2003). In Europe, the travel industry is expected to be one of the fastest growing sectors for on-line sales during the next few years, and the share of Internet sales in total travel sales is expected to rise from 3.6 % in 2002 to 7.4 % by 2006 ⁽¹⁷⁾.

Traditional travel agencies have tried to respond to the threat of direct distribution and on-line competitors by increasing the range of services they provide, notably to corporate clients, repositioning themselves as travel management companies, able to advise clients on their business travel policy by interpreting travel patterns and monitoring travel costs. Their financial resources have hence also evolved from being supplier-based (commissions) to client-based (price margins or handling fees).

⁽¹⁶⁾ Source: <http://www.nielsen-netratings.com>.

⁽¹⁷⁾ Source: *Trends in European Internet distribution of travel and tourism services*, April 2003, Centre for Regional and Tourism Research, available at: <http://www.crt.dk/uk/staff/chm/trends.htm>.

Table 19.7
Breakdown of holiday trips by organisational mode, 2002 (%)

	Direct reservation	Travel agent / tour operator	Other
BE	51.0	44.7	4.2
DK	47.9	52.1	0.0
DE	48.1	52.0	:
EL	52.0	47.9	:
ES (1)	11.4	28.9	58.9
FR	55.9	49.1	:
IE	:	:	:
IT	28.8	29.7	39.8
LU	38.8	41.8	19.2
NL	21.9	41.0	37.1
AT	53.2	46.7	:
PT	47.8	15.6	36.7
FI	14.1	32.2	53.5
SE	:	:	:
UK	35.7	65.1	:

(1) 2001.

Source: Eurostat, Tourism (theme4/tour/sect_c/c_2).

Table 19.9
Activities of travel agencies and tour operators; tourist assistance activities n.e.c. (NACE Group 63.3)

Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (5.3)	Malta (198)	United Kingdom (126.5)
2	France (1.7)	Ireland (152)	Spain (44.8)
3	Spain (1.2)	Slovakia (151)	France (44.1)
4	Italy (1.2)	Slovenia (146)	Italy (42.8)
5	Netherlands (0.7)	United Kingdom (119)	Netherlands (24.3)

(1) Germany, Greece and Poland, not available.

(2) Germany, Greece, Cyprus, the Netherlands and Poland, not available.

(3) Germany, Greece, Poland and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

STRUCTURAL PROFILE

There were 53 900 travel agencies in the EU-25 ⁽¹⁸⁾ in 2001 and value added for the sector was EUR 18.5 billion. Germany (EUR 5.5 billion in 2000) and the United Kingdom (EUR 5.3 billion) were by far the largest contributors to this total, reflecting their position as top tourist spenders in the EU and in the world (see the overview). Similarly, total employment in EU travel agencies reached 448 700 persons in 2001 ⁽¹⁹⁾, almost a third of which were working in the United Kingdom (126 500 persons) and one fifth in Germany (79 900 persons in 2000).

⁽¹⁸⁾ Cyprus, 2000; Poland, not available.

⁽¹⁹⁾ Poland and Slovenia, not available.

Table 19.8
Top European travel agencies, 2002

		Turnover (EUR billion)
TUI	DE	12.1
Thomas Cook	DE	8.0
My Travel	UK	7.0
Rewe Touristic	DE	4.4
First Choice	UK	3.6
Kuoni	CH	2.5
Club Med	FR	1.8
Hotelplan	IT	1.4
Alltours	DE	1.2
Alpitour	IT	1.1

Source: FVW International in Kuoni Annual Report 2002.

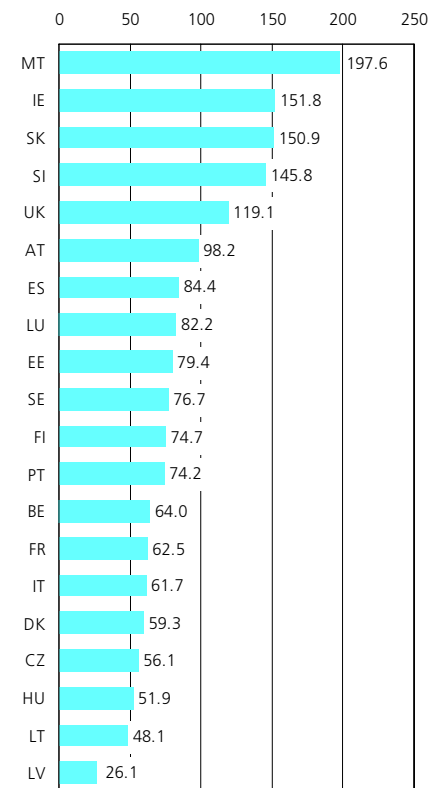
In relative terms, travel agencies contributed 0.8 % to the value added generated in the non-financial services economy of the EU-25, although the share of travel agencies was significantly higher in Malta (1.5 %), as well as in Germany (2000), Ireland and Slovakia (all 1.2 %) ⁽²⁰⁾. In a majority of the new Member States, however, travel agencies took a relatively small place in the services economy, reflecting the relatively low specialisation of these countries in tourism activities. Indeed, travel agencies had a share of non-financial services value added that was half or less of the EU average in the Czech Republic, Hungary, Lithuania (all 0.4 %) and Latvia (0.2 %).

⁽²⁰⁾ Greece and Poland, not available.

The travel agencies sector is characterised by a high presence of enterprises employing between 10 and 49 persons, that accounted for one quarter (25.5 %) of the value added of this sector in the EU-25, 5.3 percentage points more than the average for non-financial services. In contrast, the relative contributions of micro enterprises (1 to 9 persons employed) and medium-sized enterprises (50 to 249 persons employed) to sectoral value added were similar to the non-financial services average, while the contribution of large enterprises (250 and more persons employed) was lower. In employment terms, a different picture emerges, with the travel agencies sector reporting a larger than average (for non-financial services) proportion of employment accounted for by small, medium-sized and large enterprises, with micro enterprises contributing only 29.1 % of employment compared with an average of 34.4 % for non-financial services. The relatively low importance of micro enterprises is further evidenced by the higher average number of persons employed per enterprise in travel agencies (8.5 persons) in the EU-25 ⁽²¹⁾ in 2001 than in non-financial services on average (5.8 persons).

⁽²¹⁾ Cyprus, Poland and Slovenia, not available.

Figure 19.3
Activities of travel agencies and tour operators; tourist assistance activities n.e.c. (NACE Group 63.3)
Value added specialisation ratio relative to non-financial services, 2001 (EU-25=100) (1)



(1) Germany, Greece, Cyprus, the Netherlands and Poland, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

LABOUR AND PRODUCTIVITY

A distinctive characteristic of travel agencies when compared with other services activities is their greater reliance on paid employees, rather than self-employed persons or family workers. Indeed, employees constituted the bulk of the travel agencies workforce, accounting for 90.9 % of the persons employed in the EU-25 ⁽²²⁾ in 2001, nearly 7 percentage points above the average for non financial services (84.0 %). The only countries ⁽²³⁾ reporting a lower proportion of employees than the non-financial services average were Slovakia, Estonia and the Czech Republic.

EU-25 travel agencies generally faced higher average personnel costs (EUR 27 500 per employee in 2001) than other non-financial services enterprises (EUR 25 400 per employee) ⁽²⁴⁾. Apparent labour productivity failed in most countries to compensate for the higher personnel costs, which resulted in wage adjusted labour productivity being below the non-financial services average, at 142.0 % in the EU-25 ⁽²⁵⁾ in 2001 against 147.9 % for non-financial services ⁽²⁶⁾.

⁽²²⁾ Poland and Slovenia, not available.

⁽²³⁾ Germany, 2000; Greece, Cyprus, Poland and Slovenia, not available.

⁽²⁴⁾ Slovenia and Cyprus, not available.

⁽²⁵⁾ Poland and Slovenia, not available.

⁽²⁶⁾ Cyprus and Slovenia, not available.

19.2: 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.

The sector of accommodation services covers enterprises which vary widely both in terms of size and services provided. At one end there are small, single location, family-run enterprises providing accommodation services, at the other there are large hotels, often part of a chain, providing a wide range of services, which may include catering, health and leisure facilities, and conference facilities.

Hotel demand is shaped by the two main types of customers: leisure travellers and business travellers. While both markets are strongly affected by the general level of economic activity, business travellers, and in particular the conference market, are more sensitive to economic downturns than tourists. Traditionally, business travellers are less price sensitive than tourists, but become more price conscious during economic downturns. This has been very evident in recent years and may have led to a permanent shift in attitudes towards corporate travel. Increasingly, the decision of whether or not a business trip is required is more carefully scrutinised and cheaper alternatives such as video-conferencing and the use of electronic communication techniques are preferred ⁽²⁷⁾.

More generally, the accommodation sector has been greatly affected by technological developments. On the demand side this has, for example, been through the increase of Internet e-bookings. A recent Eurostat survey on e-commerce revealed, for example, that recourse to e-sales among hotels and other accommodation services enterprises equipped with an Internet connection was almost four times higher than the average in the business economy (see Table 19.11). On the supply side, a growing trend in hotels is the adoption of yield management tools aimed at improving occupancy and average revenue, in a very much similar fashion as airlines (real-time pricing).

⁽²⁷⁾ See Hotels magazine, January 2004, available at: <http://www.hotelsmag.com/0104/covstory.htm>.

Table 19.10
Main hotel chains, ranked by number of rooms, EU-15, 2002 (units)

		Number of rooms	Number of sites	World ranking	Brands
InterContinental Hotels	UK	514 873	3 333	2	InterContinental, Holiday Inn, Crowne Plaza
Accor	FR	440 807	3 829	4	Sofitel, Novotel, Mercure, Ibis, Etap Hôtel, Formule 1, Motel 6
Hilton Group plc (1)	UK	96 380	384	10	Hilton, Conrad
Sol Meliá	ES	81 096	325	13	Meliá Hotels, Sol Hotels, Paradisus, Tryp Hoteles
TUI Hotels & Resorts	DE	75 000	285	14	Grecotel, Iberotel, RIU, Magic Life, Sol y Mar
Société du Louvre	FR	67 990	900	15	Concorde, Campanile, Première Classe, Kyriad
Club Méditerranée	FR	39 114	140	22	Club Med, Jet tours
Le Méridien	UK	36 479	141	23	Le Méridien
NH Hoteles	ES	34 410	239	24	NH Hotel
Golden Tulip	NL	30 659	274	27	Golden Tulip, Tulip Inn

(1) Owns the rights to the Hilton name outside the United States.
Source: Hotels Magazine, July 2003.

Table 19.11
Proportion of enterprises having used Internet for e-commerce during 2001 (% share of enterprises using the Internet)

	EU-15 (1)	BE	DK	DE	EL	ES	FR	IE	IT	LU	NL (2)	AT	PT	FI (3)	SE	UK
Purchased via Internet																
Average (NACE D, G, 55.1, 55.2, I, K)	29.6	:	49.1	45.3	16.7	7.9	:	:	9.8	29.2	37.3	37.2	23.9	54.4	62.3	47.0
Hotels and accommodation (NACE 55.1+55.2)	24.2	:	30.8	34.7	13.9	3.3	:	31.1	8.8	23.6	34.3	32.3	33.9	67.4	51.3	5.2
of which, proportion that purchased via specialised B2B Internet market places																
Average (NACE D, G, 55.1, 55.2, I, K)	:	:	:	18.7	24.6	35.6	:	:	7.5	35.0	20.1	12.7	26.8	29.8	22.3	:
Hotels and accommodation (NACE 55.1+55.2)	:	:	:	9.7	21.1	65.1	:	17.2	6.6	15.4	12.9	8.7	13.2	48.4	16.7	:
Sold via Internet (4)																
Average (NACE D, G, 55.1, 55.2, I, K)	12.6	:	25.4	19.0	13.8	2.8	:	:	5.1	15.6	40.1	25.3	10.7	17.5	14.2	19.3
Hotels and accommodation (NACE 55.1+55.2)	48.9	:	43.6	58.6	58.6	21.4	:	71.9	35.6	65.5	46.0	70.0	59.8	70.7	48.7	19.8
of which, proportion that sold via a presence on specialised B2B Internet market places																
Average (NACE D, G, 55.1, 55.2, I, K)	:	:	:	3.9	12.3	13.4	:	:	3.8	9.6	13.2	10.9	29.0	14.6	:	:
Hotels and accommodation (NACE 55.1+55.2)	:	:	:	2.7	10.6	18.9	:	11.3	4.5	5.6	6.2	15.1	46.0	16.9	11.2	:

(1) Average for available countries. (2) All electronic networks. (3) Average includes NACE Division 67. (4) Portugal, estimated.
Source: E-commerce database, Eurostat.

STRUCTURAL PROFILE

The value added generated by accommodation services enterprises in the EU-25 reached EUR 53.0 billion in 2001. More than one fifth was accounted for by the United Kingdom (EUR 11.0 billion) while the next four largest EU economies followed within a narrow range: Germany (EUR 7.9 billion, 2000), France (EUR 7.8 billion), Italy (EUR 7.5 billion) and Spain (EUR 7.2 billion). In relative terms, however, Malta clearly displayed the highest specialisation in accommodation services, as this sector contributed 12.8 % to non-financial services' value added, while the EU-25 average was 2.2 % ⁽²⁸⁾. Malta was joined above the EU-25 average by other popular holiday destinations including Austria (5.2 %), Spain (3.8 %), Ireland (3.7 %) and Italy (2.9 %). In addition, it should be noted that available data for Cyprus suggest a similar weight for the accommodation services sector in comparison with that recorded in Malta, with 15.0 % of value added in NACE Sections G to I being accounted for by accommodation services (compared with 15.8 % in Malta). In contrast, accommodation services represented 1.0 % or less of the non-financial services economy in Latvia (1.0 %), Poland (0.9 %) and Lithuania (0.9 %).

The accommodation services sector is a relatively labour-intensive one, with limited possibilities for capital substitution. It relies on a relatively large labour base, with some 1.9 million persons employed in the EU-25 in 2001, which represented 3.0 % of total employment in non-financial services ⁽²⁹⁾. The largest labour markets among the Member States were the United Kingdom (350 500 persons employed) and Germany (317 500 persons employed, 2000) while France, Spain and Italy all had more than 200 000 persons employed in this sector. In Malta, accommodation services occupied as many as 15.0 % of the persons working in non-financial services, while a significant proportion of the non-financial services workforce was also working in this sector in Austria (8.3 %) and Ireland (7.2 %) ⁽³⁰⁾. This was in stark contrast to the situation reported in Belgium, Lithuania and Latvia, where corresponding shares were 1.5 % or lower, less than half the EU-25 average.

⁽²⁸⁾ Germany, 2000; Greece, not available.
⁽²⁹⁾ Poland and Slovenia, number of employees.
⁽³⁰⁾ Germany, 2000; Greece, Poland and Slovenia, not available.

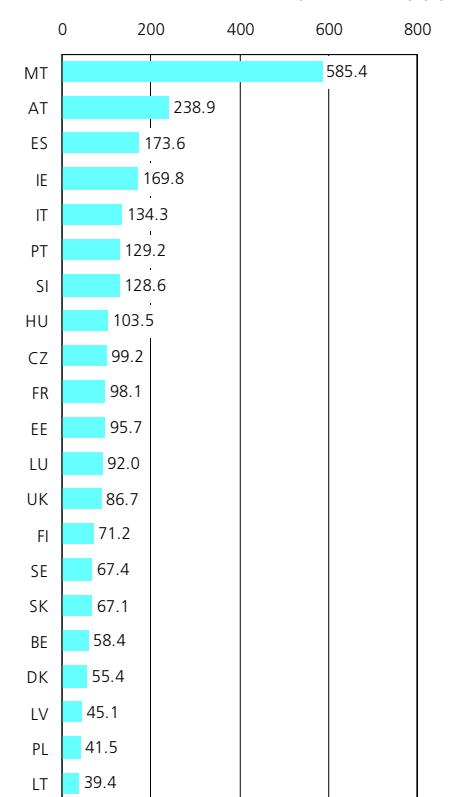
Table 19.12
Hotels; camping sites, other provision of short-stay accommodation
(NACE Groups 55.1 and 55.2)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (11.0)	Malta (585)	United Kingdom (350.5)
2	France (7.8)	Austria (239)	Spain (264.8)
3	Italy (7.5)	Spain (174)	Italy (239.7)
4	Spain (7.2)	Ireland (170)	France (221.6)
5	Austria (2.9)	Italy (134)	Austria (108.4)

(1) Germany and Greece, not available.
 (2) Germany, Greece, Cyprus and the Netherlands, not available.
 (3) Germany, Greece, Poland and Slovenia, not available.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

The size-class distribution of enterprises reveals the important role taken by small and medium-sized enterprises in this sector in comparison with the other services activities, at the expense of micro enterprises (1 to 9 persons employed) and large enterprises (more than 250 persons employed). Small enterprises were the largest contributors to sectoral value added, with a share in the total reaching 30.0 % in the EU-25 against a 20.2 % average for non-financial services. Medium-sized enterprises were also far more represented than in the other services activities, as they accounted for 22.5 % of the sector's value added against 16.4 % for the whole of the non-financial services.

Figure 19.4
Hotels; camping sites, other provision of short-stay accommodation
(NACE Groups 55.1 and 55.2)
Value added specialisation ratio relative to non-financial services, 2001 (EU-25=100) (1)



(1) Germany, Greece, Cyprus and the Netherlands, not available.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

According to the TOUR database, there were 200 700 hotels and similar establishments in the EU-25 in 2002 ⁽³¹⁾, with a capacity of some 10.3 million bed places among 5.2 million rooms – see Table 19.13. More than half of the hotels in the EU were concentrated in just three countries: the United Kingdom (43 800), Germany (38 100) and Italy (33 400). It is also interesting to note the large number of hotels in Austria (14 900), quite close to the figures reported by France (18 400) or Spain (16 700). The average establishment in the EU numbered 26 rooms and could welcome a maximum of 51 guests. The average size of establishments was considerably lower in Ireland and the United Kingdom ⁽³²⁾ (27 bed places and respectively 11 and 13 rooms). In contrast, the average number of bed places per establishment approached or exceeded 100 in the Nordic countries (Sweden, 104; Finland, 121; and Denmark, 137) as well as in Cyprus (110), Portugal (125) and Malta (181). The number of bed places per room averaged 2.0 in the EU-25, although Hungary (2.5) and the Czech Republic (2.7) were significantly above this level.

⁽³¹⁾ Ireland, Cyprus, Latvia, Lithuania and Malta, 2001.

⁽³²⁾ Note that bed and breakfasts are considered either as hotels or similar establishments or not, based on the level of services they provide.

Table 19.13

Main indicators for hotels and similar establishments, 2002 (thousands)

	Number of establishments (1)	Number of bedrooms (2)	Number of bed places (3)	of which, net rate of utilisation (%) (4)	Arrivals of residents (5)	Arrivals of non-residents (6)	Nights spent, residents (7)	Nights spent, non-residents (8)
BE	2.0	65.2	123.4	34.4	2 103.0	5 308.2	4 090.6	10 409.8
CZ	5.1	91.5	246.0	41.6	3 438.1	4 314.1	10 476.1	13 326.8
DK	0.5	33.5	65.5	39.5	1 694.1	1 283.7	4 743.4	4 483.2
DE	38.1	891.9	1 607.7	33.1	68 694.7	15 672.3	157 390.5	32 579.7
EE	0.2	8.2	15.9	:	250.2	936.7	450.1	1 886.6
EL	8.3	319.7	606.3	56.4	5 567.0	7 210.0	13 655.7	41 979.4
ES	16.7	713.5	1 395.4	53.6	33 289.5	26 687.4	86 549.0	136 122.4
FR	18.4	603.7	1 207.4	54.9	65 252.7	36 093.1	114 454.3	77 602.0
IE	5.2	59.5	140.0	48.5	2 773.0	3 577.0	7 679.0	17 321.0
IT	33.4	986.3	1 929.5	40.0	38 010.5	29 339.8	133 295.1	97 837.2
CY	0.8	46.2	87.8	74.0	330.9	2 335.1	726.8	18 066.1
LV	0.2	7.0	13.1	:	209.7	:	638.0	836.5
LT	0.2	5.8	11.1	:	140.8	:	292.8	671.8
LU	0.3	7.6	14.2	25.4	22.5	598.5	77.5	1 166.6
HU	2.2	62.4	154.6	:	2 273.1	2 658.7	5 574.1	8 260.0
MT	0.2	17.3	40.4	:	:	1 014.8	:	7 474.9
NL	2.9	86.2	177.4	45.5	7 570.8	7 501.1	13 643.8	15 026.3
AT	14.9	282.7	569.3	38.5	6 285.6	13 486.8	18 356.1	55 167.3
PL	1.5	65.7	127.6	:	4 580.4	2 535.6	8 381.8	4 999.3
PT	1.8	99.8	226.1	40.7	4 380.5	4 801.8	9 983.1	22 436.8
SI	0.4	15.1	28.2	:	463.0	1 005.6	1 713.8	3 049.4
SK	0.8	26.8	53.9	:	1 308.7	1 041.0	3 953.2	3 572.3
FI	1.0	54.9	117.9	34.4	5 327.3	1 796.5	9 552.2	3 720.6
SE	1.7	95.1	180.8	35.0	10 375.1	2 577.1	16 143.0	4 867.7
UK	43.8	584.9	1 166.5	43.5	57 680.0	14 176.0	130 560.0	48 377.0

(1) Ireland, Cyprus, Latvia, Lithuania and Malta, 2001.

(2) The Czech Republic, Ireland, Cyprus, Latvia, Lithuania and the United Kingdom, 2001; Malta, 1999.

(3) Cyprus, Latvia, Lithuania and Malta, 2001.

(4) France and Cyprus, 2001; Greece and Ireland, 2000.

(5) Cyprus, Latvia and Lithuania, 2001; Greece and Ireland, 2000.

(6) Ireland and Cyprus, 2001; Greece, 2000; Malta, 1999.

(7) Cyprus, Latvia and Lithuania, 2001; Greece, 2000.

(8) Cyprus, Latvia, Lithuania and Malta, 2001; Greece, 2000.

Source: Eurostat, Tourism (theme4/tour).

Accommodation services also include other types of establishments besides hotels, such as camping sites, holiday dwellings, youth hostels and collective dormitories for tourists – see Table 19.14. There were 192 500 such establishments in the EU-25 in 2002 ⁽³³⁾, with a total capacity of 13.0 million bed places ⁽³⁴⁾ outnumbering that of hotels. Almost two thirds of these establishments (121 700) ⁽³⁵⁾ were holiday dwellings, most of which were located in Italy (61 500) and the United Kingdom (31 000), while there were some 26 300 tourist campsites ⁽³⁶⁾, almost one third of which were in France alone (8 300). The breakdown of capacity between hotels and other types of establishments showed considerable variation across the EU. Indeed, hotels concentrated more than 85 % of the capacity in Austria, Greece, Cyprus and Malta, but less than 25 % in the Benelux countries, Poland, Denmark, Sweden and France.

Available figures for the EU-15 allow a trend of increasing average hotel capacity to be observed, with the average number of bed places per establishment rising from 45.3 to 50.4 between 1995 and 2002. This is the result of two factors: on the one hand, a growth in tourism supply with the opening of new and larger hotels, evidenced by growth in both the number of establishments and the number of bed places. On the other hand, some countries saw a reduction in the number of establishments while the number of bed places decreased at a slower rate or continued to rise, which could be interpreted as a sign of a consolidation within the sector, as smaller, and presumably less profitable, establishments ceased to exist. This was notably the case in France, Italy, Luxembourg and Austria.

One of the distinctive characteristics of the hotel market is the high seasonality of demand. The summer months are the busiest in every Member State. The highest number of nights spent is generally reached in August, with 176.9 million in the EU-15 in 2002, or 13.8 % of the yearly total, while winter months recorded the lowest attendance, particularly December and January, which accounted for less than 5.5 % of the total number of nights spent (see Figure 19.5). In some countries, a first surge in demand can be observed around Easter (March or April), particularly in the Benelux countries and the United Kingdom. Austria, Finland and Sweden also displayed a peak in February or March, probably linked to the winter sports season.

⁽³³⁾ Ireland, Cyprus, Latvia, Lithuania and Malta, 2001.

⁽³⁴⁾ Ireland, Cyprus, Latvia, Lithuania and Malta, 2001.

⁽³⁵⁾ Ireland, Cyprus, Latvia and Lithuania, 2001; Greece, Malta and Portugal, not available.

⁽³⁶⁾ Ireland, Cyprus, Latvia, Lithuania and Portugal, 2001; Malta, not available.

Table 19.14

Main indicators for collective accommodation establishments other than hotels, 2002 (thousands)

	Number of establishments	of which, tourist campsites	of which, holiday dwellings	Total number of bed places
BE	1.6	0.5	0.1	504.9
CZ	4.0	0.5	0.4	388.5
DK	0.6	0.4	0.1	320.3
DE	17.5	2.4	10.8	1 437.0
EE	0.2	0.0	0.0	7.0
EL	0.4	0.4	:	31.5
ES	17.6	2.5	8.7	1 390.0
FR	10.3	8.3	1.1	3 401.5
IE (1)	2.8	0.1	2.4	64.0
IT	80.3	2.4	61.5	2 170.0
CY (1)	0.1	0.0	0.1	4.3
LV (1)	0.1	0.0	0.1	5.2
LT (1)	0.3	0.0	0.2	15.6
LU	0.3	0.1	0.1	49.1
HU	1.2	0.3	0.5	180.5
MT (1)	0.0	:	:	0.3
NL	3.7	2.2	0.7	973.9
AT	6.0	0.5	2.9	91.8
PL	5.6	0.4	0.4	473.8
PT (2)	0.3	0.2	:	181.0
SI	0.5	0.0	0.0	38.8
SK	1.2	0.1	0.1	104.7
FI	0.5	0.3	0.1	100.7
SE	2.0	1.1	0.3	539.7
UK	35.4	3.3	31.0	525.4

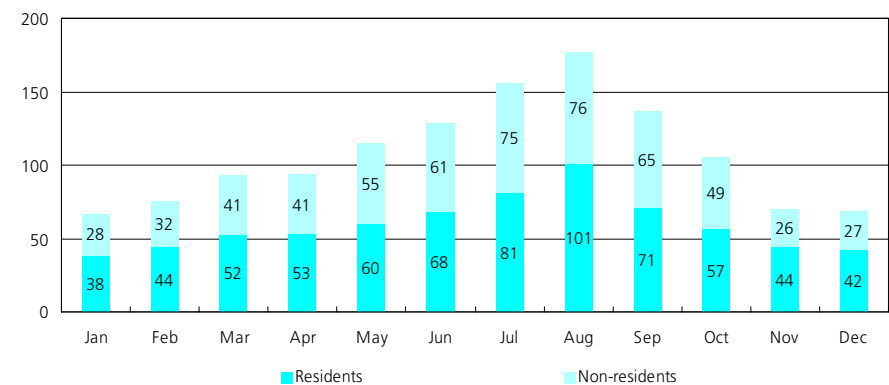
(1) 2001.

(2) Tourist campsites, 2001.

Source: Eurostat, Tourism (theme4/tour).

Figure 19.5

Number of nights spent in hotels and similar establishments, EU-15, 2002 (millions) (1)



(1) Greece, 2000; Ireland, excluding nights spent by residents.

Source: Eurostat, Tourism (theme4/tour/sect_b/b_4).

An analysis of arrivals in hotels by residence status reveals that the primary clients of hotels are, as a general rule, persons living in the country itself. Indeed, non-residents represented on average only 36.5 % of the persons checking in to hotels and similar establishments in the EU-25 in 2002 ⁽³⁷⁾. However, this proportion varied considerably across the EU, linked to the size of the country or the type of destination (holiday or business). As such, less than one fifth of the persons arriving in hotels in Sweden (19.9 %), the United Kingdom (19.7 %) or Germany (18.6 %) were people visiting from a foreign country, while non-residents accounted for the highest share of arrivals in countries such as Belgium (71.6 %), Estonia (78.9 %), Cyprus (87.6 %) and Luxembourg (96.4 %). Among the other new Member States, arrivals of non-residents outnumbered those of residents in Slovenia, the Czech Republic and Hungary, while the opposite was true in Slovakia and Poland.

In addition, non-resident guests generally tended to stay somewhat longer (3.4 nights on average) ⁽³⁸⁾ than locals (2.3 nights) ⁽³⁹⁾ – see Table 19.15. This difference may also be related to the type of trip (holiday or business), as evidenced by the noticeable differences between both ratios in the Mediterranean countries of Cyprus, Malta, Greece and Spain (which are popular international destinations for generally longer, summer holidays). In these countries, the average length of stay of non-residents was more than twice as long as that recorded for residents, and was the highest among the Member States: at 8.1 nights in Malta (1999), 7.7 nights in Cyprus, 5.8 nights in Greece and 5.1 nights in Spain.

⁽³⁷⁾ Cyprus, Latvia and Lithuania, 2001; Greece and Ireland, 2000; Latvia, Lithuania and Malta, not available.

⁽³⁸⁾ Cyprus and Malta, 2001; Greece, 2000; Latvia and Lithuania, not available.

⁽³⁹⁾ Cyprus, Latvia and Lithuania, 2001; Greece, 2000; Malta, not available.

Table 19.15
Arrivals and nights spent according to residence status, 2002

	Share of non-residents in total arrivals (%)	Average number of nights spent per arrival (units)	
		Residents	Non-residents
BE	71.6	1.9	2.0
CZ	55.7	3.0	3.1
DK	43.1	2.8	3.5
DE	18.6	2.3	2.1
EE	78.9	1.8	2.0
EL (1)	56.4	2.5	5.8
ES	44.5	2.6	5.1
FR	35.6	1.8	2.2
IE (1)	66.4	2.4	3.2
IT	43.6	3.5	3.3
CY (2)	87.6	2.2	7.7
LV (2)	:	3.0	:
LT (2)	:	2.1	:
LU	96.4	3.5	1.9
HU	53.9	2.5	3.1
MT (3)	:	:	8.1
NL	49.8	1.8	2.0
AT	68.2	2.9	4.1
PL	35.6	1.8	2.0
PT	52.3	2.3	4.7
SI	68.5	3.7	3.0
SK	44.3	3.0	3.4
FI	25.2	1.8	2.1
SE	19.9	1.6	1.9
UK	19.7	2.3	3.4

(1) 2000.

(2) 2001.

(3) 1999.

Source: Eurostat, Tourism (theme4/tour/sect_b).

LABOUR AND PRODUCTIVITY

The sector of accommodation services is characterised by a higher recourse to paid employees if compared with the non-financial services average. In 2001, 89.2 % of the persons employed in the EU-25 ⁽⁴⁰⁾ were employees, which was 5 percentage points above the corresponding share for non-financial services. The only Member State where the proportion of employees was noticeably below the national average for non-financial services was Austria (81.4 % compared with 88.1 %).

Apparent labour productivity in accommodation services was equal to EUR 28 400 of value added per person employed in the EU-25 in 2001 ⁽⁴¹⁾. This was noticeably below the average for non-financial services activities (EUR 38 800) ⁽⁴²⁾, which could partly be explained by the seasonal nature of the activity, and by the relatively high incidence of part-time employment.

⁽⁴⁰⁾ Cyprus, Poland and Slovenia, not available.

⁽⁴¹⁾ Poland and Slovenia, not available.

⁽⁴²⁾ Cyprus, Poland and Slovenia, not available.

However, taking into consideration the relative level of wages and salaries and the incidence of paid employment, the low apparent labour productivity was matched by an equally low level of average personnel costs: EUR 17 900 per employee in the EU-25 in 2001, while the average for non-financial services reached EUR 25 400 per employee ⁽⁴³⁾. As a consequence, the ratio of wage adjusted labour productivity reached 156.6 % in the EU-25 in 2001 ⁽⁴⁴⁾, which was almost 10 percentage points above the average level of 147.9 % recorded for the whole of non-financial services ⁽⁴⁵⁾.

⁽⁴³⁾ Slovenia, 2000; Cyprus, not available.

⁽⁴⁴⁾ Poland and Slovenia, not available.

⁽⁴⁵⁾ Cyprus and Slovenia, not available.

19.3: 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, recreation parks, or transport services' enterprises where, in some cases, meals and beverages may represent a significant secondary activity.

The restaurants, bars and catering sector comprises two main markets. On the one hand there are outlets selling food and beverages to final consumers that may be both tourists or local customers. Enterprises in this field may take very different forms, in terms of size, from small, family-run outlets to multinational franchises, and in terms of product, from snack outlets and fast-food chains to high-class establishments specialising in haute cuisine. On the other hand there are catering enterprises, that generally operate on a business-to-business level, to the point that they could be associated with other business services' enterprises (see Chapter 22). They are only related to tourism activities in so far that hotels or other tourism related enterprises have outsourced their catering supply to specialised external contractors. More generally, catering enterprises have greatly benefited from a trend that has seen enterprises, institutions (such as schools) and public administrations (who used to run their own restaurant facilities for their personnel or students) increasingly sub-contract this type of activity to specialised, independent enterprises.

Table 19.16
Restaurants; bars; canteens and catering (NACE Groups 55.3 to 55.5)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (24.8)	Ireland (162)	United Kingdom (1 441.7)
2	France (14.4)	Spain (149)	Spain (808.9)
3	Italy (11.4)	Portugal (128)	Italy (665.2)
4	Spain (10.8)	Luxembourg (127)	France (574.8)
5	Netherlands (4.8)	Italy (118)	Netherlands (265.8)

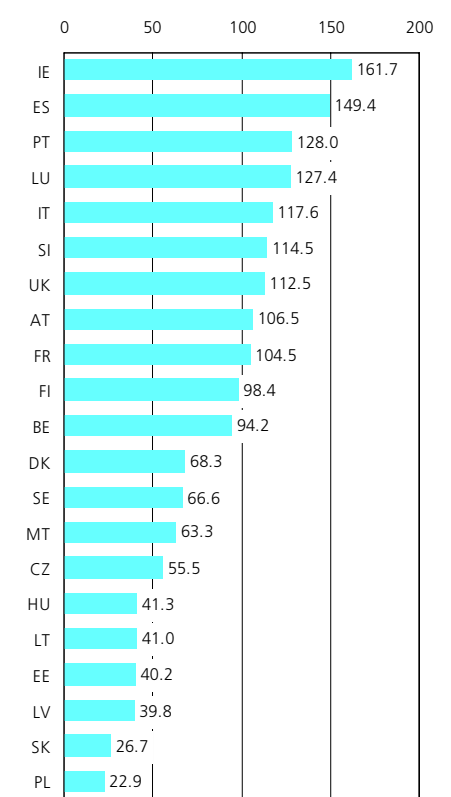
(1) Germany and Greece, not available.
 (2) Germany, Greece, Cyprus and the Netherlands, not available.
 (3) Germany, Greece, Poland and Slovenia, not available.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

STRUCTURAL PROFILE

The 1.2 million restaurants, bars and catering enterprises present in the EU-25 in 2001 generated a total value added of EUR 92.4 billion, which represented 3.8 % of the non-financial services total. As such, this constituted the largest tourism related sector, although this sector also serves the local market. Nevertheless, the weight of the sector in the national non-financial services' economy showed considerable fluctuations across the Member States (46) and between the EU-15 and the new Member States. Ireland and Spain reported a relatively high specialisation in restaurants, bars and catering, evidenced by a noticeably higher contribution of this sector to non-financial services value added, respectively 6.1 % and 5.7 %. It should be noted, however, that available data for Cyprus indicate an even higher specialisation (47). Among the new Member States, in contrast, only Slovenia reported that this sector had a higher share of non-financial services than the EU average, while all other central and eastern European countries were at the bottom of the ranking, with shares ranging from 2.1 % of non-financial services value added in the Czech Republic to 0.9 % in Poland.

(46) Germany and the Netherlands; 2000; Greece and Cyprus, not available.
 (47) Restaurants, bars and catering accounted for 13.9 % of the total value added of Sections G to I in Cyprus in 2001, against an average of 6.0 % in the EU-25 and 9.5 % in Ireland.

Figure 19.6
Restaurants; bars; canteens and catering (NACE Groups 55.3 to 55.5)
Value added specialisation ratio relative to non-financial services, 2001 (EU-25=100) (1)



(1) Germany, Greece, Cyprus and the Netherlands, not available.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

More than two thirds of the EU's value added in the restaurants, bars and catering sector originated from just four countries: the United Kingdom (EUR 24.8 billion), France (EUR 14.4 billion), Germany (EUR 12.3 billion, 2000) and Italy (EUR 11.4 billion); Spain (EUR 10.8 billion) was the only other country accounting for more than 10 % of the EU-25 value added total.

The large workforce within the restaurants, bars and catering sector reflects the labour-intensive nature of the activity. A total of 5.6 million persons were employed in this sector in the EU-25 in 2001 ⁽⁴⁸⁾, which represented approximately 8.8 % of the non-financial services workforce, or two and a half times more than its contribution in terms of value added. It is important to note that these figures are based on head-counts and do not take into account seasonal factors or the average length of work duration.

Furthermore, the distribution of employment across Member States reveals interesting patterns. Firstly, the United Kingdom alone accounted for more than one quarter of the total ⁽⁴⁹⁾, with 1.4 million persons employed. Secondly, Ireland, Portugal and Spain reported a high concentration of employment in this sector, mirroring their specialisation in terms of value added. Spain (808 900 persons employed) reported a larger workforce in this sector than Germany (744 100 persons employed, 2000) or Italy (665 200 persons employed). Ireland, for example, accounted for 1.5 % of the EU's employment in restaurants, bars and catering activities ⁽⁵⁰⁾, but only 1.0 % of total employment within the non-financial services economy ⁽⁵¹⁾. The opposite situation was observed, notably in the Baltic States and in Slovakia.

⁽⁴⁸⁾ Poland and Slovenia, number of employees.

⁽⁴⁹⁾ Poland and Slovenia, number of employees.

⁽⁵⁰⁾ Poland and Slovenia, number of employees.

⁽⁵¹⁾ Poland and Cyprus, not available; Slovenia, number of employees.

Small enterprises, and particularly those employing less than 10 persons (micro enterprises), are central in the activities of restaurants, bars and catering, perhaps more than any other sector. Indeed, micro enterprises accounted for as much as 47.3 % of the value added of this sector in the EU-25 in 2001, while their corresponding share of non-financial services' value added was 26.5 %. Furthermore, the role of medium-sized enterprises (50 to 249 persons employed) in this sector was significantly reduced, as they generated 7.1 % of sectoral value added against a non-financial services average of 16.4 %. The only countries significantly differing from this pattern were Estonia and Latvia, where the contribution of micro enterprises to wealth creation was in line with the national average for non-financial services, and Lithuania, Hungary and Slovakia, where medium-sized enterprises were relatively important.

LABOUR AND PRODUCTIVITY

A distinctive characteristic of employment in restaurants, bars and catering activities was the low occurrence of paid employees, underlining the importance of self-employed persons and family workers. In 2001, only 78.9 % of the persons employed in the sector in the EU-25 ⁽⁵²⁾ were employees, against 82.7 % in non-financial services as a whole ⁽⁵³⁾. Among the Member States, only Malta, Estonia, Sweden, and the United Kingdom reported a higher proportion of employees in this sector relative to their non-financial services' averages ⁽⁵⁴⁾. In the United Kingdom it should be noted that approximately one in four pubs are managed houses, meaning that they are owned by breweries, with the manager as a paid employee. Finally, Italy was the only country where paid employees were outnumbered by unpaid working proprietors and family workers.

Average personnel costs supported by restaurants, bars and catering enterprises were generally lower than in other services, which could be explained by relatively low average qualification levels among the workforce, the importance of part-time employment, and the seasonal nature of the activity. Personnel costs per employee were equal to EUR 13 000 in the EU-25 in 2001, not far from half the average for non-financial services (EUR 25 400) ⁽⁵⁵⁾, although the difference was less marked in Finland, Italy, France and Luxembourg ⁽⁵⁶⁾. Despite the low level of average personnel costs, wage adjusted labour productivity also remained below the non-financial services average, at 127.7 % in the EU-25 in 2001 ⁽⁵⁷⁾, 20 percentage points less than the non-financial services average (147.9 %) ⁽⁵⁸⁾. Belgium was the only country ⁽⁵⁹⁾ where wage adjusted labour productivity in restaurants, bars and catering was above the national average for non-financial services, while in contrast the productivity gap was the largest in the Czech Republic, Hungary, Slovakia and the Baltic States.

⁽⁵²⁾ Poland and Slovenia, not available.

⁽⁵³⁾ Cyprus and Slovenia, not available

⁽⁵⁴⁾ Germany, 2000; Greece, Cyprus, Poland and Slovenia, not available.

⁽⁵⁵⁾ Cyprus and Slovenia, not available.

⁽⁵⁶⁾ Germany and Slovenia, 2000; Greece and Cyprus, not available.

⁽⁵⁷⁾ Poland and Slovenia, not available.

⁽⁵⁸⁾ Cyprus and Slovenia, not available.

⁽⁵⁹⁾ Germany and the Netherlands, 2000; Greece, Cyprus and Slovenia, not available.

Table 19.17
Main restaurant, bar and catering enterprises, EU-15

Company	Country	Turnover 2001/02 (EUR million)	Main activities
Compass Group	UK	7 953	Contract catering
Sodexo Alliance	FR	4 554	Contract catering
Elior	FR	2 036	Contract catering, restaurants
Whitbread	UK	1 832	Restaurants
Six Continents	UK	1 334	Hotels, restaurants, pubs
Accor	FR	1 323	Hotels, restaurants, contract catering
Autogrill	IT	1 133	Travel, roadside catering
LSG	DE	935	Travel, airline catering
GIB Group	BE	872	Restaurants
Scottish & Newcastle	UK	687	Pubs, hotels

Source: INFORMA, based on Neo-restauration and annual reports.

Table 19.18

Hotels and restaurants (NACE Division 55)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	8 627	2 684	4 405	41 137	215	:	41 393	51 826	6 592	47 996	1 592	212	199	862
Value added at factor cost (EUR million) (1)	3 225	584	1 840	20 238	69	:	18 052	22 184	2 383	18 872	907	76	52	439
Purchases of goods and services (EUR million) (1)	5 282	1 958	2 685	21 429	145	:	23 830	29 251	4 222	29 897	624	148	148	420
Gross investment in tangible goods (EUR million) (1)	963	130	272	1 538	24	:	3 616	4 908	502	3 592	132	63	22	:
Number of persons employed (thousands)	158	163	95	1 023	13	:	1 074	796	125	905	33	17	24	13
App. labour productivity (EUR thous./pers. emp.) (1)	20.4	3.6	19.4	19.1	5.2	:	16.8	27.9	19.0	20.9	27.3	4.5	2.1	34.7
Average personnel costs (EUR thous./employee) (1)	15.3	3.9	15.3	12.5	3.4	:	13.5	23.1	14.4	18.5	17.0	2.3	1.8	23.0
Wage adjusted labour productivity (%) (1)	133.7	92.3	127.5	152.6	155.3	:	125.0	120.7	132.3	112.9	160.5	193.9	117.5	150.9
Gross operating rate (%) (1)	18.0	5.3	12.5	21.8	12.2	:	17.4	11.6	13.2	19.8	27.3	17.7	5.6	23.5
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	1 071	444	15 195	10 512	3 085	7 021	814	254	4 275	7 250	80 244	543	742	:
Value added at factor cost (EUR million)	340	251	6 737	5 168	1 258	2 262	281	91	1 579	2 768	35 748	164	229	:
Purchases of goods and services (EUR million)	717	180	8 422	5 180	1 304	4 828	488	161	2 787	4 633	42 239	419	543	:
Gross investment in tangible goods (EUR million)	108	45	598	972	237	790	81	22	166	535	8 063	171	141	:
Number of persons employed (thousands)	58	15	325	212	200	239	:	20	53	109	1 792	83	80	:
App. labour productivity (EUR thous./pers. emp.)	5.8	16.4	20.7	24.4	6.3	9.5	:	4.5	29.8	25.3	19.9	2.0	2.9	:
Average personnel costs (EUR thous./employee)	4.6	7.9	13.7	18.1	5.4	8.5	8.4	3.4	23.9	21.7	12.6	1.3	1.9	:
Wage adjusted labour productivity (%)	127.3	208.6	151.4	135.2	116.1	111.2	:	131.0	125.0	116.8	158.7	146.6	154.4	:
Gross operating rate (%)	7.1	30.5	19.9	20.5	21.5	9.0	5.8	8.9	10.3	9.0	18.4	17.0	12.5	:

(1) Germany, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 19.19

Hotels; camping sites, other provision of short-stay accommodation (NACE Groups 55.1 and 55.2)
Main indicators, 2001

	BE	CZ	DK	DE (1)	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	1 812	773	1 244	14 740	84	:	13 002	18 114	2 040	14 458	723	53	54	232
Value added at factor cost (EUR million)	846	296	584	7 892	40	:	7 220	7 764	896	7 472	471	30	18	129
Purchases of goods and services (EUR million)	911	470	685	6 954	43	:	5 996	10 107	1 144	7 298	222	26	35	103
Gross investment in tangible goods (EUR million)	321	68	143	843	16	:	2 389	2 263	217	1 453	102	39	11	:
Number of persons employed (thousands)	23	32	23	317	4	:	265	222	42	240	15	3	4	3
App. labour productivity (EUR thous./pers. emp.)	37.5	9.3	25.4	24.9	10.5	:	27.3	35.0	21.3	31.2	30.6	10.7	4.2	42.1
Average personnel costs (EUR thous./employee)	26.2	5.9	18.5	15.4	5.1	:	16.9	25.7	18.2	21.0	16.2	4.6	3.3	24.9
Wage adjusted labour productivity (%)	142.9	158.1	137.0	160.9	206.8	:	161.2	136.6	116.9	148.6	189.1	231.7	127.9	168.8
Gross operating rate (%)	18.1	18.6	14.2	24.2	25.1	:	22.8	13.8	10.9	26.1	30.7	32.2	7.9	26.2
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	465	348	4 061	5 542	1 101	1 569	269	116	1 184	2 371	19 889	192	335	:
Value added at factor cost (EUR million)	200	211	1 978	2 908	642	830	110	54	463	1 017	10 959	73	146	:
Purchases of goods and services (EUR million)	250	131	2 057	2 530	353	782	130	61	747	1 397	8 324	145	199	:
Gross investment in tangible goods (EUR million) (2)	65	41	390	713	141	424	67	10	67	231	2 547	134	113	:
Number of persons employed (thousands)	19	10	59	108	:	46	:	8	13	31	350	19	32	:
App. labour productivity (EUR thous./pers. emp.)	10.5	20.8	33.2	26.8	:	18.1	:	6.5	36.7	33.1	31.3	3.9	4.6	:
Average personnel costs (EUR thous./employee)	7.0	9.2	19.8	18.5	7.0	12.4	11.1	4.1	26.0	25.3	16.9	2.1	2.3	:
Wage adjusted labour productivity (%)	150.2	225.6	167.6	144.8	:	146.1	:	159.9	141.0	130.7	184.5	184.8	196.7	:
Gross operating rate (%)	14.5	34.0	22.3	23.0	32.7	18.6	6.5	17.6	12.6	11.6	26.9	18.9	22.7	:

(1) 2000.

(2) The Netherlands, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 19.20

Restaurants; bars; canteens and catering (NACE Groups 55.3, 55.4 and 55.5)

Main indicators, 2001

	BE	CZ	DK	DE (1)	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	6 815	1 911	3 161	26 419	130	:	28 392	33 713	4 552	33 539	869	159	145	630
Value added at factor cost (EUR million)	2 378	288	1 256	12 346	29	:	10 832	14 420	1 487	11 401	436	46	33	310
Purchases of goods and services (EUR million)	4 371	1 488	2 000	14 475	103	:	17 835	19 144	3 078	22 600	402	122	112	317
Gross investment in tangible goods (EUR million)	643	63	129	695	9	:	1 226	2 645	284	2 139	30	24	10	:
Number of persons employed (thousands)	135	131	72	744	9	:	809	575	83	665	18	14	20	10
App. labour productivity (EUR thous./pers. emp.)	17.6	2.2	17.5	16.6	3.1	:	13.4	25.1	17.9	17.1	24.3	3.3	1.7	32.4
Average personnel costs (EUR thous./employee)	12.9	3.3	14.1	11.2	2.7	:	11.9	22.0	12.3	17.1	17.9	1.9	1.5	22.3
Wage adjusted labour productivity (%)	136.6	66.7	124.4	148.7	116.2	:	112.7	113.9	145.4	100.0	135.7	175.8	114.5	145.1
Gross operating rate (%)	18.0	-0.1	11.8	20.5	3.8	:	14.9	10.4	14.3	17.1	24.5	12.8	4.8	22.4
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	606	96	11 134	4 970	1 984	5 452	545	138	3 091	4 879	60 355	350	408	:
Value added at factor cost (EUR million)	140	40	4 759	2 260	616	1 432	171	37	1 116	1 751	24 789	91	83	:
Purchases of goods and services (EUR million)	467	49	6 365	2 650	951	4 046	358	100	2 040	3 236	33 914	274	344	:
Gross investment in tangible goods (EUR million) (2)	43	4	338	259	96	366	14	12	99	305	5 516	37	28	:
Number of persons employed (thousands)	39	5	266	103	:	193	:	12	40	79	1 442	64	48	:
App. labour productivity (EUR thous./pers. emp.)	3.6	7.8	17.9	21.9	:	7.4	:	3.1	27.7	22.2	17.2	1.4	1.7	:
Average personnel costs (EUR thous./employee)	3.4	5.0	12.1	17.5	4.5	7.4	7.3	3.0	23.1	20.1	11.5	1.0	1.5	:
Wage adjusted labour productivity (%)	104.9	156.9	147.4	124.8	:	100.5	:	104.2	119.7	110.7	149.7	145.0	113.1	:
Gross operating rate (%)	1.5	17.6	19.0	17.7	15.2	6.2	5.4	1.6	9.4	7.7	15.6	15.9	4.1	:

(1) 2000.

(2) The Netherlands, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 19.21

Activities of travel agencies and tour operators; tourist assistance activities n.e.c. (NACE Group 63.3)

Main indicators, 2001

	BE	CZ	DK	DE (1)	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	4 850	1 054	2 356	19 442	130	:	11 466	11 819	1 742	12 743	119	68	60	227
Value added at factor cost (EUR million)	324	58	218	5 490	12	:	1 227	1 729	280	1 200	74	6	8	40
Purchases of goods and services (EUR million)	4 516	995	2 156	14 344	114	:	10 394	10 295	1 463	11 583	45	62	53	186
Gross investment in tangible goods (EUR million)	43	23	14	207	2	:	114	126	24	140	6	0	2	:
Number of persons employed (thousands)	9	13	6	80	1	:	45	44	6	43	3	1	2	1
App. labour productivity (EUR thous./pers. emp.)	38.0	4.6	38.1	68.7	8.3	:	27.4	39.2	49.8	28.0	23.7	5.5	5.0	60.8
Average personnel costs (EUR thous./employee)	33.2	6.8	33.3	28.7	6.9	:	20.9	34.5	29.8	27.0	14.1	2.6	2.8	28.5
Wage adjusted labour productivity (%)	114.5	66.8	114.6	239.0	121.6	:	130.9	113.9	167.2	103.9	167.9	216.3	182.8	213.2
Gross operating rate (%)	1.6	1.1	1.3	17.4	2.0	:	3.2	1.8	6.8	2.8	27.2	4.8	6.2	10.0
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	384	121	4 542	3 541	:	2 068	270	479	1 102	4 440	61 331	100	252	:
Value added at factor cost (EUR million)	35	25	739	418	:	166	44	42	170	404	5 258	14	39	:
Purchases of goods and services (EUR million)	350	99	4 082	3 122	:	1 908	218	436	940	3 837	56 181	86	215	:
Gross investment in tangible goods (EUR million)	7	1	57	40	:	42	6	3	13	30	664	15	7	:
Number of persons employed (thousands)	3	1	24	11	:	8	:	2	5	14	126	3	7	:
App. labour productivity (EUR thous./pers. emp.)	10.1	21.0	30.4	36.4	:	20.9	:	19.4	32.6	28.3	41.6	4.3	5.5	:
Average personnel costs (EUR thous./employee)	7.1	10.4	23.6	29.6	:	17.0	16.3	6.2	30.1	30.5	32.1	2.3	3.3	:
Wage adjusted labour productivity (%)	142.3	202.7	128.6	122.7	:	123.0	:	314.2	108.5	92.9	129.5	184.1	164.5	:
Gross operating rate (%)	2.8	11.5	5.0	2.9	:	1.7	2.3	6.1	1.6	0.2	2.2	8.1	7.1	:

(1) 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Transport services



The overall competitiveness of an economy is greatly dependent on the quality and efficiency of its transport system. Enterprises from all sectors rely on transport services for a variety of functions, from the supply of raw materials and other inputs, to the delivery of products to final consumers. Transport is increasingly considered as an integral part of the production process, notably in the case of 'just-in-time' production systems, where input deliveries are made in close co-ordination with production schedules in order to keep inventories to a minimum. Transport is also important in the everyday lives of most Europeans, from their journey to work or school, to their shopping time and their holidays. While the car is the most important means of transport in this field, transport services also have an important role to play.

The common transport policy was enshrined in the Treaty of Rome (1957) establishing the European Community⁽¹⁾. It was, at first, primarily seen as a necessary complement to the free movement of persons and goods, some of the principles upon which the single European market was founded. EU policy in this field has since grown to cover a wide number of areas⁽²⁾, notably in the field of transport infrastructure, harmonisation, passenger rights, safety or environmental issues. The transport policy strategy currently being implemented is based upon the White Paper entitled *European transport policy for 2010: time to decide*⁽³⁾ that proposes an action plan aimed at improving the quality and efficiency of transport within the EU and gradually breaking the link between transport growth and economic growth in order to reduce the pressure on the environment.

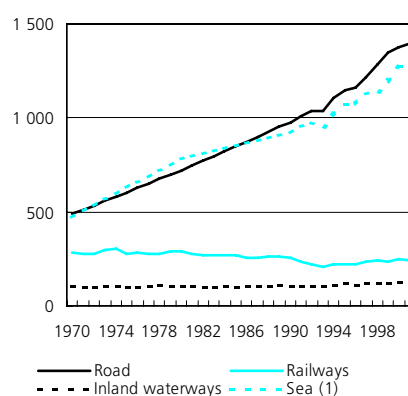
⁽¹⁾ Articles 70 to 80.

⁽²⁾ The complete list of EU legislation in the field of transport is available at: http://europa.eu.int/eur-lex/en/lif/ind/en_analytical_index_07.html.

⁽³⁾ Available at: http://europa.eu.int/comm/energy_transport/en/lb_en.html.

Among the objectives put forward by the White Paper, the Commission proposes that the market shares of the various modes of transport return to their levels of 1998 by 2010. The Marco Polo programme was established on 22 July 2003 with this perspective, to reduce road congestion and to promote intermodality, in other words the use of various transport modes in an integrated manner. To achieve this objective, the programme supports actions that contribute to shift the expected increase in international road goods traffic towards short sea shipping, rail and inland waterways or to a combination of modes of transport in which road journeys are as short as possible. The programme will run from 2003 to 2010, with a budget of EUR 75 million for the EU-15 until 2006.

Figure 20.1
Evolution of goods transport, EU-15
(billion tonne-kilometres)



(1) Intra-EU traffic only.

Source: Eurostat; ECMT; UIC in European Union Energy and Transport in Figures, Directorate-General of the European Commission for Energy and Transport, 2003.

Transport services are broken down into: land transport (NACE Division 60), which includes railways, urban transport systems, road transport, as well as transport by pipelines; water transport (NACE Division 61); air transport (NACE Division 62), which includes space transport; and supporting and auxiliary transport activities (NACE Division 63), which cover cargo handling and storage, the operation of railway stations, ports and airports, travel agencies and tourist assistance activities.

Note that travel agencies (NACE Group 63.3) are covered in Subchapter 19.1 and that this activity and transport by pipelines (NACE Group 60.3) are not covered in any of the subchapters that form Chapter 20, although they are sometimes included in the aggregated data used in this overview.

NACE

60: land transport; transport via pipelines;
60.1: transport via railways;
60.2: other land transport;
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;
63.4: activities of other transport agencies.

Table 20.1
Evolution of goods transport in the new Member States (billion tonne-kilometres)

	1970	1980	1990	2000	2001
Road					
CZ (1)	:	:	:	39.0	40.3
EE	2.4	4.2	4.5	3.9	4.7
CY	:	:	3.7	:	:
LV	2.9	5.1	5.9	4.8	5.4
LT	3.4	6.9	7.3	7.8	8.3
HU	5.8	11.4	15.2	19.1	18.5
MT	:	:	2.5	:	:
PL	15.8	44.6	40.3	72.8	74.4
SI	1.5	2.8	3.5	5.3	5.5
SK (1)	:	:	:	21.4	20.2
Rail					
CZ (2)	:	:	:	17.5	16.9
EE	5.7	6.5	7.0	8.1	8.6
CY	0.0	0.0	0.0	0.0	0.0
LV	15.5	17.6	18.5	13.3	14.2
LT	13.6	18.2	19.3	8.9	7.7
HU	19.8	24.4	16.8	8.1	7.7
MT	0.0	0.0	0.0	0.0	0.0
PL	98.0	132.4	81.6	54.0	47.7
SI	3.3	3.8	4.2	2.9	2.8
SK (2)	:	:	:	11.2	10.9
Inland waterways					
CZ (3)	:	:	:	0.8	0.6
EE	0.0	0.0	0.0	0.0	0.0
CY	0.0	0.0	0.0	0.0	0.0
LV	0.1	0.1	0.3	0.0	0.0
LT	0.1	0.2	0.2	0.0	0.0
HU	1.8	2.2	2.0	0.9	1.1
MT	0.0	0.0	0.0	0.0	0.0
PL	2.3	2.3	1.0	1.1	1.2
SI	0.0	0.0	0.0	0.0	0.0
SK (3)	:	:	:	1.4	1.0

(1) Czechoslovakia: 1970, 10.1; 1980, 21.3; 1990, 23.3.

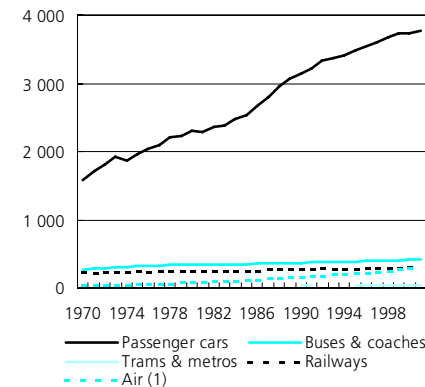
(2) Czechoslovakia: 1970, 55.9; 1980, 66.2; 1990, 59.4.

(3) Czechoslovakia: 1970, 2.4; 1980, 3.6; 1990, 4.4.
Source: Eurostat; ECMT; UIC in European Union Energy and Transport in Figures, Directorate-General of the European Commission for Energy and Transport, 2003.

Looking at the development of traffic confirms that there has been a strong and consistent growth of transport activity over the past decades, but that the evolution has been somewhat different among the various transport modes (see Figure 20.1). In 2001, total intra-EU-15 traffic of goods (including domestic traffic) reached 3 031 billion tonnes-kilometres⁽⁴⁾ (tkm) when combining road, rail, inland waterways and sea transport (excluding pipeline transport), corresponding to an

⁽⁴⁾ Total transported tonnage multiplied by the number of kilometres travelled.

Figure 20.2
Evolution of land and air passenger transport, EU-15 (billion passenger-kilometres)



(1) Intra-EU traffic only.

Source: Eurostat; ECMT; UIC; AEA; IACA in European Union Energy and Transport in Figures, Directorate-General of the European Commission for Energy and Transport, 2003.

average increase of 2.7 % per annum since 1970. Growth in traffic was the strongest in the 1970s, with an increase of 3.6 % per annum, before slowing down during the 1980s (1.8 %) and early 1990s (0.5 % between 1990 and 1993). The sector strongly recovered thereafter, gaining 3.1 % per annum between 1994 and 2001. Including information for the 10 new Member States would have added a further 298 billion tkm to the total traffic of goods in 2001⁽⁵⁾ - see Table 20.1. Note that within the new Member States, the modal split of transport is very different from that displayed within the EU-15, as the former is characterised by a much greater importance of rail transport.

Most growth in goods traffic was due to an expansion of road and sea transport, whose evolution was remarkably similar. Indeed, the volume of goods transported by road rose from 489 billion tkm in 1970 to 1 395 billion tkm by 2001, an average increase of 3.5 % per annum. Over the same period, intra-EU-15 sea transport increased by 3.2 % per annum, from 472 billion tkm in 1970 to 1 270 billion tkm in 2001. In comparison, goods traffic on rail and inland waterways remained relatively stable. Rail transport lost some ground, with transported volumes falling from 282 billion tkm in 1970 to 242 billion tkm by 2001, while inland waterways reported a slight increase in the volume of goods transported from 102 billion tkm to 125 billion tkm over the same period.

As regards passenger traffic, transport by car, bus, rail⁽⁶⁾ and air totalled 4 833 billion passenger-kilometres (pkm) within the EU-15 in 2001, of which as much as 78 % was made by car - see Figure 20.2. Restricting the analysis to

⁽⁵⁾ Excluding sea transport; Cyprus and Malta, road transport, not available.

⁽⁶⁾ Including urban rail.

Table 20.2
Evolution of land passenger transport in the new Member States (billion passenger-kilometres)

	1970	1980	1990	2000	2001
Railways					
CZ (1)	:	:	:	7.3	7.3
EE	1.2	1.6	1.5	0.3	0.2
CY	0.0	0.0	0.0	0.0	0.0
LV	3.8	4.8	5.4	0.7	0.7
LT	2.1	3.3	3.6	0.6	0.5
HU	15.2	13.7	11.4	9.7	10.0
MT	0.0	0.0	0.0	0.0	0.0
PL	36.9	46.3	50.4	19.7	18.2
SI	1.5	1.4	1.4	0.7	0.7
SK (1)	:	:	:	2.9	2.8
Buses and coaches					
CZ (2)	:	:	:	9.6	10.6
EE	2.6	3.7	4.5	2.6	2.5
CY	:	:	:	:	:
LV	3.3	4.6	5.9	2.3	2.3
LT	4.9	6.7	6.7	1.0	1.0
HU	7.4	11.9	10.5	12.1	12.0
MT	:	:	:	:	:
PL (3)	29.1	49.2	46.3	31.7	31.0
SI	2.6	4.9	6.6	1.6	1.5
SK (2)	:	:	:	8.4	8.3

(1) Czechoslovakia: 1970, 20.5; 1980, 18.0; 1990, 19.4.

(2) Czechoslovakia: 1970, 21.4; 1980, 33.8; 1990, 43.4.

(3) Excluding urban bus transport.

Source: Eurostat; ECMT; UIC in European Union Energy and Transport in Figures, Directorate-General of the European Commission for Energy and Transport, 2003.

transport services (bus, rail and air), passenger traffic reached 1 054 billion pkm in 2001. New Member States represented an additional 116.1 billion pkm in 2000⁽⁷⁾ - see Table 20.2. Within the EU-15, transport services passenger traffic has been rising on average by 2.1 % per annum over the last 30 years against growth of 2.8 % per annum for cars. Over that period, growth was strongest in the 1970s, when passenger traffic on transport services increased on average by 2.7 % per annum. During the 1980s, traffic growth somewhat abated to 1.8 % per annum, a trend that continued in the first years of the 1990s, with growth limited to 1.5 % per annum between 1990 and 1993. A strong recovery followed, with average annual growth reaching 2.7 % per annum over the period 1994-2001. Air transport experienced by far the highest rates of growth, rising on average by 7.2 % per annum between 1970 and 2001. As such, air transport is gaining ground on railways and, if current trends continue, will soon surpass railways to become the third most important mode of passenger transport after passenger cars and buses.

⁽⁷⁾ Transport by railways and buses and coaches only; Cyprus and Malta, transport by buses and coaches, not available.

Table 20.3
Average daily distance travelled by freight and passengers, EU-15 (kilometres per inhabitant)

	1970	2001
Goods		
Road	3.9	10.1
Sea (1)	3.8	9.2
Railways	2.3	1.8
Inland waterways	0.8	0.9
Passengers		
Passenger cars	12.8	27.4
Buses and coaches	2.2	3.0
Railways	1.8	2.2
Air (1)	0.3	2.1
Trams and metros	0.3	0.3

(1) Intra-EU traffic only.

Source: Eurostat; ECMT; UITP; UIC; AEA; IACA in European Union Energy and Transport in Figures, Directorate-General of the European Commission for Energy and Transport, 2003.

STRUCTURAL PROFILE

The sector of transport services (NACE Divisions 60 to 63 and hence including pipelines and travel agencies) numbered close to one million enterprises in the EU-25 in 2001 (954 600⁽⁸⁾) that generated EUR 307.7 billion of value added. This represented a 12.7 % share of value added in the non-financial services sector (NACE Sections G to I and K). In addition, some 7.4 million persons were employed in the transport services in 2001 in the EU-25, and 6.2 million in the EU-15, which represented 10.9 % of those working in non-financial services.

More than half of the wealth created by transport services within the EU-25 was generated by land transport (NACE Division 60, including pipelines), where value added reached EUR 157.0 billion in 2001, or 51.0 % of the total. The diverse set of activities classified under the heading of auxiliary transport activities (NACE Division 63, including travel agencies) composed the second largest sector within transport services, with value added of EUR 112.3 billion, or 36.5 % of the total. Air transport (8.1 %) and water transport (4.4 %) were the two smallest activities.

⁽⁸⁾ Cyprus, 2000; Poland, NACE Division 60 and Group 61.1 only.

Table 20.4
Transport services (NACE Divisions 60 to 63) Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (62.5)	Malta (205)	France (1 079.3)
2	France (48.0)	Lithuania (183)	United Kingdom (1 063.6)
3	Italy (36.4)	Latvia (156)	Germany (1 058.6)
4	Spain (26.6)	Luxembourg (146)	Italy (908.0)
5	Netherlands (17.4)	Finland (145)	Spain (740.3)

(1) Germany, Estonia, Greece, Ireland, Poland, Slovenia and Slovakia, not available.

(2) Germany, Estonia, Greece, Ireland, Cyprus, the Netherlands, Poland, Slovenia and Slovakia, not available.

(3) The Czech Republic, Estonia, Greece, Ireland, the Netherlands, Poland, Slovenia and Slovakia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

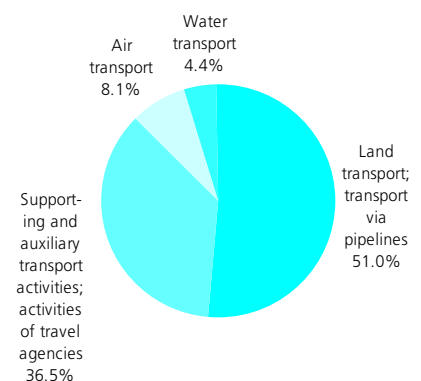
Malta was the country that was relatively most specialised in transport services within the EU-25⁽⁹⁾ in 2001, probably due to the importance of tourism activities and the sizeable merchant fleet registered in this country (see Subchapter 20.3). In Malta and the Baltic States, the contribution of transport services to the non-financial services' value added was around twice that recorded on average in the EU-25. In contrast, the transport services sector in the Czech Republic, Germany (2000), Ireland, Sweden and the United Kingdom was proportionally smaller than the EU-25 average. In addition, within transport services, the following national specialisation was evident for each transport mode⁽¹⁰⁾: Belgium, the Czech Republic, Lithuania, Hungary, Austria and Slovakia for land transport, Denmark, Cyprus, Finland and Sweden for water transport, Cyprus, Luxembourg, Malta, Portugal and the United Kingdom for air transport.

Size-class data show that transport services enterprises were generally larger than the non-financial services' average. Micro and small enterprises (employing less than 50 persons) contributed slightly more than one third (35.5 %) of total value added in the transport services sector, compared with almost half (46.7 %) in non-financial services.

⁽⁹⁾ Germany and the Netherlands, 2000; Greece, Cyprus and Poland, not available.

⁽¹⁰⁾ Germany, 2000; Estonia, Ireland, Slovenia and Slovakia, incomplete; Greece and Poland, not available.

Figure 20.3
Transport services (NACE Divisions 60 to 63) Share of value added at factor cost, EU-25, 2001



Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 20.5

Transport services (NACE Divisions 60 to 63)**Value added at factor cost and persons employed, by enterprise size-class, 2001 (% of total)**

	Micro enterprises		Small enterprises		Medium-sized enterprises		Large enterprises	
	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added (1)	Share of persons employed (1)	Share of value added (1)	Share of persons employed (1)
EU-25	16.9	22.6	18.6	18.9	:	:	:	:
EU-15	17.2	21.8	18.8	20.6	15.7	15.5	47.4	41.7

(1) EU-15, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/sizclass).

LABOUR AND PRODUCTIVITY

Most of the transport services workforce was employed in the land transport subsector (including pipelines), where the number of persons employed was estimated at 4.8 million, while services auxiliary to transport activities were estimated to employ a further 2.1 million persons in 2001. Land transport was responsible for at least one in two jobs in the transport services sector in every Member State ⁽¹¹⁾ except Cyprus (26.7 %) and Malta (18.6 %); land transport recorded a particularly high proportion of total employment in the Czech Republic (84.2 %), Hungary (84.3 %) and Slovakia (87.9 %). Cyprus, Luxembourg, and the Nordic countries were the Member States ⁽¹²⁾ that reported the highest proportion of their total number of persons employed working in the water transport sector; this was particularly true in Cyprus (19.6 %), but also in Denmark (8.9 %), Finland (7.5 %) and Sweden (7.4 %). Note the particular case of Luxembourg, a country with no coastline where the water transport sector accounted for 7.6 % of the transport services workforce. Malta and Luxembourg had a relatively large workforce in air transport (18.8 % and 16.3 % of the national transport services' total, respectively), while the next highest shares ⁽¹³⁾ were in Cyprus (12.6 %) and Denmark (11.2 %).

⁽¹¹⁾ Greece, Poland and Slovenia, not available.⁽¹²⁾ The Czech Republic, Estonia, Greece, Ireland, Poland, Slovenia and Slovakia, not available.⁽¹³⁾ Greece, the Netherlands, Poland and Slovenia, not available.

On the basis of LFS data, transport services clearly stand out from the other services activities in terms of their gender profile. Only 20.9 % of the persons employed in this sector in 2002 in the EU-25 ⁽¹⁴⁾ were women, which was less than half the average for services (NACE Sections G to K), where women accounted for 44.2 % of those employed. Part-time work was also relatively less frequent in transport services than in other service activities, since 89.1 % of those employed in the EU-25 ⁽¹⁵⁾ in 2002 worked on a full-time basis, compared with a services' average of 81.7 %.

⁽¹⁴⁾ Poland, not available.⁽¹⁵⁾ Austria and Poland, not available.

This latter point may to some extent explain why labour costs faced by transport services enterprises were generally higher than in the other services. Average personnel costs were at EUR 29 600 per employee in 2001 in the EU-25 (EUR 33 900 in the EU-15), against EUR 25 400 for non-financial services as a whole ⁽¹⁶⁾ (EUR 27 500 in the EU-15). Average personnel costs in the EU-25 ranged from EUR 26 100 in the land transport subsector to more than twice as much (EUR 52 900) in the air transport subsector.

The relatively high level of average personnel costs had further consequences on the level of labour productivity, as wage adjusted labour productivity within the EU-25 transport services sector was 8 percentage points below the non-financial services' average, at an estimated 139.6 %. Three Member States ⁽¹⁷⁾ reported significantly higher wage adjusted labour productivity ratios in the transport services sector compared with the whole of non-financial services: Denmark, Estonia and Malta.

⁽¹⁶⁾ Slovenia, 2000; Cyprus, not available.

⁽¹⁷⁾ Germany, 2000; Greece, Poland and Slovenia, not available.

Table 20.6
Transport services (NACE Divisions 60 to 63)
Labour force characteristics, 2002

	Share of men		Share of full-time		Share of employees	
	Value (%)	Index (services=100)	Value (%)	Index (services=100)	Value (%)	Index (services=100)
EU-25	:	:	:	:	:	:
EU-15	79.1	140.4	91.0	113.6	85.5	105.8
BE	85.9	145.1	93.0	113.8	93.5	120.6
CZ	79.4	149.7	98.8	104.9	85.4	113.3
DK	77.0	129.2	91.5	115.5	91.3	104.1
DE	75.1	146.5	89.0	118.7	90.7	106.9
EE	75.1	144.8	98.2	103.7	92.1	100.6
EL	86.4	140.6	98.5	102.2	66.5	114.9
ES	85.1	147.5	96.4	105.9	71.0	95.5
FR	78.1	137.4	92.7	109.3	94.5	106.4
IE	75.9	143.3	89.6	113.0	75.8	89.9
IT	83.5	134.9	96.3	106.7	76.6	127.5
CY	63.1	119.3	96.9	104.1	80.4	106.3
LV	74.4	160.2	96.6	104.0	95.0	103.7
LT	77.8	148.8	95.0	103.9	93.2	111.0
LU	87.6	155.9	97.2	109.9	97.1	108.0
HU	80.3	149.4	98.9	103.1	86.4	107.1
MT	86.5	124.5	94.8	107.4	80.6	99.7
NL	75.2	128.2	71.7	123.7	92.8	105.7
AT	77.1	156.0	:	:	91.4	105.2
PL	:	:	:	:	:	:
PT	83.4	149.5	96.8	104.5	85.0	120.3
SI	82.0	155.5	95.5	100.9	81.8	94.2
SK	79.5	153.1	99.5	101.6	92.6	107.7
FI	77.7	146.3	92.9	111.6	83.5	95.6
SE	75.3	127.1	87.4	110.4	86.6	101.3
UK	77.4	138.0	88.2	122.9	85.1	97.1

Source: Eurostat, Labour Force Survey.

Table 20.7
Transport services (NACE Divisions 60 to 63)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Transport services	46.6	137.5	33.9
Land transport; transport via pipelines	38.2	122.3	31.3
Water transport	91.6	231.8	39.5
Air transport	64.6	118.1	54.7
Supporting and auxiliary transport activities; activities of travel agencies	56.8	167.0	34.0

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

20.1: RAILWAY TRANSPORT

This subchapter includes information on the transport of passengers and goods by railways (NACE Group 60.1). Although in NACE the activities related to the operation of the railway infrastructure are classified as part of auxiliary transport activities, some information on the rail infrastructure is also provided in this subchapter.

This subchapter does not cover urban and suburban railway transportation (part of NACE Class 60.21), the repair and maintenance of rolling stock (part of NACE Group 35.2), sleeping car services (part of NACE Class 55.23) or dining car services (part of NACE Group 55.3).

Railways figure at the top of the EU policy agenda in the field of transport. Indeed, rail transport in Europe has experienced a steady decline over the recent decades, especially in the area of goods transport, notably as a result of competition from the road haulage sector. Railway transport is often seen as less flexible and less reliable than road haulage as regards delivery times. In addition, international traffic is hindered by long stopping times en route, to give priority to passenger trains or because of procedures at borders (for example, train crews and locomotives have to be changed), while at the same time formalities for heavy goods vehicles have been greatly simplified following the introduction of the single market.

In September 2001, the Commission published a White Paper ⁽¹⁸⁾ on *European transport policy for 2010*. For railways, the paper set the objective of maintaining the modal share of rail transport by 2010 at the same level as in 1998, thus stemming and reversing the decline of the rail transport sector. As a follow-up to the White Paper, the Commission adopted on 23 January 2002 a new package of five measures concerning railway transport ('second package'), aiming at greater safety, interoperability and the opening-up of the rail goods transport market. The Commission has also proposed the establishment of a European railway agency to steer the technical work on safety and interoperability.

⁽¹⁸⁾ Available at: http://europa.eu.int/comm/energy_transport/en/lb_en.html.

Table 20.8
Main indicators for railways, 2002

	Length of lines (thousand km)	of which electrified (%)	Number of persons employed (thousand)	Passenger- kilometres (billion)	Tonnes- kilometres (billion)
EU-25 (1)	197.3	49.8	1 046.3	339.9	354.6
BE	3.5	83.4	42.5	8.3	8.4
CZ	9.5	30.8	81.8	6.6	17.0
DK	2.0	30.5	11.9	5.5	1.9
DE (2)	35.9	53.7	162.6	69.3	72.7
EE	1.0	13.5	4.5	0.2	9.3
EL	2.4	3.4	9.1	1.8	0.3
ES	13.9	54.6	36.0	20.7	13.8
FR	29.4	49.3	178.0	73.2	50.0
IE	1.9	2.7	6.0	1.6	0.4
IT	16.3	68.0	104.9	47.2	23.4
CY (1)	-	-	-	-	-
LV	2.3	11.3	14.7	0.7	15.0
LT	1.8	6.9	13.1	0.5	9.8
LU	0.3	95.3	3.2	0.3	0.6
HU	8.0	35.2	55.1	7.5	7.0
MT (1)	-	-	-	-	-
NL	2.8	73.4	25.5	14.3	3.7
AT	5.7	57.7	47.4	8.4	17.6
PL	20.2	59.4	143.3	17.3	46.6
PT	2.9	37.0	10.5	3.7	2.6
SI	1.2	41.0	8.9	0.7	2.8
SK	3.7	42.5	43.6	2.7	10.4
FI	5.9	41.0	11.8	3.3	9.7
SE (3)	9.9	76.8	10.3	5.9	12.0
UK (4)	17.1	30.6	21.7	40.1	19.6

(1) No railways.

(2) Excluding NEG; tonnes-kilometres, excluding GVG.

(3) Number of employees, excluding Green Cargo; tonnes-kilometres, excluding MTAB.

(4) Number of employees, excluding ATOC; tonnes-kilometres, excluding NIR.

Source: UIC.

STRUCTURAL PROFILE

On the basis of SBS data, there were 957 400 persons employed in the EU-25 railway sector in 2001. This figure corresponds well with the UIC statistics for its members – see Table 20.8. According to UIC, employment in the railway sector declined continuously during the 1980s and 1990s in the EU-15 and the number of persons employed more than halved over this period.

EU-25 rail transport enterprises generated a total value added of EUR 34.9 billion in 2001, or 22.2 % of the total for land transport services. Rail transport relied on an EU-25 network encompassing 197 200 km of track in 2002, of which 47 600 km was located in the new Member States and 49.2 % was electrified (see also Table 20.8).

Table 20.9
Passengers transported by high speed rail (billion passenger-kilometres) (1)

	1990	1995	2000	2001	2002
BE	0.0	0.0	0.9	0.9	0.9
DE	0.0	8.7	13.9	15.5	15.3
ES	-	1.2	2.2	2.4	2.5
FR	14.9	21.4	34.7	37.4	39.9
IT	0.3	1.1	5.1	6.8	7.5
NL	0.0	0.0	0.1	0.1	0.1
FI	0.0	0.0	0.1	0.1	0.1
SE	0.0	0.5	2.1	2.1	2.3

(1) The United Kingdom, not available; none of the other Member States had high-speed rail networks.

Source: UIC.

Rail has lost significant ground relative to other transport modes. As regards the transport of goods, the volume transported fell to 236.9 billion tkm in the EU-15 in 2002, down from 255.4 billion tkm in 1990 and 289.8 billion tkm in 1980. In other words, the volume of goods transport on the EU-15's railways declined on average by 1.3 % per annum between 1980 and 1990, and by 0.6 % per annum between 1990 and 2002. As such, rail was the only transport mode to report a decline in goods traffic over the period considered. As a consequence, the modal share of rail in total intra-EU-15 goods transport ⁽¹⁹⁾ was almost halved between 1980 (15.3 %) and 2001 (8.0 %). A comparison of rail and road transport shows that the volume of rail traffic in 1980 was equivalent to 40.2 % of road traffic, a ratio that fell to 17.3 % by 2001. Note that rail transport played a much more important role ⁽²⁰⁾ in the new Member States (except Cyprus and Malta where rail transport is not present), as the volume of goods transported by rail was equivalent to 44.0 % of the goods transported by rail in 2000, a share unseen in the EU-15 since 1976.

⁽¹⁹⁾ Transport by road, rail, inland-waterways and sea.

⁽²⁰⁾ For more information on this topic, see *Integration of accession countries in the EU: the case for railways*, European Commission, available at: <http://europa.eu.int/comm/transport/rail/overview/doc/ri-2hg-en.pdf>.

20.2: ROAD TRANSPORT

Other land transport activities (NACE Group 60.2) cover road freight transport, as well as road passenger transport (other than railways), scheduled or not, such as urban, suburban or inter-city public transport, taxi operations or charters. This definition includes a diverse number of agents, ranging from independent lorry or taxi drivers to large national or metropolitan public transport enterprises. This subchapter also contains some information on the private use of passenger cars, which is not covered by NACE.

Road transport has been one of the main areas of growth in transport 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 its capacity to carry goods and persons with unequalled flexibility.

As regards passenger transport, railway traffic in the EU-15 stagnated at around 250 billion pkm throughout the 1980s, before picking up in the 1990s to reach 307 billion pkm by 2001. Growth at the end of this period could be linked to the development of high-speed rail networks (see Table 20.9). In total, rail passenger transport increased by 0.8 % per annum in the 1980s, a trend that improved slightly to 1.1 % per annum between 1990 and 2001. This was nevertheless almost half the growth rate of passenger traffic for the other transport modes, and as a consequence the share of railways in total passenger transport fell from 8.2 % in 1980 to 6.7 % in 1990 and to 6.4 % by 2001.

LABOUR AND PRODUCTIVITY

Average personnel costs in the EU-15 railway transport sector were higher than the average for non-financial services. In 2001 they reached EUR 28 300 per employee against EUR 25 400 for non-financial services as a whole ⁽²¹⁾. There was however a large difference between the figures for the EU-15 and the EU-25, reflecting the weight of the new Member States in the railway transport sector, as average personnel costs stood at EUR 42 300 per employee in the EU-15. As a result, wage adjusted labour productivity in the EU-15 (corrected for the share of employees in persons employed) was 120.6 % in the railway transport sector in 2001, compared with 147.6 % for the whole of non-financial services.

⁽²¹⁾ Slovenia, 2000; Cyprus, not available.

Table 20.10
Other land transport (NACE Group 60.2)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (21.0)	Lithuania (197)	United Kingdom (530.5)
2	France (18.6)	Finland (176)	Germany (523.7)
3	Italy (14.5)	Slovenia (141)	France (517.5)
4	Spain (13.0)	Spain (138)	Spain (473.0)
5	Netherlands (8.2)	Austria (136)	Italy (453.3)

(1) Denmark, Germany, Estonia, Greece, Ireland, Latvia, Hungary and Poland, not available.

(2) Denmark, Germany, Estonia, Greece, Ireland, Cyprus, Latvia, Hungary, the Netherlands and Poland, not available.

(3) Denmark, Estonia, Greece, Ireland, Latvia, Hungary, Poland and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

The Community's policy in the field of road transport has mainly focused on achieving a single market in road freight and passenger transport by coach and bus, and was seen as a necessary complement to the freedom of movement for persons and goods. In addition, during the past 15 years a great number of measures were taken with a view to improving social conditions and enhancing technology

and safety, while also taking into account environmental concerns. The Community *acquis* in the field of transport now consist of several hundred regulations and directives ⁽²²⁾ covering numerous aspects, including market access, fiscal and technical harmonisation, social legislation, safety and environment.

⁽²²⁾ The full set of EU legislation in the field of road transport is available at: http://europa.eu.int/comm/transport/road/legislation/index_en.htm.

STRUCTURAL PROFILE

Road transport was the largest land transport activity with almost one million enterprises in the EU-25 ⁽²³⁾ generating a value added of EUR 120.2 billion in 2001, or 39.1 % of the wealth created in the whole transport services sector (NACE Divisions 60 to 63). This represented a 4.9 % contribution to non-financial services' value added in the EU-25. Although this average was brought down by the relatively low importance of the road transport sector in two large economies, namely Germany, where it accounted for only 4.2 % of non-financial services' value added (in 2000), and the United Kingdom, where the share was only 3.6 %. Value added generated in road transport services represented 7.0 % or more of the non-financial services' total ⁽²⁴⁾ in Slovenia (7.0 %), Finland (8.7 %), Hungary (9.4 %, 2000), and Lithuania (9.7 %). As such, these countries were the most specialised in road transport services. In contrast, the road transport sector was notably smaller in relative terms in the Czech Republic and in Malta, where it accounted for only 3.4 % and 2.0 % respectively of the value added created in non-financial services. In addition, available data also suggest a similar situation in Cyprus, where road transport represented only 2.4 % of the total value added for NACE Sections G to I, while the corresponding EU-25 average was 7.9 %.

Within road transport services, by far the largest subsector was freight transport by road (NACE Class 60.24). It accounted for almost two thirds (64.6 %) of value added in the road transport sector in the EU-25 (one third being generated in passenger transport activities). The sectoral share of freight rose to as high as 87.0 % in the Czech Republic, with the Benelux countries, Italy Slovenia and Sweden all reporting shares of between 70 % and 75 % ⁽²⁵⁾. In contrast, passenger services generated more than half of the value added in the road transport sector in Cyprus and Slovakia. The most specialised countries in the freight sector, as measured by the relative size of this activity within non-financial services, were Lithuania, Finland and Slovenia ⁽²⁶⁾.

⁽²³⁾ There were 960 000 enterprises with the following exceptions: Cyprus, 2000; Poland, excluding NACE Group 61.2, Division 62 and Group 63.3; Slovenia, 1999 for NACE Divisions 60 and 61; Slovakia, 1999 for NACE Division 62 and excluding NACE Group 61.2.

⁽²⁴⁾ Denmark and Latvia, 1999; Germany, Hungary and the Netherlands, 2000; Estonia, Greece, Ireland, Cyprus, and Poland, not available.

⁽²⁵⁾ Denmark and Latvia, 1999; Germany and Hungary, 2000; Estonia, Greece, Ireland and Poland, not available.

⁽²⁶⁾ Denmark, Germany, the Netherlands and Poland, 2000; Greece and Cyprus, not available.

A notable characteristic of road transport is the role played by small enterprises. Enterprises with less than 50 persons employed generated 56.5 % of the sector's value added in 2001 in the EU-25, which was 10 percentage points above the corresponding average for non-financial services (46.7 %). The difference could be mainly attributed to a greater presence of enterprises with between 10 and 49 persons employed; these represented 27.4 % of value added in the road transport sector, against an average of 20.2 % for non-financial services. There was also a relatively high proportion of medium-sized enterprises (17.9 % of value added, compared with a 16.4 % average for non-financial services). Large enterprises employing more than 250 persons accounted for only a quarter (25.6 %) of total value added in the road transport sector (compared with more than one third for non-financial services as a whole).

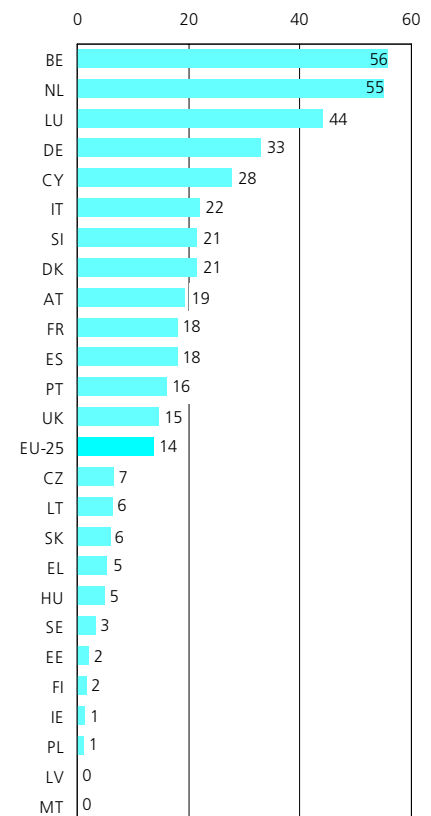
Road transport services could count on an estimated 4.7 million km of roads in the EU-25 in 2000, of which 0.9 million km were situated in the new Member States. As such, average road density was similar in the EU-15 and the new Member States, both in comparison to surface area and population. However, the average for the new Member States was significantly below the EU-15 average in terms of motorways (see Figure 20.4). Indeed, there were 54 600 km of motorways in the EU-25 at the end of 2000, but only 2 900 km of these were in the new Member States. This corresponded to an average of 3.9 km of motorways per thousand square km of land in the new Member States, against 13.7 km per thousand square km of land in the EU-25. Among EU-15 countries, only Sweden (3.3 km/1 000 km²), Finland (1.6 km/1 000 km²) and Ireland (1.5 km/1 000 km²) were below the average figure for the 10 new Member States. The lowest density of motorways was recorded in Poland (1.3 km/1 000 km²), while Latvia and Malta had no motorways at all.

Table 20.11
Number of road transport vehicles, EU-15 (millions)

	1970	1980	1990	1995	2000	2001
Passenger cars	62.5	103.9	143.2	161.0	180.6	184.7
Buses and coaches	0.3	0.4	0.5	0.5	0.5	0.5
Freight vehicles	7.5	10.6	17.4	19.8	23.7	24.7
Powered two-wheelers	:	:	:	23.4	27.9	28.0

Source: Eurostat; European Union Energy and Transport in Figures, Directorate-General of the European Commission for Energy and Transport, 2003.

Figure 20.4
Density of motorways, 2000
(km/1 000 km²)



Source: Eurostat; UN in European Union Energy and Transport in Figures, Directorate-General of the European Commission for Energy and Transport, 2003.

Table 20.12

Evolution of road transport vehicles in the new Member States (thousands)

	1970	1980	1990	2000	2001
Passenger cars					
CZ	690	1 780	2 410	3 440	3 530
EE	30	130	240	460	410
CY	60	90	180	270	280
LV	40	170	280	560	590
LT	40	250	490	1 170	1 130
HU	240	1 010	1 940	2 360	2 480
MT	:	:	:	190	200
PL	480	2 380	5 260	9 990	10 500
SI	150	420	580	870	880
SK	160	550	880	1 270	1 290
Buses and coaches					
CZ	:	20	26	19	18
EE	:	6	8	6	6
CY	:	2	2	3	3
LV	:	:	:	12	12
LT	:	11	15	16	16
HU	:	22	26	18	18
MT	:	:	:	1	1
PL	:	66	92	82	82
SI	:	3	3	2	2
SK	:	10	14	11	11
Freight vehicles					
CZ	:	130	156	298	321
EE	:	62	68	:	:
CY	:	24	74	115	118
LV	:	:	:	97	100
LT	:	66	83	99	100
HU	:	197	262	353	380
MT	:	:	:	:	:
PL	:	:	:	1 880	1 979
SI	:	:	:	55	56
SK	:	:	:	153	161

Source: Eurostat; national statistics in European Union Energy and Transport in Figures, Directorate-General of the European Commission for Energy and Transport, 2003.

Table 20.13

Road transport traffic, 2001

	Freight transport by road (billion tonne-kilometres)	Passenger transport (billion passenger-kilometres)			
		Passenger cars	Powered two-wheelers	Buses and coaches	Tram and metro
EU-15	1 394.8	3 778.9	152.0	413.6	47.5
BE	40.0	108.0	1.5	12.5	0.9
DK	17.6	58.6	0.7	9.0	0.0
DE	353.0	705.5	17.0	68.7	8.5
EL	19.6	81.6	19.2	22.0	1.3
ES	141.9	306.2	14.3	51.7	5.3
FR	273.7	727.6	12.3	43.8	10.3
IE	7.2	34.9	0.4	6.3	0.0
IT	236.9	666.4	68.4	95.8	5.4
LU	2.4	5.2	0.1	0.9	0.0
NL	45.0	152.0	2.8	12.7	1.4
AT	28.5	69.5	1.6	13.2	2.8
PT	14.5	89.4	7.0	12.0	0.6
FI	27.6	57.0	0.9	7.7	0.5
SE	30.0	93.1	0.8	11.3	2.2
UK	156.9	624.0	5.0	46.0	8.3

Source: Eurostat; ECMT; UIC in European Union Energy and Transport in Figures, Directorate-General of the European Commission for Energy and Transport, 2003.

Traffic volume figures are available for the EU-15 in 2001. As regards freight transport, a total of 1.4 billion tonnes-km (tkm) were moved in 2001, of which almost two thirds were accounted for by just three countries: Germany (353 billion tkm), France (274 billion tkm) and Italy (237 billion tkm). These figures are an estimate of road transport on national territories, including cabotage and cross-trade. As such, road transport accounted for 79.2 % of total inland freight traffic (covering road, rail and inland waterways), with shares ranging from less than two thirds in the Netherlands (49.6 %), Austria (58.8 %) and Sweden (60.5 %), up to more than nine tenths in Italy (91.5 %), Spain (92.1 %), Ireland (93.3 %) and Greece (98.0 %).

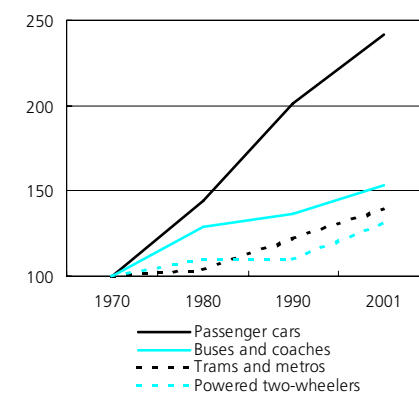
Personal cars were the preferred mode of transport for passengers in the EU-15 in 2001, with total traffic of 3.8 billion passenger-km (pkm), representing as much as 80.4 % of total land passenger transport (27). The dominance of cars was somewhat eroded by buses and railways in Austria and by powered two-wheelers notably in Greece, Italy and Portugal; the share of powered two-wheelers was 3.2 % in the EU-15. Transport services attracted only 16.4 % of passenger traffic in the EU-15, mainly buses and coaches (8.8 %) and railways (6.5 %), while trams and metros represented 1.0 % of total traffic.

(27) Cars, buses, railways, urban rail and powered two-wheelers.

The evolution of the modal split of passenger transport over past decades clearly highlights the increasing dominance of personal cars (see Figure 20.5). The share of buses and coaches lost approximately 1 percentage point every decade, down from 12.1 % in 1970.

Figure 20.5

Evolution of land passenger transport, EU-15 (1970=100, based on the number of passenger-kilometres)



Source: Eurostat; ECMT; UIC; UITP in European Union Energy and Transport in Figures, Directorate-General of the European Commission for Energy and Transport, 2003.

Table 20.14

Other land transport (NACE Group 60.2)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Other land transport	35.5	123.3	28.8
Freight transport by road	38.3	132.2	29.0
Other scheduled passenger land transport; taxi operation; other land passenger transport	31.0	108.6	28.5

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

LABOUR AND PRODUCTIVITY

Road transport services constituted a significant labour market within the EU transport services sector, relying on a 3.7 million strong workforce in 2001 ⁽²⁸⁾. More than half a million persons employed were reported by the United Kingdom (530 500 persons), Germany (523 700 persons) and France (517 500 persons). At a more detailed level, it is clear that the vast majority of the persons working in road transport services were employed in the freight transport subsector, that alone had some 2.3 million persons employed ⁽²⁹⁾. Only six countries ⁽³⁰⁾ reported more persons employed in passenger transport than freight transport, namely the Czech Republic, Cyprus, Hungary (2000), Latvia (1999), Malta and Slovakia.

Within non-financial services, road transport services represented on average 6.0 % of the persons employed in the EU-25, but some countries ⁽³¹⁾ reported a markedly higher concentration of labour in this activity. This was notably the case of Hungary (2000) and Lithuania, where road transport services attracted more than one in 10 persons employed in non-financial services and also in Finland (9.8 %), as opposed to Malta where the corresponding share was 3 %.

A typical characteristic of road transport services, and in particular road freight transport, is the prevalence of unpaid persons employed, as opposed to paid employees. This category of persons employed includes, for example, self-employed persons or family workers. In 2001, they represented 18.2 % of the sector's workforce in the EU-25 ⁽³²⁾, a share that rose to 19.2 % in road freight transport ⁽³³⁾. The importance of unpaid workers in the road transport sector was particularly significant in Ireland, Malta and Finland, where their prevalence in the workforce was two to three times higher than the national average for non-financial services.

Average personnel costs faced by road transport enterprises were slightly above the average for non-financial services at EUR 28 800 per employee in the EU-15 in 2001. The country where personnel costs differed the most was the Netherlands, with average personnel costs in the road transport sector that were 26.8 % higher than the average for non-financial services. It must be noted that, by definition, personnel costs do not concern the high proportion of unpaid persons employed in this sector.

Wage adjusted labour productivity, measured as the ratio between value added and personnel costs, was equal to 123.3 % in the EU-15 in 2001, which was 24.3 percentage points below the average for non-financial services. In addition, despite reporting slightly higher average personnel costs, the freight transport subsector boasted a markedly higher wage adjusted labour productivity (132.2 %) than the passenger transport subsector (108.6 %) in the EU-15.

⁽²⁸⁾ Estonia and Poland, NACE Class 60.24 only; Hungary, 2000; Latvia, 1999; Slovenia, number of employees.

⁽²⁹⁾ Slovenia, number of employees.

⁽³⁰⁾ Denmark and Latvia, 1999; Germany and Hungary, 2000; Slovenia, number of employees; Estonia, Greece, Ireland and Poland, not available.

⁽³¹⁾ Denmark and Latvia, 1999; Germany and Hungary, 2000; Slovenia, number of employees; Estonia, Greece, Ireland, Cyprus and Poland, not available.

⁽³²⁾ Hungary, 2000; Latvia, 1999; Estonia, Poland and Slovenia, not available.

⁽³³⁾ Poland and Slovenia, not available.

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).

It also provides some information on water transport infrastructure (navigable waterways, harbours and piers); in NACE these activities that are related to the operation of infrastructure are classified as part of auxiliary transport activities.

The European Union is very dependent on maritime transport, as more than two thirds (69.9 %) of external trade and almost one fifth (19.7 %) of internal trade in terms of volume was made by sea for the EU-15 in 2002. However, the sector is characterised by an important recourse to 'flags of convenience', meaning that vessels controlled by shipowners in one country are in fact registered in another country that is more attractive in terms of taxation, social legislation and safety or environmental standards. In the face of this phenomenon, the EU has taken two forms of action: on the one hand, 'positive measures' destined to make the EU fleet competitive again, on the other hand, measures to improve on-board safety and environmental protection through strict enforcement of international standards within the EU.

In the field of maritime security, for example, one important measure has been the creation of an advisory body to the European Commission, the European Maritime Safety Agency (EMSA), aimed at reducing the risk of maritime accidents, marine pollution from ships, and the loss of human lives at sea. Some of the key areas where the agency will be active are the strengthening of the Port State Control regime ⁽³⁴⁾, the auditing of the Community recognised classification societies or the establishment of a Community vessel traffic monitoring and information system. The agency will also play an important role in the process of enlargement, by assisting countries in the implementation of Community legislation on maritime safety and the prevention of pollution by ships.

⁽³⁴⁾ The Paris Memorandum of Understanding on Port State Control is one of the first maritime regional initiatives, created in 1978. Each Member State of this organisation must inspect at least 25 % of foreign vessels calling in its ports. These ships may get a notification of deficiency. If deficiencies are serious and numerous, the ship will be forbidden to leave the port.

Table 20.15
Water transport (NACE Division 61)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (2.4)	Denmark (680)	Italy (22.5)
2	Denmark (1.8)	Finland (395)	Germany (20.1)
3	Italy (1.8)	Lithuania (285)	United Kingdom (18.2)
4	Netherlands (0.8)	Malta (236)	France (15.9)
5	France (0.8)	Sweden (214)	Sweden (15.4)

(1) Germany, Estonia, Greece, Ireland, Poland, Slovenia and Slovakia, not available.

(2) Germany, Estonia, Greece, Ireland, the Netherlands, Poland, Slovenia and Slovakia, not available.

(3) The Czech Republic, Estonia, Greece, Ireland, Poland, Slovenia and Slovakia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Inland waterways have not benefited from the same growth that has been seen in the maritime transport subsector and are, in contrast, under-exploited in the view of the Commission. As set out in the 2001 White Paper on European transport policy, the Commission's objectives include making rivers and canals a key part of the European intermodal transport system. As part of this concept, the Commission hopes to link waterways into rail and short-sea transport systems, as an alternative to the congested road network.

Note that both maritime and internal waterways transport services were fully liberalised as from 1 January 1999 and 1 January 2000 respectively. This means that apart from a few restrictions (passenger services between the Greek islands, which will not be opened up to competition until 2004), enterprises have the right to provide a service in a country other than the one in which they are established (also referred to as cabotage).

STRUCTURAL PROFILE

Within the sector of transport services, water transport (NACE Division 61) was the smallest activity in terms of value added creation. There were approximately 14 000 enterprises active in this sector in the EU-25 ⁽³⁵⁾ in 2001 that generated EUR 13.4 billion of added value. This represented 4.4 % of the wealth created in the transport services sector. Naturally, some countries reported a much greater reliance on water transport 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 sector in Denmark (24.3 %) and almost one fifth in Cyprus (18.8 %). Other countries reporting a relatively high specialisation in water transport were Estonia (1999) and Finland ⁽³⁶⁾. In contrast, all of the countries with no coastlines, with the exception of Luxembourg, reported only limited water transport activity (the Czech Republic, Hungary and Austria). Conversely, some countries with important coastlines reported relatively low degrees of specialisation in water transport, in particular Spain and France.

⁽³⁵⁾ Cyprus, 2000; Poland, for NACE Group 61.1 only; Slovenia, 1999; Slovakia, 1999 for NACE Group 61.2 only.

⁽³⁶⁾ Germany, 2000; Estonia and Slovenia, 1999; Greece, Ireland, Poland and Slovakia, not available.

An analysis of the size-class breakdown of enterprises in the water transport sector reveals a markedly different situation according to which subsector is considered. In sea and coastal water transport, enterprises were on average much larger than in the other transport services' activities. Micro and small enterprises with less than 50 persons employed accounted for 28.7 % of total value added in the EU-25, while the corresponding share was 35.5 % for transport services and 46.7 % for non-financial services as a whole. In contrast, inland waterways transport was dominated by micro and small enterprises where no less than 66.9 % of the value added was generated.

Inland waterways used for transport constituted a network of 36 200 km in the EU-25 in 1999 (see Table 20.16). Only five countries reported no inland waterways traffic, namely Denmark, Ireland, Cyprus, Malta and Slovenia. Germany (7 300 km), the Netherlands (5 046 km) and Belgium (1 569 km) had the highest density of inland waterways on their territory, while Finland (6 245 km) and France (5 732 km) also reported extensive networks. Among the new Member States, Poland (3 812 km) and Hungary (1 373 km) reported the highest density of inland waterways.

Inland waterways are traditionally specialised in the transport of large quantities of bulk products, such as sand, ores, coal, chemicals and oil, and traffic remains relatively constrained compared with the other transport modes. Freight traffic on inland waterways reached 125 billion tonne-km (tkm) in the EU-15 in 2001 (to which could be added 4.2 billion tkm in the 10 new Member States in 2000). This represented half the amount recorded for rail freight and one tenth of that for sea transport or road transport. In relative terms, the volume of freight transported by inland waterways in the EU-15 was equivalent to 7.1 % of the total for all inland freight ⁽³⁷⁾. The country displaying the highest specialisation was the Netherlands, where as much as 46.2 % of inland freight was transported by inland waterways. Belgium (13.9 %), Germany (13.2 %) and Luxembourg (11.7 %) were the only other countries where more than 10 % of freight was transported using this mode. Among the new Member States, inland waterways were relatively significant as a mode of transport in Slovakia (7.0 %) and in Hungary (3.1 %).

⁽³⁷⁾ Sum of road, railways and inland waterways.

Table 20.16.
Length of inland waterways in use, 1999
(kilometres) (1)

BE	1 569
CZ	664
DK	-
DE	7 300
EE	320
EL	6
ES	70
FR	5 576
IE	-
IT	1 477
CY	-
LV	106
LT	369
LU	37
HU	1 373
MT	-
NL	5 046
AT	351
PL	3 812
PT	124
SI	-
SK	172
FI	6 245
SE	390
UK	1 153

(1) Navigable canals, rivers and lakes regularly used for transport.

Source: Eurostat; UN; national statistics in European Union Energy and Transport in Figures, Directorate-General of the European Commission for Energy and Transport, 2003.

Table 20.17.
Merchant fleet, EU-15, 2002 (1)

	Number of ships (units)	Tonnage (million DWT)
Total fleet controlled	8 965	264.5
National flag	3 297	88.0
Foreign flag	5 668	176.5

(1) Ships of 1 000 GRT and over, as of 1 January 2002; including international registers like the Danish International Ship Register; including vessels registered at territorial dependencies.

Source: ISL in European Union Energy and Transport in Figures, Directorate-General of the European Commission for Energy and Transport, 2003.

Growth in inland waterways shipping has been fairly limited when compared with other means of transportation, with the volume of transported freight rising on average by 0.1 % per annum during the 1980's in the EU-15, although it accelerated to 1.5 % per annum between 1990 and 2001.

The busiest inland EU inland waterways port was Rotterdam (the Netherlands) with 101.1 million tonnes of freight loaded and unloaded for river and sea-river traffic in 2001. Antwerp (Belgium, 72.3 million tonnes in 2001) and Amsterdam (the Netherlands, 47.3 million tonnes in 2000) followed. Other ports of importance included Liège (Belgium, 19.6 million tonnes in 2000), Paris (France, 18.5 million tonnes in 2001) and Duisburg (Germany, 13.6 million tonnes in 2001).

Turning to sea transport, the EU-15 merchant fleet numbered 8 965 vessels in 2002, equivalent to 264 million dead-weight-tonnes (DWT), or 33 % of the world fleet. It should be noted that these figures refer to all ships controlled by owners from EU-15 Member States, but that 63 % of this fleet in 2002 (representing 67 % of total tonnage) flew a third country flag (see Table 20.17), while 3 297 ships (with a tonnage of 88.0 million DWT) flew EU-15 flags. The enlargement of the EU could have an impact on these figures considering the number of ships registered in Malta or in Cyprus. Within the total EU-15 controlled fleet, 39 % of total tonnage was accounted for by oil tankers, 36 % by bulk carriers, 14 % by container ships and 10 % by general cargo ships.

When looking at sea transport traffic, a distinction has to be made between deep-sea transport, that refers to shipping on long sea routes, and short-sea shipping, that covers transport services between national or European ports. Restricting the analysis to the latter, sea transport of freight within the EU-15 reached 1 270 billion tkm in 2001. As such, short-sea shipping was the second most important freight transport mode, at a level that was only slightly below that reported for road freight transport. In addition, both transport modes recorded a similar evolution over recent decades, with relatively high growth rates. Sea transport of freight increased, on average, by 3.2 % per annum between 1990 and 2001, against an average of 3.4 % for road transport.

Table 20.18
Top ten ports ranked by traffic, EU-15

Sea ports (million tonnes)		1970	1980	1990	2001
Rotterdam	NL	226.0	276.0	288.0	313.7
Antwerpen	BE	78.0	82.0	102.0	130.1
Hamburg	DE	47.0	63.0	61.0	92.7
Marseille	FR	74.0	103.0	90.0	92.4
Le Havre	FR	58.0	77.0	54.0	69.0
Amsterdam	NL	21.0	34.0	47.0	68.4
Grimsby & Imm.	UK	:	:	59.7	51.4
London	UK	64.0	48.0	58.0	50.7
Genova	IT	53.0	51.0	44.0	50.2
Tees & Hartlep.	UK	23.0	38.0	40.0	49.7
Container traffic (thousand TEU)		1990	1995	2000	2001
Rotterdam	NL	3 666.7	4 786.6	6 267.9	6 102.0
Hamburg	DE	1 969.0	2 890.2	4 248.2	4 688.7
Antwerpen	BE	1 549.1	2 329.1	4 082.3	4 218.2
Bremen/B'haven	DE	1 197.8	1 524.0	2 712.4	2 896.4
Felixstowe	UK	:	:	2 853.1	2 800.0
Gioia Tauro	IT	0.0	15.8	2 652.7	2 488.3
Algeciras	ES	552.6	1 154.7	2 009.1	2 151.8
Genova	IT	310.2	615.2	1 500.6	1 526.5
Le Havre	FR	857.8	970.4	1 464.9	1 525.0
Valencia	ES	387.2	671.8	1 308.0	1 506.8
Inland ports (million tonnes)		1995	1999	2000	2001
Rotterdam	NL	:	106.4	:	101.1
Antwerpen	BE	54.2	62.3	70.2	72.3
Amsterdam	NL	:	47.0	47.3	:
Liège	BE	13.7	19.1	19.6	:
Paris	FR	20.3	19.1	19.8	18.5
Duisburg	DE	:	:	14.0	13.6
Strasbourg	FR	9.7	9.6	10.8	9.6
Köln	DE	6.8	8.7	9.6	9.6
Mannheim	DE	7.7	7.7	7.9	8.3
Ludwigshafen	DE	8.2	7.2	8.2	7.6

Source: ISL, Ports of Rotterdam, Hamburg and Liverpool and European Federation of Inland Ports in European Union Energy and Transport in Figures, Directorate-General of the European Commission for Energy and Transport, 2003.

Nine of the 10 largest EU sea ports were in the North Sea (see Table 20.18). Rotterdam (the Netherlands) was the largest of all, with 314 million tonnes of general cargo loaded and unloaded in 2001, almost two and a half times the volume of the next largest port, Antwerp (Belgium), with 130 million tonnes.

One of the main trends in this transport mode has been a switch from conventional general cargo transportation towards containers. Indeed, the growth of general cargo traffic in the top 20 EU sea ports increased at an average rate of 0.4 % per annum between 1990 and 2001, while container traffic grew by 9.7 % per annum over the same period. Rotterdam was also the largest port in terms of container transport, with 6.1 million TEU⁽³⁸⁾ in 2000, ahead of Hamburg (Germany, 4.7 million TEU) and Antwerp (Belgium, 4.2 million).

⁽³⁸⁾ Twenty Foot Equivalent Unit (TEU): a measurement of carrying capacity on a container ship, referring to a common container size of 20 ft in length.

Table 20.19
Main container service maritime operators, EU-15, 2001 (TEU in service)

Company	Country	TEU in service	World ranking
AP Moller Group (1)	DK	773 931	1
Mediterranean Shipping Co	IT, CH	413 814	2
P&O Nedlloyd (2)	NL, UK	406 654	3
CMA - CGM (3)	FR	225 436	8
Hapag-Lloyd	DE	135 953	16

(1) Including Maersk Sealand, Portlink, Safmarine and Torm Lines.

(2) Including Farrell Lines, Mercosul and P&O Swire.

(3) Including ANL and Feeder Associated Systems.

Source: Containerisation Yearbook in European Union Energy and Transport in Figures, Directorate-General of the European Commission for Energy and Transport, 2003.

LABOUR AND PRODUCTIVITY

Employment in the water transport services sector was 155 400 persons in the EU-25 in 2001⁽³⁹⁾, which represented 2.2 % of the transport services' workforce, only half the contribution of this sector in terms of value added. Italy reported the largest workforce employed in the water transport sector, with 22 500 persons employed, ahead of Germany (20 100 persons). It can be noted that 87.1 % of those employed in Italy were working in sea and coastal transport (NACE Group 61.1), a share close to the EU average. Within the EU, only Austria and the Benelux countries reported higher employment in inland water transport (NACE Group 61.2) than in sea transport.

Contrary to road transport, but in a similar fashion to air transport, most persons employed in water transport services were employees. In fact, unpaid persons employed represented only 6.0 % of total employment in 2001⁽⁴⁰⁾, a share that was nevertheless noticeably higher in inland water transport (19.0 %) than in sea and coastal transport (2.7 %).

The gender split of the water transport workforce shows that it was largely composed of men, who represented 80.2 % of those employed in the EU-15 in 2002, a share that was much higher than the services' (NACE Sections G to K) average of 56.3 %. Another typical employment characteristic of the water transport sector was the low prevalence of part-time work, that concerned only 5.3 % of the EU-15 workforce in 2002, against 19.9 % in services as a whole.

⁽³⁹⁾ The Czech Republic, 2000; Estonia and Slovenia, number of employees, 1999; Poland and Slovakia, number of employees for NACE Group 61.1 only.

⁽⁴⁰⁾ The Czech Republic, 2000; Estonia, Poland, Slovenia and Slovakia, not available.

Annual short-term statistics for the water transport sector highlight the important restructuring that the sector has undergone in recent years. In 2001, the index of the number of persons employed decreased by 5.0 % in the EU-25 and by 2.7 % in the EU-15. At a national level, most countries reported important contractions in employment in the second half of the 1990s and in 2000, by rates often exceeding 5.0 % per annum. In 2001 and 2002, however, some countries reported a significant upturn, notably France (2.9 % and 2.1 %) and Austria (5.2 % and 5.8 %) ⁽⁴¹⁾.

Water transport activities were characterised by relatively high average personnel costs, though these were matched by high apparent labour productivity. According to SBS data, each employee cost on average EUR 36 300 to water transport enterprises in the EU-25 in 2001, around two fifths more than the average level for non-financial services. It could be noted that average personnel costs in the EU-25 were somewhat lower for enterprises in the inland waterways subsector (EUR 30 900 per employee) than they were for enterprises in the sea and coastal transport subsector (EUR 37 600).

Despite these relatively high figures for average personnel costs, wage adjusted labour productivity ratios were also significantly higher than average. The value added generated by the persons employed in the water transport sector represented as much as 231.8 % of personnel costs (after adjustment for the share of employees in persons employed) in the EU-15 in 2001, while the corresponding average for non-financial services was 147.6 %. Only five countries ⁽⁴²⁾ reported lower wage adjusted labour productivity in the water transport sector than their respective averages for the whole of non-financial services, namely the Czech Republic (2000), France, Luxembourg, Hungary and Malta.

⁽⁴¹⁾ Belgium, the Czech Republic, Germany, Greece, Spain, Cyprus, Luxembourg, Hungary, Malta, the Netherlands and Finland, not available.

⁽⁴²⁾ The Czech Republic, Germany and the Netherlands, 2000; Estonia, Greece, Ireland, Cyprus, Poland, Slovenia and Slovakia, not available.

Table 20.20
Water transport (NACE Division 61)
Labour force characteristics, 2002

	Share of men		Share of full-time		Share of employees	
	Value (%)	Index (services=100)	Value (%)	Index (services=100)	Value (%)	Index (services=100)
EU-25	:	:	:	:	:	:
EU-15	80.2	142.3	94.7	118.2	95.4	118.0
BE	100.0	168.8	100.0	122.3	100.0	128.9
CZ	88.5	166.8	100.0	106.2	100.0	132.8
DK	69.8	117.0	82.3	103.9	100.0	114.0
DE	82.6	161.2	94.8	126.4	93.1	109.7
EE	85.3	164.5	100.0	105.6	100.0	109.3
EL	93.6	152.5	100.0	103.8	99.0	171.1
ES	77.7	134.6	96.7	106.3	96.0	129.0
FR	71.0	124.9	95.6	112.7	94.7	106.7
IE	:	:	87.0	109.7	97.1	115.2
IT	83.9	135.6	97.4	107.8	91.7	152.6
CY	38.3	72.3	100.0	107.5	100.0	132.3
LV	95.6	205.8	96.1	103.4	89.1	97.3
LT	:	:	:	:	:	:
LU	:	:	:	:	:	:
HU	:	:	:	:	:	:
MT	100.0	144.0	100.0	113.3	100.0	123.7
NL	80.9	137.9	78.4	135.2	89.3	101.7
AT	:	:	:	:	:	:
PL	:	:	:	:	:	:
PT	:	:	:	:	:	:
SI	85.2	161.5	100.0	105.7	100.0	115.2
SK	:	:	:	:	:	:
FI	59.0	111.1	94.6	113.6	96.9	111.0
SE	68.8	116.1	89.7	113.2	98.7	115.5
UK	79.8	142.3	95.2	132.6	96.8	110.5

Source: Eurostat, Labour Force Survey.

Table 20.21
Water transport (NACE Division 61)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Water transport	91.6	231.8	39.5
Sea and coastal water transport	111.0	:	:
Inland water transport	64.6	177.7	36.3

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

20.4: AIR TRANSPORT

The air transport sector comprises enterprises engaged in the transport of passengers and freight by air on scheduled services (NACE Group 62.1), as well as unscheduled services, helicopter and air taxi services and the employment of aircraft for private use (NACE Group 62.2). Space transport activities (NACE Group 62.3), which essentially include the launching of satellites and space vehicles, complete the list of activities covered.

This subchapter does, however, also provide separately some information on air transport infrastructure (terminal facilities and airports), although in NACE these activities are classified as part of auxiliary transport activities.

Air transport has by far enjoyed the strongest growth among transport activities in the European Union over the last 30 years. However, in spite of a progressive liberalisation and privatisation policy for European skies, supply in the EU airline market still appears to be fragmented, especially when compared with the United States. True cross-border mergers of major airlines remain rare, with the notable exception of the Air France–KLM merger announced in 2003 and approved by the Commission in February 2004. Most countries still see air transport as a strategic issue and are not inclined to leave the control of their national carrier in foreign hands. For example, the bankruptcy of Sabena in Belgium and Swissair in Switzerland was followed almost seamlessly by the emergence of a replacement, albeit smaller, national carrier.

The constitution of alliances between airlines is more often used as an alternative. All main EU airlines are part of large alliances, whereby members agree to link their networks via cooperative arrangements. This is notably done through code-sharing, which allows one member airline to sell tickets under its own name for travel that occurs on another airline's network.

Among the important Community measures concerning air transport is the 'Single European sky' initiative, aimed at reforming the architecture of European air traffic control, which, like airlines, remains largely fragmented. Indeed, airspace is still organised nationally, each country regulating its own airspace. The Commission has proposed to merge the current national regions to create a single European upper airspace, and to define new air traffic control zones on the basis of operational efficiency rather than national boundaries.

Table 20.22
Air transport (NACE Division 62)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (9.3)	Malta (1 316)	United Kingdom (95.9)
2	France (3.9)	Luxembourg (606)	France (70.4)
3	Spain (2.2)	Portugal (204)	Germany (37.7)
4	Netherlands (2.1)	Finland (174)	Spain (37.7)
5	Italy (1.6)	United Kingdom (156)	Italy (23.7)

(1) Germany, Estonia, Greece, Ireland, Poland and Slovakia, not available.

(2) Germany, Estonia, Greece, Ireland, the Netherlands, Poland and Slovakia, not available.

(3) The Czech Republic, Estonia, Greece, Ireland, the Netherlands, Poland, Slovenia and Slovakia, not available.
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

STRUCTURAL PROFILE

The 2 883 enterprises active in the air transport sector in the EU-25⁽⁴³⁾ in 2001 contributed an 8.1 % share of transport services' value added, some EUR 25.0 billion. This corresponded to a 1.0 % share of total value added within the non-financial services sector. More than one third (37.2 %) of the EU-25's value added, EUR 9.3 billion, originated from the United Kingdom alone⁽⁴⁴⁾. In relative terms, however, Malta appeared as the most specialised country in the air transport sector. In Malta, air transport represented as much as 13.5 % of the non-financial services' economy and more than half of all transport services activities, when measured in value added terms. In Luxembourg too, the air transport sector was relatively developed, accounting for 6.2 % of value added in non-financial services. The new Member States reported the lowest specialisation ratios for air transport services, with the share of this activity in the non-financial services' economy less than half the average for the EU-25.

The air transport sector was dominated by large enterprises, as those enterprises employing less than 50 persons accounted for 4.6 % of the sector's value added in the EU-25 in 2001. This was exactly 10 times less than the corresponding share for the non-financial services economy, while as much as 84.8 % of value added creation resulted from large enterprises employing 250 or more persons.

Turning to traffic figures, air transport has enjoyed rapid growth over the past decades, despite short-term fluctuations in activity caused by macroeconomic cycles or external factors, such as fear of terrorist attacks, health crises (SARS) or geopolitical instability (war in Iraq) that have all affected airlines in recent

years. Intra-EU passenger transport by air reached 286 million passenger-km (pkm) in 2001, corresponding to average growth of 7.2 % per annum between 1970 and 2001 and 5.6 % per annum between 1990 and 2001. As a result, intra-EU air transport accounted for 5.9 % of total passenger transport within the EU, up from 4.0 % in 1990 and 1.5 % in 1970.

Data for EU airlines from the Association of European Airlines (AEA)⁽⁴⁵⁾, which includes almost all the flagship carriers and other major airlines, show that total passenger traffic remained stable in 2002 compared with the year before, with a slight decline of 0.5 % to 564 billion revenue passenger-km. These figures followed a slump of 4.4 % in 2001, in the aftermath of the terrorist attacks of 11 September in the United States. Scheduled traffic accounted for most of the traffic, with 546 billion passenger-km travelled, approximately one fifth of which (21.5 %) were on European routes. Airlines anticipated declines in passenger traffic by reducing their carrying capacity accordingly, which stood at 738 billion seat-km in 2002, down 4.6 % on 2001. As a consequence the passenger load factor, in other words the average rate of seating capacity which was actually sold and utilised, improved from 71.0 to 74.0 %. The same improvement could be observed on European routes, although passenger load factors remained lower, at 65.3 %, up from 62.2 % in 2001.

⁽⁴⁵⁾ The EU members of AEA are Adria (Slovenia), Aer Lingus (Ireland), Air France (France), Air Malta (Malta), Alitalia (Italy), Austrian Airlines (Austria), British Airways (the United Kingdom), British Midland (the United Kingdom), Cargolux Airlines (Luxembourg), CSA Czech Airlines (the Czech Republic), Cyprus Airways (Cyprus), Finnair (Finland), Iberia (Spain), KLM (the Netherlands), LOT (Poland), Lufthansa (Germany), Luxair (Luxembourg), Malev (Hungary), Meridiana (Italy), Olympic (Greece), SAS (Denmark, Sweden, Norway), SN Brussels Airlines (Belgium), Spanair (Spain), TAP-Air Portugal (Portugal) and Virgin Atlantic (the United Kingdom).

⁽⁴³⁾ Cyprus, 2000; Poland, not available; Slovakia, 1999.

⁽⁴⁴⁾ Germany, 2000; Estonia and Slovakia, 1999; Greece, Ireland and Poland, not available.

Provisional figures from AEA show that, despite a slight improvement in 2003 (1.2 %), total passenger traffic was still below its 1999 level. Intra-European traffic increased by 1.5 %, while North Atlantic routes somewhat recovered (4.5 %) after two years of heavy declines. In contrast, a fall of 6.8 % was recorded on Far Eastern routes, at least in part an effect of the SARS crisis.

Table 20.23

Recent evolution of passenger transport on European airlines, 2003
 (% change compared to previous year) (1)

Destination	Passenger traffic	Available seats	Passenger load factor (points)
Total scheduled	1.2	1.4	-0.2
Domestic	1.6	-1.4	2.0
Total international	1.2	1.7	-0.4
Total long haul	1.0	2.0	-0.7
Geographical Europe (2)	1.5	1.4	0.1
North Atlantic	4.0	4.4	-0.3
Mid Atlantic	4.9	4.3	0.4
South Atlantic	5.4	-2.9	6.4
North Africa	6.8	12.2	-3.3
Sub Saharan Africa	3.1	3.8	-0.5
Middle East	-0.5	-3.1	1.8
Far East - Australasia	-6.8	-2.2	-3.8

(1) Members of AEA.

(2) Including all scheduled international routes originating and terminating within the region comprising geographical Europe and European Russia up to the Urals (longitude 55°E), including Cyprus, Turkey, Azores, Canary Islands, Iceland and Madeira.

Source: AEA.

Table 20.24

AEA passenger airline traffic, 2002

		Total passenger traffic (million passenger-kilometres)	2002/2001 growth (%)	Scheduled passenger traffic (million passenger-kilometres)	Passenger load on scheduled traffic (%)	Share of European routes in scheduled traffic (%) (1)	Passenger load on scheduled European routes (%) (1)
SN Brussels Airlines	BE	2 606	:	2 606	48.1	60.8	45.3
CSA Czech Airlines	CZ	4 184	4.5	3 841	70.6	58.9	64.7
SAS	DK	24 579	5.5	24 170	70.9	40.6	63.5
Lufthansa	DE	93 757	2.5	93 643	77.1	19.7	66.5
Olympic Airways	EL	7 735	-8.4	7 548	66.1	48.4	63.0
Iberia	ES	40 464	-2.3	40 464	73.1	22.9	66.6
Spanair	ES	8 690	-14.1	4 265	60.9	20.8	56.0
Air France	FR	98 541	2.8	98 508	76.1	12.2	65.0
Alitalia	IT	29 836	-17.8	29 618	71.0	25.3	67.7
Meridiana	IT	2 311	6.0	2 248	62.7	16.1	57.0
Cyprus Airways	CY	3 307	9.6	3 275	73.1	96.4	74.4
Luxair	LU	1 094	3.1	578	53.5	100.0	53.5
Malev	HU	3 461	-0.1	3 076	63.0	63.0	59.4
Air Malta	MT	2 746	-4.2	2 305	69.2	97.4	69.9
KLM	NL	59 190	0.3	59 181	80.2	18.3	74.4
Austrian Airlines	AT	17 981	6.3	13 794	70.5	31.7	60.7
LOT Polish Airlines	PL	5 923	1.7	5 166	69.4	36.2	54.9
TAP Air Portugal	PT	11 266	8.9	11 257	69.5	38.4	63.9
Adria Airways	SI	794	0.5	678	56.2	100.0	56.2
Finnair	FI	13 064	0.8	8 462	65.4	45.0	58.4
British Airways	UK	99 710	-4.1	99 123	72.8	15.4	67.5
bmi	UK	5 681	14.6	5 303	63.3	47.0	62.6
Virgin Atlantic	UK	27 174	-4.4	27 174	81.1	0.0	:
Total		564 093	-0.5	546 285	74.0	21.5	65.3

(1) Including all scheduled international routes originating and terminating within the region comprising geographical Europe and European Russia up to the Urals (longitude 55°E), including Cyprus, Turkey, Azores, Canary Islands, Iceland and Madeira.

Source: AEA.

The decrease of traffic was also evident when looking at airport activity. The largest airport in the EU was London Heathrow, with 63.3 million passengers in 2002, down 1.9 % compared with 2000 – see Table 20.25. As regards freight traffic, the largest EU airport was Frankfurt with 1.5 million tonnes of loaded and unloaded freight and mail in 2002, 12.5 % below its level of 2002 – see Table 20.26.

It should, however, be noted that outside of the mainstream airlines, two other categories of airlines have shown substantial growth in recent years, namely low-cost, 'no-frills' airlines and regional airlines. Both appeared to have lived mostly unaffected through the difficult times otherwise experienced by national flag carriers. Ryanair (Ireland) and Easyjet (the United Kingdom), the largest players among low-cost airlines, reported respectively a 61.8 % and a 38.6 % increase in their number of passengers carried in 2002, with load factors exceeding 80 % in both cases, and similar figures for 2003. The Internet plays a vital role for these enterprises, as more than 9 out of every 10 tickets that they sell are bought online. As regards regional airlines, the EU members of ERA ⁽⁴⁶⁾ boasted an 11.7 % increase in traffic in 2002, to 21.2 million pkm travelled (see Table 20.27 overleaf). In addition, load factors improved to 59.5 % in 2002, up from 57.6 % in 2001. Partial figures for 2003 indicated a further 8.3 % increase in passenger traffic in the first nine months of the year, when compared with the same period in 2002.

⁽⁴⁶⁾ European regional airlines association.

Table 20.25

Top airports by number of passengers arriving, departing and in transit, EU-15 (million passengers) (1)

		1970	1980	1990	2000	2002
London Heathrow	UK	15.6	27.5	43.0	64.6	63.3
Frankfurt Rhein-Main	DE	9.4	17.6	29.4	49.4	48.5
Paris Ch. de Gaulle	FR	2.2	10.1	22.5	48.2	48.4
Amsterdam Schiphol	NL	5.2	9.4	16.5	39.6	40.7
Madrid Barajas	ES	4.8	10.1	16.2	32.9	33.9
London Gatwick	UK	3.7	9.7	21.2	32.1	29.6
Roma Fiumicino	IT	6.5	11.4	17.7	26.3	25.3
Paris Orly	FR	10.4	15.7	24.3	25.4	23.2
München F.J. Strauss	DE	3.6	6.0	11.4	23.1	23.2
Barcelona Transoceanico	ES	4.0	5.8	9.0	19.8	21.3
Manchester Ringway Intl	UK	1.9	4.3	10.1	18.8	19.0
København Kastrup	DK	6.5	8.6	12.1	18.3	18.2
Palma de Mallorca	ES	4.8	7.3	11.3	19.4	17.8
Milano Malpensa	IT	:	:	:	20.7	17.4
Stockholm Arlanda	SE	2.6	4.3	14.0	18.4	16.5
London Stansted	UK	:	:	:	11.9	16.0
Dublin Collinstown	IE	1.9	2.6	5.5	13.8	15.1
Düsseldorf Rhein-Ruhr	DE	3.6	7.2	11.9	16.0	14.7
Bruxelles National	BE	2.8	5.1	7.1	21.6	14.4
Wien Schwechat	AT	1.5	2.7	5.5	11.9	12.0

(1) Airports Council International (ACI) is the worldwide professional association of airport operators. ACI EUROPE represents over 450 airports in 48 European countries. Member airports handle 90 % of commercial air traffic in Europe, with 1 billion passengers each year.

Source: ACI Europe.

Table 20.26

Top twenty airports by cargo loaded and unloaded and mail, EU-15 (thousand tonnes) (1)

		1995	2000	2002
Frankfurt Rhein-Main	DE	1 297	1 710	1 495
Paris Ch. de Gaulle	FR	824	1 610	1 399
Amsterdam Schiphol	NL	978	1 267	1 240
London Heathrow	UK	1 043	1 402	1 235
Luxembourg Findel	LU	286	501	549
Bruxelles National	BE	427	687	510
Köln/Bonn	DE	276	442	495
København Kastrup	DK	310	419	374
Liège Bierset	BE	8	270	327
Madrid Barajas	ES	230	338	296
Milano Malpensa	IT	126	301	280
London Gatwick	UK	232	338	243
East Midlands	UK	83	194	220
London Stansted	UK	93	183	186
München F.J. Strauss	DE	65	148	144
Roma Fiumicino	IT	257	201	131
Stockholm Arlanda	SE	104	154	123
Manchester Ringway Intl	UK	51	122	117
Wien Schwechat	AT	93	135	114
Paris Orly	FR	276	121	111

(1) Airports Council International (ACI) is the worldwide professional association of airport operators. ACI EUROPE represents over 450 airports in 48 European countries. Member airports handle 90 % of commercial air traffic in Europe, with 1 billion passengers each year.

Source: ACI Europe.

Table 20.27

Scheduled passenger traffic on regional airlines, 2002

		Passenger traffic (million passenger- kilometres)	2002/2001 growth (%)	Capacity (million seat- kilometres)	2002/2001 growth (%)	Passenger load factor (%)
Cimber Air	DK	163	-22.8	287	-22.1	56.9
Augsburg Airways	DE	422	26.9	837	22.8	50.4
Deutsche BA	DE	1 462	-3.7	2 466	-8.0	59.3
Eurowings	DE	1 399	64.9	2 591	56.1	54.0
Lufthansa CityLine	DE	3 657	0.8	6 088	-2.0	60.1
Aegean Airlines	EL	1 036	70.0	1 608	59.7	64.5
Air Nostrum	ES	1 598	24.3	2 635	19.6	60.6
Binter Canarias	ES	386	0.6	512	3.6	75.4
Brit Air	FR	1 925	5.1	3 095	3.1	62.2
Régional	FR	1 520	33.1	2 668	28.0	57.0
Air Dolomiti	IT	711	29.8	1 287	18.3	55.2
airBaltic	LV	173	8.2	309	1.5	55.9
Air Lithuania	LT	43	-1.0	80	-1.2	53.3
Lithuanian Airlines	LT	312	3.2	627	0.9	49.8
KLM Cityhopper	NL	1 415	2.5	2 025	8.2	69.9
KLM exel	NL	141	-16.4	136	-60.6	103.2
Tyrolean Airways	AT	1 335	-7.5	2 241	-6.2	59.6
EuroLOT	PL	238	24.6	500	15.9	47.7
ATA Aerocondor	PT	48	16.5	63	21.2	75.6
PGA Portugalia	PT	775	1.4	1 344	-3.8	57.7
SATA Air Açores	PT	78	0.9	121	1.0	64.2
Air Botnia	FI	332	30.1	670	15.8	49.6
Malmö Aviation AB	SE	396	15.7	766	22.2	51.7
Skyways	SE	425	-7.8	787	-7.8	54.1
flybe.	UK	1 216	19.7	1 887	3.3	64.5
Total		21 206	11.7	35 629	8.0	59.5

Source: ERA - European Regions Airline Association, available at <http://www.eraa.org>.

LABOUR AND PRODUCTIVITY

Total employment in the air transport services' sector (NACE Division 62) was 380 200 persons in 2001 ⁽⁴⁷⁾, which represented 0.6 % of the non-financial services' workforce, and 5.7 % of the transport services' workforce. Two fifths of all persons employed in the sector in the EU-25 worked either in the United Kingdom (95 900 persons) or France (70 400 persons), while Germany and Spain reported the same number of persons employed (37 700).

A typical characteristic of the labour force in the air transport services sector, similar to railways, was the almost exclusive presence of paid employees. Indeed, according to the LFS, 98.7 % of the persons employed in EU-15 air transport enterprises in 2001 were employees, a proportion that was at its lowest in Italy with 94.9 % among the Member States ⁽⁴⁸⁾.

Contrary to the situation in the other transport services' activities, the air transport workforce boasted a remarkably high proportion of women. They accounted for 36.8 % of total employment in the air transport services sector in the EU-15 in 2002, while the average for transport services as a whole was 20.9 %. The proportion of women working in this sector was, nevertheless, still below the services' (NACE Sections G to K) average of 43.7 %. Note that only Malta reported a lower proportion of women working in the air transport sector than in the other transport services ⁽⁴⁹⁾. A greater recourse to part-time work was recorded, as 87.4 % of the air transport workforce were in full-time employment in the EU-15 in 2002, which was the lowest share among the NACE Divisions that compose transport services.

⁽⁴⁷⁾ Slovenia, number of employees; Estonia, number of employees, 1999; Slovakia, 1999; the Czech Republic and Poland, not available.

⁽⁴⁸⁾ Estonia, Latvia, Lithuania, Poland and Slovakia, not available.

⁽⁴⁹⁾ Denmark, Estonia, Greece, Latvia, Lithuania, Poland, Portugal, Slovenia and Slovakia, not available.

Average personnel costs were significantly higher in the air transport sector than in the other transport services' activities and - more generally - than in the non-financial services sector as a whole; there were no exceptions to this observation among the Member States. In the EU-25, enterprises in the air transport sector faced average personnel costs of EUR 52 900 per employee in 2001. This was more than double the average level recorded for the whole of non-financial services (EUR 25 400 per employee) and was also much higher than the average of EUR 29 600 per employee recorded for the average across all transport services.

These high figures for average personnel costs were only partly compensated for by higher apparent labour productivity. This was reflected in wage adjusted labour productivity ratios that were generally below average. In the EU-15, the value added generated by enterprises in the air transport sector in 2001 was only 18.1 % above the level of personnel costs (adjusted for the share of employees in persons employed). As such, the EU-15 wage adjusted labour productivity ratio for air transport services was almost 30 percentage points below the average for non-financial services. The highest productivity gap between air transport activities and other non-financial services' activities was recorded in Latvia and Hungary. It must nevertheless be noted that five countries reported higher than average wage adjusted labour productivity ratios in the air transport sector (when compared with non-financial services' averages), namely Belgium, Germany (1999), Luxembourg, Malta and the United Kingdom ⁽⁵⁰⁾.

⁽⁵⁰⁾ Germany, 1999; the Czech Republic, Estonia, Greece, Ireland, Cyprus, the Netherlands, Poland, Slovenia and Slovakia, not available.

Table 20.28
Air transport (NACE Division 62)
Labour force characteristics, 2002

	Share of men		Share of full-time		Share of employees	
	Value (%)	Index (services=100)	Value (%)	Index (services=100)	Value (%)	Index (services=100)
EU-25	:	:	:	:	:	:
EU-15	63.2	112.3	87.4	109.1	98.7	122.1
BE	73.6	124.2	88.3	108.0	96.8	124.8
CZ	54.9	103.5	100.0	106.2	100.0	132.8
DK	74.9	125.7	99.3	125.3	100.0	114.0
DE	60.7	118.5	82.6	110.2	99.9	117.7
EE	:	:	:	:	:	:
EL	64.2	104.5	100.0	103.8	98.6	170.5
ES	63.5	110.0	95.5	104.9	99.7	134.1
FR	61.3	108.0	85.7	101.0	100.0	112.7
IE	49.1	92.7	89.7	113.2	99.6	118.2
IT	71.4	115.4	94.9	105.1	94.9	157.9
CY	48.3	91.4	98.0	105.3	100.0	132.3
LV	:	:	:	:	:	:
LT	:	:	:	:	:	:
LU	81.4	144.8	99.1	112.1	100.0	111.2
HU	67.0	124.6	97.1	101.2	97.3	120.6
MT	88.7	127.6	91.7	103.8	100.0	123.7
NL	63.2	107.7	66.3	114.4	99.1	113.0
AT	48.4	97.8	:	:	100.0	115.2
PL	:	:	:	:	:	:
PT	66.5	119.3	97.0	104.6	100.0	141.5
SI	81.4	154.4	73.5	77.7	100.0	115.2
SK	:	:	:	:	:	:
FI	52.6	98.9	98.3	118.1	100.0	114.6
SE	61.0	102.9	91.0	114.8	100.0	117.0
UK	60.3	107.5	88.9	123.9	96.3	109.8

Source: Eurostat, Labour Force Survey.

20.5: AUXILIARY TRANSPORT ACTIVITIES

This subchapter includes information on all auxiliary transport services, cargo handling and storage, other supporting transport activities and transport agencies (other than travel agencies), as covered by NACE Groups 63.1, 63.2 and 63.4.

Some information concerning the size and use of road, air, railway and water transport infrastructure has been provided in previous subchapters (20.1 to 20.4) to complement the SBS data for each mode of transport. However, NACE regroups the operation of transport infrastructure within supporting transport activities (NACE Group 63.2). SBS data are provided for this activity within this subchapter.

STRUCTURAL PROFILE

The group of activities that are classified as services auxiliary to transport (excluding travel agencies) constitute a significant part of the transport services sector. There were 82 800 enterprises active in this sector in the EU-25 in 2001 ⁽⁵¹⁾, generating value added of EUR 93.8 billion, which equated to 30.5 % of the total wealth created in the transport services sector or a 3.9 % share of the non-financial services' economy. Three countries accounted for more than half of the EU-25's value added: the United Kingdom (EUR 20.3 billion), Germany (EUR 18.3 billion, 2000) and France (EUR 14.5 billion).

The Baltic States, and particularly Latvia and Estonia, reported relatively high specialisation in auxiliary transport activities. In these two countries, the size of the activities covered by this subchapter was two to three times larger than the EU-25 average. At the other end of the spectrum, Slovakia, Hungary and Luxembourg reported the lowest specialisation in auxiliary transport activities.

A size-class breakdown for auxiliary transport activities reveals the relatively large average size of enterprises in this sector. Indeed, enterprises with 250 or more persons employed generated more than half (53.8 %) of the sector's value added in the EU-25 in 2001, while the corresponding average for non-financial services was 36.9 %.

⁽⁵¹⁾ Cyprus, 2000.

Table 20.29

Cargo handling and storage; other supporting transport activities; activities of other transport agencies (NACE Groups 63.1, 63.2 and 63.4)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (20.3)	Estonia (354)	Italy (280.9)
2	France (14.5)	Latvia (273)	France (252.5)
3	Italy (12.7)	Malta (198)	United Kingdom (240.6)
4	Spain (7.4)	Lithuania (172)	Spain (139.1)
5	Netherlands (4.7)	Italy (129)	Netherlands (62.3)

(1) Germany, Greece and Ireland, not available.

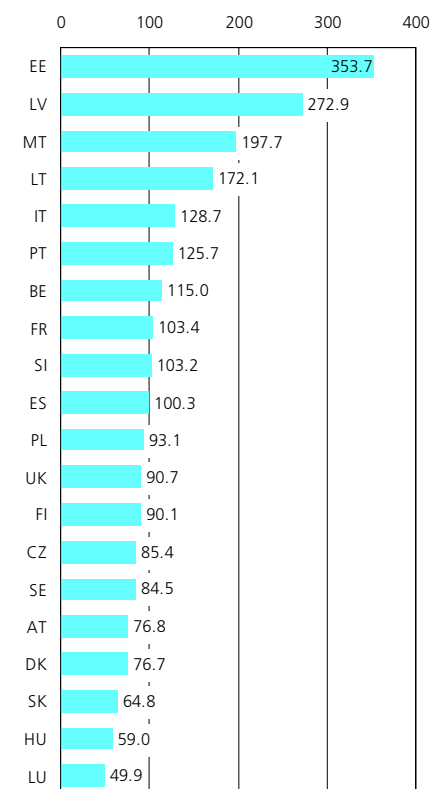
(2) Germany, Greece, Ireland, Cyprus and the Netherlands, not available.

(3) Germany, Greece, Ireland, Poland and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 20.6

Cargo handling and storage; other supporting transport activities; activities of other transport agencies (NACE Groups 63.1, 63.2 and 63.4)
Value added specialisation ratio relative to non-financial services, 2001 (EU-25=100) (1)



(1) Germany, Greece, Ireland, Cyprus and the Netherlands, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

LABOUR AND PRODUCTIVITY

Auxiliary transport activities (excluding travel agencies) were an important employer within the transport services' sector, with 1.6 million persons employed in the EU-25 ⁽⁵²⁾ in 2001. This represented some 2.6 % of the total non-financial services' workforce. Mirroring the specialisation ratios highlighted above, the Baltic States reported a relatively high concentration of employment in this sector, joined by Malta where auxiliary transport services attracted as much as 7.2 % of the non-financial services' workforce.

Enterprises active in the auxiliary transport services sector (excluding travel agencies) faced average personnel costs that were generally higher than those recorded in the whole of the transport services sector, at EUR 33 000 per employee in the EU-25 in 2001, compared to EUR 29 600 per employee for the average across all transport services, and EUR 25 400 for the whole of non-financial services ⁽⁵³⁾. Nevertheless, apparent labour productivity more than compensated for these high levels of personnel costs. This was reflected in the ratio of wage adjusted labour productivity, which was equal to 173.8 % in the EU-25 in 2001 ⁽⁵⁴⁾, some 26.2 percentage points above the average for non-financial services. Only Luxembourg and Hungary ⁽⁵⁵⁾ reported lower wage adjusted labour productivity ratios for auxiliary transport activities compared with their national averages for non-financial services.

⁽⁵²⁾ Poland and Slovenia, number of employees.

⁽⁵³⁾ Slovenia, 2000; Cyprus, not available.

⁽⁵⁴⁾ Poland and Slovenia, not available.

⁽⁵⁵⁾ Germany, 2000; Greece, Ireland, Cyprus, the Netherlands, Poland, Slovenia and Slovakia, not available.

Table 20.30

Land transport; transport via pipelines (NACE Division 60)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	12 056	6 409	6 671	47 431	577	:	31 306	56 936	2 181	43 332	125	578	832	1 199
Value added at factor cost (EUR million) (2)	6 625	1 113	3 242	23 481	156	:	15 418	26 967	813	19 094	76	255	305	583
Purchases of goods and services (EUR million) (2)	7 561	4 829	3 619	25 864	406	:	18 180	30 452	1 377	27 148	49	343	554	790
Gross investment in tangible goods (EUR million) (3)	2 431	1 085	487	6 700	60	:	3 468	5 001	249	5 088	11	187	75	:
Number of persons employed (thousands)	137	228	66	607	22	:	511	696	27	538	5	39	55	11
App. labour productivity (EUR thous./pers. emp.) (2)	48.3	4.9	49.0	38.6	7.1	:	30.1	38.7	29.7	35.5	15.2	6.5	5.5	50.8
Average personnel costs (EUR thous./employee) (2)	38.6	6.9	35.4	30.9	4.8	:	23.0	34.7	38.0	32.8	21.5	4.0	3.4	40.5
Wage adjusted labour productivity (%) (2)	125.0	70.4	138.4	124.8	148.4	:	130.8	111.7	78.1	108.3	70.8	162.4	164.5	125.2
Gross operating rate (%) (2)	14.6	-3.7	18.2	15.2	9.0	:	24.9	7.8	-3.8	16.1	15.8	17.0	16.0	11.3
	HU	MT	NL	AT	PL	PT	SI (1)	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	3 139	67	18 408	9 885	11 150	3 988	972	994	6 011	12 024	57 192	1 498	2 644	:
Value added at factor cost (EUR million)	1 154	33	9 005	6 458	6 996	1 747	363	446	3 088	4 209	25 315	389	1 194	:
Purchases of goods and services (EUR million)	2 036	28	9 507	5 290	4 005	2 340	619	650	2 990	8 153	33 518	1 187	1 784	:
Gross investment in tangible goods (EUR million) (3)	484	3	1 228	2 656	793	1 168	110	358	715	1 372	4 400	198	488	:
Number of persons employed (thousands)	127	2	211	145	:	90	:	73	71	122	583	133	227	:
App. labour productivity (EUR thous./pers. emp.)	9.1	16.4	42.6	44.6	:	19.4	:	6.1	43.3	34.4	43.5	2.9	5.3	:
Average personnel costs (EUR thous./employee)	7.1	10.3	32.7	33.2	7.4	17.0	10.7	5.3	34.3	30.7	29.9	3.1	3.0	:
Wage adjusted labour productivity (%)	127.6	158.8	130.3	134.1	:	114.3	:	114.7	126.3	112.1	145.5	94.3	175.3	:
Gross operating rate (%)	8.1	38.0	14.5	19.7	41.0	8.8	5.4	5.8	20.4	6.9	16.0	9.9	20.3	:

(1) 1999.

(2) Germany, 2000.

(3) Germany and the United Kingdom, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 20.31

Transport via railways (NACE Group 60.1)
Main indicators, 2001

	BE (1)	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million) (2)	1 576	:	921	11 836	:	:	1 720	:	:	5 916	0	:	158	295
Value added at factor cost (EUR million) (2)	2 113	:	642	4 060	:	:	2 374	:	:	3 816	0	:	98	213
Purchases of goods and services (EUR million) (2)	802	:	509	8 961	:	:	906	:	:	2 601	0	:	83	184
Gross investment in tangible goods (EUR million) (2)	1 240	:	0	1 615	:	:	786	:	:	1 718	0	:	25	:
Number of persons employed (thousands)	41	:	8	85	:	:	38	:	:	81	0	:	14	3
App. labour productivity (EUR thous./pers. emp.) (2)	51.0	:	80.2	44.8	:	:	61.7	:	:	47.0	:	:	6.8	66.2
Average personnel costs (EUR thous./employee) (2)	40.8	:	51.6	44.3	:	:	32.8	:	:	41.1	:	:	4.9	57.4
Wage adjusted labour productivity (%) (2)	124.9	:	155.3	101.1	:	:	187.8	:	:	114.5	:	:	137.6	115.2
Gross operating rate (%) (2)	26.8	:	24.8	0.5	:	:	64.5	:	:	8.4	:	:	16.9	9.5
	HU (1)	MT	NL	AT	PL	PT	SI (1)	SK	FI	SE	UK	BG	RO (1)	TR
Turnover (EUR million)	739	0	:	:	:	:	147	:	728	1 220	9 307	:	772	:
Value added at factor cost (EUR million)	560	0	:	:	:	:	130	:	486	416	4 167	:	507	:
Purchases of goods and services (EUR million)	379	0	:	:	:	:	109	:	272	818	6 820	:	491	:
Gross investment in tangible goods (EUR million)	312	0	:	:	:	:	45	:	169	110	390	:	292	:
Number of persons employed (thousands)	59	0	:	:	:	:	:	:	9	9	52	:	102	:
App. labour productivity (EUR thous./pers. emp.)	9.6	:	:	:	:	:	:	:	51.5	45.4	80.6	:	5.0	:
Average personnel costs (EUR thous./employee)	5.4	:	:	:	:	:	14.5	:	40.9	34.7	47.8	:	2.4	:
Wage adjusted labour productivity (%)	177.6	:	:	:	:	:	:	:	125.8	130.9	168.7	:	204.2	:
Gross operating rate (%)	33.1	:	:	:	:	:	0.3	:	13.7	8.1	18.2	:	33.6	:

(1) 1999.

(2) Germany, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 20.32

Other land transport (NACE Group 60.2)
Main indicators, 2001

	BE	CZ	DK (1)	DE	EE	EL	ES	FR	IE	IT	CY	LV (1)	LT	LU
Turnover (EUR million) (3)	10 298	3 766	5 755	34 029	:	:	29 587	42 030	:	36 320	125	253	674	904
Value added at factor cost (EUR million) (3)	4 371	460	3 267	19 246	:	:	13 044	18 645	:	14 496	76	119	207	371
Purchases of goods and services (EUR million) (3)	6 644	2 819	2 786	16 743	:	:	17 274	23 710	:	24 224	49	147	472	606
Gross investment in tangible goods (EUR million) (3)	1 323	585	702	5 059	:	:	2 682	3 255	:	3 354	11	39	50	:
Number of persons employed (thousands)	94	139	71	524	:	:	473	518	:	453	5	23	41	8
App. labour productivity (EUR thous./pers. emp.) (3)	46.3	3.3	46.1	37.3	:	:	27.6	36.0	:	32.0	15.2	5.3	5.1	44.8
Average personnel costs (EUR thous./employee) (3)	35.9	6.3	32.6	28.2	:	:	21.8	31.8	:	30.5	21.5	2.6	2.7	33.6
Wage adjusted labour productivity (%) (3)	128.9	52.3	141.3	132.3	:	:	126.7	113.3	:	104.9	70.8	202.9	185.3	133.2
Gross operating rate (%) (3)	13.4	-5.5	22.1	20.1	:	:	22.6	8.8	:	15.9	15.8	24.1	15.8	11.9
	HU (2)	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG (2)	RO	TR
Turnover (EUR million)	2 129	67	16 565	8 021	:	3 756	1 015	499	5 283	10 802	47 598	1 164	1 297	:
Value added at factor cost (EUR million)	720	33	8 187	3 755	:	1 651	274	164	2 602	3 792	21 024	306	397	:
Purchases of goods and services (EUR million)	1 419	28	9 460	4 454	:	2 212	645	360	2 718	7 334	26 548	966	1 018	:
Gross investment in tangible goods (EUR million)	194	3	:	1 212	:	1 094	48	65	546	1 262	4 212	117	238	:
Number of persons employed (thousands)	71	2	198	94	:	84	:	28	62	113	530	102	121	:
App. labour productivity (EUR thous./pers. emp.)	10.2	16.4	41.3	40.0	:	19.6	:	5.8	42.1	33.5	39.6	3.0	3.3	:
Average personnel costs (EUR thous./employee)	5.4	10.3	32.4	29.1	:	16.2	10.1	4.8	32.9	30.3	28.0	3.0	2.5	:
Wage adjusted labour productivity (%)	190.3	158.8	127.3	137.4	:	121.2	:	121.9	127.9	110.5	141.8	99.3	132.9	:
Gross operating rate (%)	16.2	38.0	13.9	16.1	:	11.1	6.6	6.0	21.3	6.7	15.5	13.2	8.9	:

(1) 1999.

(2) 2000.

(3) Germany, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 20.33

Other scheduled passenger land transport; taxi operation; other land passenger transport (NACE Classes 60.21 to 60.23)
Main indicators, 2001

	BE	CZ	DK	DE (1)	EE	EL	ES	FR	IE	IT	CY	LV (2)	LT	LU
Turnover (EUR million)	1 362	1 983	858	10 573	:	:	5 510	11 113	:	5 025	62	87	122	97
Value added at factor cost (EUR million)	1 243	60	545	7 631	:	:	3 968	7 509	:	4 302	41	45	68	101
Purchases of goods and services (EUR million)	909	1 432	337	4 962	:	:	2 216	4 560	:	2 778	22	47	61	71
Gross investment in tangible goods (EUR million)	352	482	115	2 841	:	:	817	1 752	:	1 517	7	19	8	:
Number of persons employed (thousands)	32	97	17	246	:	:	159	193	:	140	3	13	19	2
App. labour productivity (EUR thous./pers. emp.)	39.0	0.6	32.2	31.0	:	:	25.0	38.9	:	30.8	16.1	3.4	3.5	47.0
Average personnel costs (EUR thous./employee)	34.8	6.5	22.5	27.6	:	:	23.0	34.9	:	33.8	17.0	3.2	2.9	38.8
Wage adjusted labour productivity (%)	112.0	9.5	143.4	112.6	:	:	108.5	111.4	:	91.1	95.1	105.2	123.4	121.0
Gross operating rate (%)	16.5	-18.4	26.2	17.3	:	:	31.9	16.2	:	9.4	23.6	2.7	14.6	25.3
	HU (1)	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG (1)	RO	TR
Turnover (EUR million)	705	27	2 436	2 157	:	916	158	197	1 312	4 001	12 825	371	345	:
Value added at factor cost (EUR million)	348	15	2 148	1 526	:	551	70	95	885	1 016	6 580	123	153	:
Purchases of goods and services (EUR million)	363	10	1 443	936	:	458	74	133	450	3 233	6 749	279	297	:
Gross investment in tangible goods (EUR million) (3)	113	1	385	637	:	649	21	42	142	413	2 052	:	63	:
Number of persons employed (thousands)	44	1	:	42	:	37	:	18	24	50	211	70	68	:
App. labour productivity (EUR thous./pers. emp.)	7.9	12.2	:	35.9	:	14.7	:	5.1	36.9	20.3	31.2	1.7	2.3	:
Average personnel costs (EUR thous./employee)	6.2	8.0	:	27.1	:	16.8	12.9	5.2	34.8	27.5	26.8	3.0	2.8	:
Wage adjusted labour productivity (%)	127.3	152.3	:	132.5	:	87.8	:	97.5	106.0	73.7	116.5	57.3	82.3	:
Gross operating rate (%)	10.8	45.3	22.5	22.5	:	3.3	3.2	-1.2	29.5	-5.2	9.5	11.9	-7.5	:

(1) 2000.

(2) 1999.

(3) The Netherlands, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 20.34

Freight transport by road (NACE Class 60.24)
Main indicators, 2001

	BE	CZ	DK (1)	DE (1)	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	8 936	1 783	4 433	23 457	389	:	24 076	30 917	1 526	31 295	62	225	552	807
Value added at factor cost (EUR million)	3 129	400	1 974	11 615	90	:	9 076	11 136	507	10 194	35	77	139	270
Purchases of goods and services (EUR million)	5 734	1 387	2 434	11 780	284	:	15 059	19 150	1 013	21 446	27	144	411	534
Gross investment in tangible goods (EUR million)	971	103	408	2 219	28	:	1 864	1 503	106	1 836	4	74	42	:
Number of persons employed (thousands)	63	42	44	271	10	:	314	324	13	314	2	9	21	6
App. labour productivity (EUR thous./pers. emp.)	50.0	9.6	44.9	42.9	9.2	:	28.9	34.3	38.4	32.5	14.3	8.5	6.5	44.0
Average personnel costs (EUR thous./employee)	36.5	6.0	34.7	28.7	3.9	:	21.1	30.1	21.7	28.3	27.9	1.9	2.6	31.9
Wage adjusted labour productivity (%)	137.0	158.2	129.2	149.4	237.5	:	136.7	114.0	177.0	114.9	51.2	439.3	245.5	138.1
Gross operating rate (%)	13.0	8.9	15.6	21.3	13.7	:	20.5	6.1	19.4	17.0	7.9	26.6	16.1	10.2
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	1 532	40	14 129	5 864	0	2 841	856	302	3 971	6 801	34 774	939	953	:
Value added at factor cost (EUR million)	343	18	6 039	2 229	0	1 099	204	70	1 717	2 776	14 445	154	244	:
Purchases of goods and services (EUR million)	1 194	18	8 017	3 519	0	1 755	571	227	2 269	4 101	19 799	801	720	:
Gross investment in tangible goods (EUR million)	102	2	762	576	0	446	28	23	404	849	2 160	:	175	:
Number of persons employed (thousands)	27	1	126	51	175	47	:	10	38	63	320	30	53	:
App. labour productivity (EUR thous./pers. emp.)	12.7	22.7	48.0	43.5	0.0	23.6	:	7.3	45.3	44.0	45.2	5.1	4.6	:
Average personnel costs (EUR thous./employee) (2)	6.1	11.9	37.9	30.8	5.7	15.8	9.1	3.9	32.0	32.6	28.7	3.3	2.1	:
Wage adjusted labour productivity (%)	207.2	191.5	126.7	140.9	:	149.2	:	184.7	141.7	135.2	157.1	155.5	218.1	:
Gross operating rate (%) (2)	11.8	32.9	12.4	13.8	28.0	13.6	7.2	10.7	18.6	13.8	17.7	8.0	14.9	:

(1) 2000.

(2) Poland, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 20.35

Water transport (NACE Division 61)
Main indicators, 2001

	BE	CZ	DK	DE	EE (1)	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million) (3)	2 033	35	13 401	10 755	268	:	1 255	5 639	:	6 182	205	9	62	475
Value added at factor cost (EUR million) (4)	113	0	1 811	2 711	42	:	455	838	:	1 801	106	6	33	37
Purchases of goods and services (EUR million) (5)	1 918	29	11 800	7 325	224	:	877	4 849	:	4 667	99	5	32	437
Gross investment in tangible goods (EUR million) (5)	31	2	1 340	224	3	:	212	461	:	1 201	21	4	15	:
Number of persons employed (thousands) (3)	1	2	10	20	:	:	7	16	:	23	4	0	2	1
App. labour productivity (EUR thous./pers. emp.) (5)	89.1	4.8	177.4	135.0	:	:	63.0	52.7	:	79.9	29.0	25.9	18.5	26.8
Average personnel costs (EUR thous./employee) (5)	50.7	5.3	45.3	40.9	10.1	:	29.2	42.9	:	40.4	15.3	7.8	8.9	34.0
Wage adjusted labour productivity (%) (5)	175.8	90.2	391.7	330.1	:	:	215.6	122.8	:	197.5	190.1	330.0	208.8	78.9
Gross operating rate (%) (4)	3.4	:	10.2	20.1	1.7	:	19.6	3.5	:	15.5	24.6	46.5	28.4	-1.9
	HU	MT	NL	AT	PL	PT	SI (1)	SK	FI	SE	UK	BG	RO (2)	TR
Turnover (EUR million)	44	51	1 561	93	:	354	17	:	2 300	3 389	5 649	:	149	:
Value added at factor cost (EUR million)	13	22	845	29	:	89	3	:	649	815	2 386	:	21	:
Purchases of goods and services (EUR million)	31	30	855	64	:	276	17	:	1 651	2 638	3 353	:	133	:
Gross investment in tangible goods (EUR million)	6	3	586	47	:	34	0	:	205	487	451	4	22	:
Number of persons employed (thousands)	2	1	14	0	:	2	:	:	8	15	18	6	7	:
App. labour productivity (EUR thous./pers. emp.)	7.4	28.4	59.3	90.0	:	48.0	:	:	76.7	52.9	131.4	:	3.2	:
Average personnel costs (EUR thous./employee)	7.5	17.9	20.6	40.3	:	21.7	16.5	:	40.4	33.8	56.0	2.9	2.6	:
Wage adjusted labour productivity (%)	99.5	159.1	287.7	223.6	:	221.0	:	:	190.2	156.5	234.5	:	123.4	:
Gross operating rate (%)	-0.1	21.1	37.2	19.2	:	14.1	0.6	:	13.5	9.2	25.1	:	3.4	:

(1) 1999.

(2) 2000.

(3) The Czech Republic, 2000.

(4) Germany, 2000.

(5) The Czech Republic and Germany, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 20.36

Air transport (NACE Division 62)
Main indicators, 2001

	BE	CZ	DK	DE	EE (1)	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	2 658	:	2 856	7 513	58	:	7 132	16 514	:	10 935	388	63	79	1 154
Value added at factor cost (EUR million) (2)	440	29	746	81	6	:	2 150	3 949	:	1 605	114	14	6	399
Purchases of goods and services (EUR million) (3)	2 217	:	2 210	8 782	51	:	5 216	12 776	:	9 279	273	46	71	757
Gross investment in tangible goods (EUR million) (2)	68	:	469	1 654	2	:	524	2 065	:	574	3	8	3	:
Number of persons employed (thousands)	6	:	13	38	:	:	38	70	:	24	2	1	1	3
App. labour productivity (EUR thous./pers. emp.) (2)	79.7	:	57.7	2.1	:	:	57.1	56.1	:	67.6	48.4	28.3	4.7	132.2
Average personnel costs (EUR thous./employee) (2)	58.4	:	51.4	61.1	10.4	:	46.3	56.0	:	56.6	37.7	12.2	9.1	58.8
Wage adjusted labour productivity (%) (2)	136.4	:	112.2	3.5	:	:	123.2	100.1	:	119.5	128.5	232.7	51.6	224.9
Gross operating rate (%) (2)	4.7	:	2.9	-30.0	-0.9	:	5.7	0.0	:	2.5	6.5	12.8	-6.7	19.2
	HU	MT	NL	AT	PL	PT	SI	SK (1)	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	431	255	7 399	2 277	:	1 590	111	18	1 674	3 053	27 625	:	:	:
Value added at factor cost (EUR million)	35	224	2 150	397	:	617	25	2	532	789	9 274	:	:	:
Purchases of goods and services (EUR million) (3)	392	34	5 245	1 877	:	1 047	71	16	1 169	2 265	17 640	:	:	:
Gross investment in tangible goods (EUR million)	16	1	:	296	:	88	1	1	375	506	2 648	6	:	:
Number of persons employed (thousands)	3	2	:	9	:	11	:	0	9	14	96	3	:	:
App. labour productivity (EUR thous./pers. emp.)	11.2	109.1	:	45.5	:	54.4	:	14.9	60.8	58.3	96.7	:	:	:
Average personnel costs (EUR thous./employee)	20.9	26.7	:	49.2	:	40.5	34.7	8.7	48.9	59.6	55.9	4.4	:	:
Wage adjusted labour productivity (%)	53.5	408.1	:	92.5	:	134.2	:	171.4	124.3	97.8	172.9	:	:	:
Gross operating rate (%)	-7.0	66.1	4.6	-1.3	:	9.9	3.0	5.4	6.3	-0.5	14.3	:	:	:

(1) 1999.

(2) Germany, 2000.

(3) Germany and Sweden, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 20.37

Cargo handling and storage; other supporting transport activities; activities of other transport agencies (NACE Groups 63.1, 63.2 and 63.4)
Main indicators, 2001

	BE	CZ	DK	DE (1)	EE	EL	ES	FR	IE (1)	IT	CY	LV	LT	LU
Turnover (EUR million)	11 089	2 756	5 080	48 945	1 173	:	20 800	44 629	1 889	29 789	240	863	415	407
Value added at factor cost (EUR million)	2 949	450	1 430	18 337	262	:	7 382	14 483	678	12 676	193	323	141	123
Purchases of goods and services (EUR million)	8 093	2 299	3 742	31 953	905	:	13 645	30 976	1 223	20 535	48	567	285	290
Gross investment in tangible goods (EUR million)	1 120	125	237	3 470	97	:	2 553	5 498	129	3 690	26	136	78	:
Number of persons employed (thousands)	39	24	20	301	9	:	139	253	10	281	5	15	11	2
App. labour productivity (EUR thous./pers. emp.)	74.8	19.2	71.3	61.0	28.9	:	53.1	57.4	66.9	45.1	42.4	21.4	12.9	65.0
Average personnel costs (EUR thous./employee)	48.3	9.1	37.7	34.7	9.1	:	29.1	34.0	:	31.6	23.8	6.6	5.5	48.0
Wage adjusted labour productivity (%)	154.8	211.1	189.1	175.7	318.6	:	182.3	168.8	:	142.6	178.7	326.8	236.8	135.5
Gross operating rate (%)	10.3	9.4	13.5	17.4	15.5	:	17.2	13.3	:	16.1	38.9	26.0	20.0	8.2
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	1 032	283	15 109	8 264	3 610	3 345	712	454	3 661	10 751	46 027	505	735	:
Value added at factor cost (EUR million)	202	126	4 698	1 654	2 547	1 428	156	92	1 037	2 255	20 291	180	357	:
Purchases of goods and services (EUR million)	833	160	13 011	6 598	557	2 072	473	362	2 672	8 675	25 569	353	396	:
Gross investment in tangible goods (EUR million) (2)	56	10	1 636	234	297	1 590	70	17	194	1 158	7 649	103	104	:
Number of persons employed (thousands)	15	5	62	24	:	28	:	6	19	43	241	31	31	:
App. labour productivity (EUR thous./pers. emp.)	13.3	25.8	75.4	68.7	:	51.4	:	14.4	54.5	52.8	84.3	5.9	11.4	:
Average personnel costs (EUR thous./employee)	8.7	9.5	40.8	44.0	11.0	26.8	17.4	7.0	35.4	39.9	40.4	4.1	5.9	:
Wage adjusted labour productivity (%)	152.2	272.9	184.7	156.0	:	191.3	:	203.9	154.0	132.3	209.0	144.8	194.9	:
Gross operating rate (%)	6.9	28.8	14.8	7.5	54.5	21.0	4.6	10.4	10.2	5.5	23.6	11.9	24.7	:

(1) 2000.

(2) The Netherlands, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

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 their investments, while consumers have a wider array of choices for credit and alternative savings provisions in the form of new products relating to consumer credit, mortgages, investment funds, pensions and insurance products.

The integration of financial markets is one of the central pillars of European policy in the drive towards creating 'the most competitive and dynamic knowledge-based economy in the world'. Probably the most visible sign along this path has been the introduction of the euro, which is (at the time of writing), the common currency used within 12 of the Member States. There has also been a considerable amount of legislative activity in this area, 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 unveiled by the European Commission on 11 May 1999 ⁽¹⁾. The basis of the plan was the introduction of 42 different measures designed to create a single market for financial services. The plan was divided into four key areas: to create a single wholesale financial market; to create an open and secure retail financial market; to create rules and supervision procedures; and to harmonise other conditions that would encourage an optimal financial market (for example, addressing questions such as disparities in tax and legal systems).

⁽¹⁾ *Financial Services: Implementing the framework for financial markets: action plan*, COM(1999) 232.

More than five years after its publication, the 10th progress report on the FSAP was released on 25 November 2003. It stated that 36 of the measures had been completed, while five additional measures had been added in the light of market developments, dealing with cross-border clearing and settlement, insurance guarantee schemes, reinsurance supervision, the solvency system in insurance and a proposal for a third money laundering directive.

The financial services' sector encompasses financial intermediation as offered by credit institutions, financial leasing and other credit granting enterprises and other financial intermediaries (for example, securities and derivatives dealers) (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).

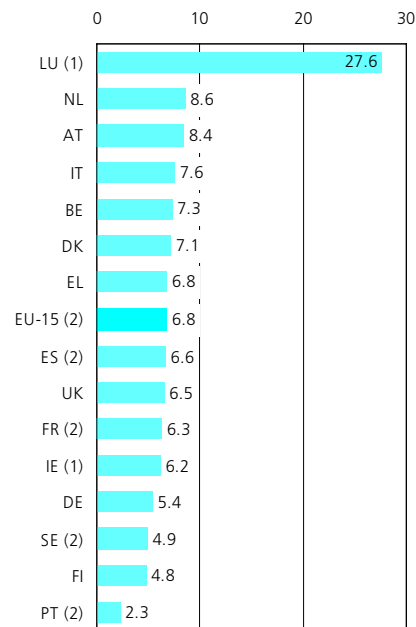
NACE

- 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.

STRUCTURAL PROFILE

According to National Accounts, financial services (NACE Section J) represented 6.8 % of gross value added (in basic prices) within the EU-15's business economy (NACE Sections C to K) in 1999. Germany (23.9 %) accounted for the highest share of the EU-15 total in 1999, ahead of the United Kingdom (17.0 %), France and Italy (both 15.4 %). However, in relative terms, Luxembourg stood out as being the most specialised country in the financial services sector, as financial service activities contributed more than four times the EU-15 average to total value added in the business economy. The next highest specialisation ratios were recorded in the Netherlands, Austria, Italy, Belgium, Denmark and Greece, which were the only other Member States that were specialised in this sector. During the second half of the 1990s, the fastest expanding financial services sectors were in Luxembourg, Greece, Ireland and Portugal.

Figure 21.1
Financial intermediation (NACE Section J)
Share of value added in the business
economy (NACE Sections C to K), 2001 (%)



(1) 2000.

(2) 1999.

Source: Eurostat, National Accounts - Breakdowns by branch of activity (theme2/brkdowns).

21.1: 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). Few official statistics are available for central banking activities (NACE Class 65.11) and the data presented in this subchapter focuses on monetary intermediation excluding central banking (NACE Class 65.12) and other financial intermediation activities (NACE Group 65.2).

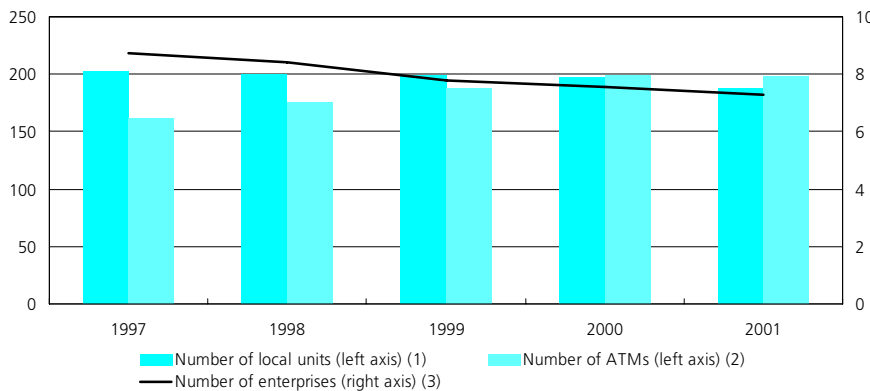
Financial intermediation institutions play an important role as intermediaries for channelling savings into investments and through the allocation of capital in the form of loans. By supplying various financial products (mortgages, consumer credit), financial institutions can provide added impetus to economic growth and consumption, while others, which are designed to promote savings, are likely to reduce the rate of consumption.

Europe's financial markets are often described as fragmented, and it is thought that the introduction of the euro may help to change this situation. Nevertheless, national patterns of banking have historically been quite different, as various forms of bank predominate, for example cooperative banks, savings banks and commercial banks. There has been a significant amount of merger and acquisition activity in the past decade in the banking sector. This may have resulted from banks coming under pressure from other financial service providers and has led some banks to focus their activities on investment banking with corporate customers, or alternatively to diversify into other related financial markets, for example insurance, pensions, fund management and financial advice.

From the demand side, cross-border sales of financial products to private individuals remain an exception. This is largely thought to be a result of consumers' preference for local services, whereby advice can be sought from a local branch before making an important investment or borrowing decision. In addition, a lack of tax harmonisation and administrative requirements, as well as the costs of searching for information and a perceived lack of security are also thought to deter individuals from cross-border purchases and enterprises from offering their products outside of their home markets.

Two areas where there have been significant changes in the way that individuals bank are telephone and Internet banking, where a rapid uptake has resulted in these two forms of banking accounting for more than 10 % of consumer banking transactions in some Member States.

Figure 21.2
Evolution of the number of financial intermediation enterprises and network access, EU-15 (thousands)



(1) Finland and Sweden, not available.
 (2) Belgium, Luxembourg, Finland and Sweden, not available.
 (3) Finland, not available.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/credstat).

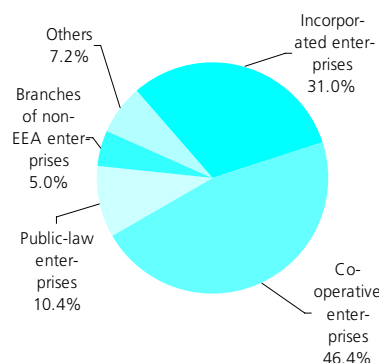
One of the most important regulatory changes is the likely introduction of Basel II, a regulatory framework designed to encourage best practice in risk management and minimum capital requirements in the banking sector. The Basel Committee is composed of central bank governors from a group of 10 countries (2). In June 1999, the Committee issued a proposal for a new capital adequacy framework to replace its original 1988 accord. Following interaction with banks and industry groups, a final consultative document was issued in April 2003, with a view to introducing the new framework by the end of 2006. These new standards, aiming for a closer match between the capital that banks hold and the risks they take, should lead to more stable, efficiently run institutions. Regulators have specifically taken account of improvements in IT, new banking products, and changes in risk-management procedures. As a result, banks will need to change their practices with respect to credit risk (their exposure to borrowers who might not honour their contractual obligations), operational risk (their exposure to losses from inadequate internal processes and systems, as well as external threats, such as rogue traders), and market risk (their exposure to adverse market developments, such as exchange rates or interest rates).

(2) Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, the Netherlands, Spain, Sweden, Switzerland, the United Kingdom and the United States.

The Internal Market Directorate-General of the European Commission released in late 2003 a proposal for a directive (3) to establish a new financial services committee structure, which aims to extend the committee structure and approach already used in the securities sector since 2002 to the banking and investment fund sectors. In addition, there is an ongoing review of capital requirements, designed to make banks and other financial institutions more risk-sensitive so that they foster enhanced risk management. A third area where there have been significant legislative changes is the development of e-commerce. A European Commission communication (4) was based on the principle that the trading rules applied to the cross-border sale and purchase of financial services should be those of the Member State where the service provider was established (in other words, the country of origin).

(3) COM/2003/0659 final.
 (4) COM (2003) 259(01).

Figure 21.3
Breakdown of number of financial intermediation enterprises by legal status, EU-15, 2001



Source: Eurostat, Structural Business Statistics (theme4/sbs/credstat/c_serie2/leg_stat).

STRUCTURAL PROFILE

Official statistical information available on financial intermediation is concentrated on other monetary intermediation, other than central banking (NACE Class 65.12) and other financial intermediation (NACE Group 65.2), which is composed of leasing, credit granting, securities, property unit trusts, options and hedging arrangements. Together these two activities are referred to as financial intermediation.

The number of financial intermediation enterprises operating in the EU has fallen in recent years, primarily as a result of mergers and acquisitions. Between 1997 and 2001, the number of financial intermediation enterprises in the EU-15 (5) fell by 16.6 %, with 7 281 enterprises active in 2001 (see Figure 21.2). As the number of enterprises fell, network access, as measured by the number of local units, did not decline at such a rapid pace, falling overall by 7.0 % in the EU-15 (6) during the period 1997 to 2001. Reductions in the number of local units were most rapid in those countries that had the highest concentration of local units, for example, the Netherlands or Belgium. The opposite trend was observed as regards the introduction of automatic teller machines (ATMs), more commonly known as cash dispensers, which have revolutionised the way in which people handle their money through easy access on a 24-hour-a-day basis, rather than only during banking hours. Between 1997 and 2001, the number of ATMs in the EU-15 (7) grew overall by 22.4 %, resulting in an average of 5.2 ATMs per 10 000 inhabitants in 2001 (compared with 5.0 local units per 10 000 inhabitants). Although a complete time-series for Belgium and Finland is not available (and hence data are excluded in Figure 21.2), these two countries added an additional 11 114 ATMs to the total in 2001. These figures provide evidence of a shift in the structure of retail banking, highlighting a move from branches to ATMs, as banks try to reduce their costs, while maintaining an operating presence in close proximity to consumers. ATMs are often introduced at sites where it would be harder for a bank to open a new branch, for example inside a supermarket or at a railway station or an airport.

Figure 21.3 provides a breakdown of financial intermediation enterprises in the EU-15, according to legal status. It shows that the most popular legal form was a cooperative enterprise (46.4 % of the total), followed by incorporated enterprises (31.0 %). Between 2000 and 2001 there was almost no change in the number of incorporated enterprises (-0.5 %), while there were far more significant reductions in the numbers of co-operative and public law enterprises (-6.1 % and -5.0 % respectively).

(5) Finland, not available.
 (6) Finland and Sweden, not available.
 (7) Belgium, Luxembourg, Finland and Sweden, not available.

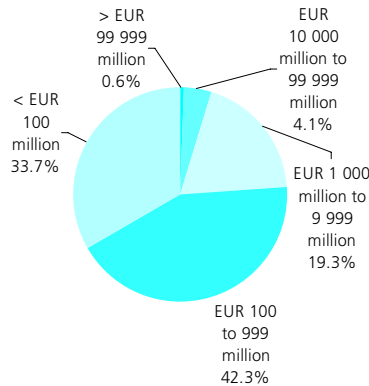
A breakdown of the number of financial intermediation enterprises according to the size of their balance sheets provides one way of studying concentration levels, as well as showing that the EU's largest banks tend to be located in Germany, the United Kingdom, France and the Netherlands. Data for 2001 shows that only 46 enterprises in the EU-15, less than 1 % of the total number, had a balance sheet total that was in excess of EUR 99.9 billion. Some 42.3 % of enterprises in the financial intermediation sector in the EU-15 reported a balance sheet total of between EUR 100 million and EUR 999 million, while 33.7 % had a balance sheet total that was less than EUR 100 million (see Figure 21.4).

Table 21.1 provides a breakdown of banking activity between three different types of bank. Commercial banks accounted for just over three quarters of the activity in the EU-15's banking sector, while savings banks reported shares between 13 and 14 % for each of the three indicators presented.

Eurofinas data for the finance house sector in the EU-15 encompass four main segments, of which the largest in June 2003 was consumer credit for personal consumption, representing 40 % of outstanding value ⁽⁸⁾. Car finance, home or real estate mortgage finance, and the industrial credit sector followed, accounting respectively for 31 %, 20 % and 9 % of outstanding value. Compared to a year before in June 2002, there was a noticeable increase in the amount of outstanding consumer credit for personal consumption, which rose by 7.1 %, while the second highest growth rate was recorded for home or real estate mortgage (5.6 %). Growth was registered both in terms of the amount of new credit granted and in terms of the number of new contracts, while the average size of loans remained relatively unchanged.

⁽⁸⁾ Outstanding value is defined as overall capital lent, net of due interests, before write-off.

Figure 21.4
Breakdown of number of financial intermediation enterprises by balance sheet total, EU-15, 2001



Source: Eurostat, Structural Business Statistics (theme4/sbs/credstat/c_serie2/sizecla).

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. Open-ended funds can be contractual or corporate, the latter having a separate legal identity and issuing shares like any other company, while the former is a commonly managed pool of money governed by contract or trust law.

A major step in the development of open-ended funds within Europe came from 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). As well as its stated harmonisation goal, this directive provided protection to investors. Other funds are permitted within the EU, according to national regulations.

Table 21.1
Main indicators by type of bank, EU-15, as of 31 December 2001

	Total assets (EUR billion)	Deposits (EUR billion)	Loans (EUR billion)
Co-operative banks	2 531	1 437	1 386
Savings banks (1)	4 023	1 921	2 011
Commercial banks (2)	24 435	10 254	11 400

(1) As of 1 January 2002; non bank loans and deposits.

(2) As of 31 December 2002.

Source: GEBC (European Association of Cooperative Banks), ESBG (European Savings Bank Group), FBE (European Banking Federation).

There have also been a number of recent changes to the legislative environment. Legislation was introduced to facilitate the distribution of such funds across the EU, with a first directive⁽⁹⁾, often referred to as the product directive, designed to remove the barriers to cross-border marketing of investment funds by widening the scope of assets in which they could invest. Investment funds were subsequently permitted to invest not only in listed shares and bonds, but also in bank deposits (cash funds), money market instruments and financial derivatives, as well as other units of other collective investment undertakings (a so-called 'fund of funds'). A second directive⁽¹⁰⁾, referred to as the management directive, was designed to allow management companies authorised to offer their services in one of the Member State to be able to extend their services throughout the EU. In addition, the directive introduced the concept of a simplified prospectus, to ensure more accessible and comprehensive information to strengthen investor protection.

Figure 21.5 shows the growth in net assets for UCITS and non-UCITS funds over the last 10 years, which increased on average by 13.6 % per annum. By 2003 the net assets managed by the European investment funds industry⁽¹¹⁾ were valued at EUR 4.8 billion, of which 78.0 % were UCITS, a share that remained fairly stable over the last decade.

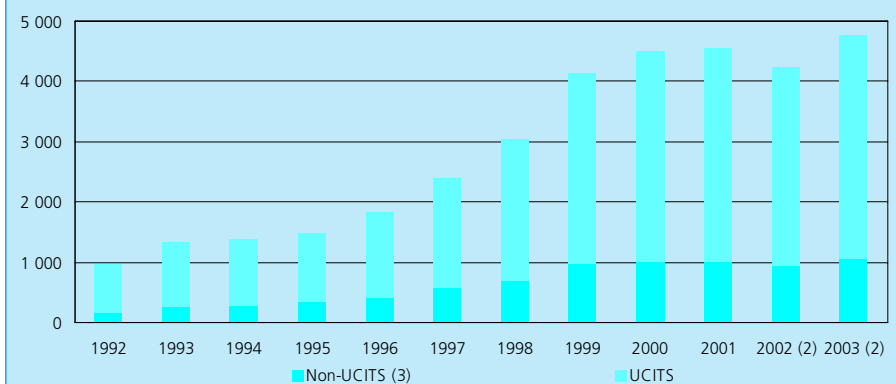
As well as the classification between open and closed-ended funds, a further distinction can be made between funds specialising in investments in bonds, equities and money markets, or balanced funds with a mix of these three types of investments. Figure 21.6 shows the change in the composition of the net assets of UCITS, notably displaying the increase in the importance of equity funds throughout the 1990s and subsequent decline after 2000 as stock market indices fell. Table 21.2 shows the same breakdown for 2003 for most of the Member States. The largest amounts of UCITS funds managed in the EU were in France and Luxembourg, with EUR 909.3 billion and EUR 874.2 billion respectively. The high value of assets managed in UCITS funds in Ireland (EUR 285.4 billion) is also worth noting. Among the Member States with the largest fund management industries, Luxembourg is particularly specialised in bond funds (reflecting the high number of bonds listed on the Luxembourg exchange), whereas the United Kingdom and Germany are specialised in equity funds, and Spain in money market funds. France and Italy are both relatively specialised in money market funds, with France also specialised in balanced funds and Italy also specialised in bond funds.

⁽⁹⁾ Directive 2001/108/EC.

⁽¹⁰⁾ Directive 2001/107/EC.

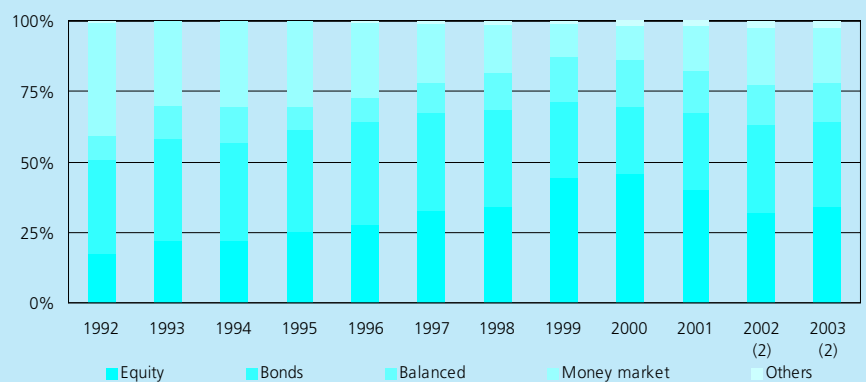
⁽¹¹⁾ EU-15, plus the Czech Republic, Hungary, Poland, Norway and Switzerland.

Figure 21.5
Net assets of the European investment funds industry, Europe (EUR million) (1)



(1) EU-15, plus the Czech Republic, Hungary, Poland, Norway and Switzerland. (2) Including Liechtenstein. (3) Undertaking for Collective Investment in Transferable Securities: a collective investment fund that complies with Directive (85/611/EEC) of 20 October 1985.
Source: FEFSI, available at www.fefsi.org.

Figure 21.6
Total net assets of UCITS, Europe (%) (1)



(1) EU-15 excluding Ireland, plus the Czech Republic, Hungary, Poland, Norway and Switzerland. (2) Including Liechtenstein.
Source: FEFSI, available at www.fefsi.org.

Table 21.2
Net assets of funds invested in transferable securities and money market instruments

	Total net assets (EUR million), end 2003	Equity funds (%)	Bond funds (%)	Balanced funds (%)	Money market funds (%)	Other funds (%)
BE	78 166	60.0	12.2	25.3	2.4	0.0
CZ	3 233	3.0	24.9	24.8	47.3	0.0
DK	39 219	27.9	71.0	1.1	0.0	0.0
DE	218 780	44.0	31.0	6.4	17.8	0.8
EL	30 399	16.0	21.5	10.6	51.9	0.0
ES	202 173	30.0	29.0	12.4	28.6	0.0
FR	909 300	23.5	18.0	22.4	36.1	0.0
IE	285 372	:	:	:	:	:
IT	379 044	19.7	39.7	15.2	25.4	0.0
LU	874 198	32.3	45.1	7.5	8.8	6.4
HU	3 116	9.4	67.3	2.1	21.3	0.0
NL (1)	80 300	39.1	18.2	11.1	1.4	30.3
AT	69 661	16.5	64.8	10.8	7.9	0.0
PL	6 790	7.8	50.6	24.3	17.3	0.0
PT	21 366	7.3	41.8	7.3	43.4	0.2
FI	23 727	36.6	15.1	13.0	35.2	0.0
SE	69 474	67.2	6.6	16.3	7.9	2.0
UK	313 953	74.5	16.9	7.8	0.8	0.0
Total (2)	3 322 898	33.8	30.5	13.5	19.6	2.5

(1) End 2002.

(2) Excluding Ireland.

Source: FEFSI, available at www.fefsi.org.

LABOUR AND PRODUCTIVITY

According to the labour force survey there were 3.4 million persons employed in the financial intermediation sector (NACE Division 65) in the EU-15 in 2002. This equated to 62.6 % of the financial services total (NACE Section J) and to 5.6 % of those employed in the services sector (NACE Sections G to K).

The characteristics of the labour force within the financial intermediation sector differ considerably from those displayed for the whole of the services sector. Nowhere was this more apparent than in relation to the high proportion of paid employees working in the financial intermediation sector, which in every Member State ⁽¹²⁾ was higher than the services average, and was 97.8 % in the EU-15. The lowest difference between the proportions for the financial intermediation and services sector was recorded in Latvia, where all of the financial intermediation labour force (100.0 %) were paid employees compared with a services' average of 91.6 %. The difference rose as high as 42.0 percentage points in Greece, where 99.8 % of the financial intermediation sector's labour force were employees, compared with a services' average of 57.8 %.

There were also noticeable differences in terms of the proportion of persons who worked on a full-time basis, as 86.6 % of those employed in the EU-15's financial intermediation sector worked full-time, some 6.4 percentage points more than the services average. A higher incidence of full-time work was registered in each of the EU-25 Member States ⁽¹³⁾, except for Slovenia. The largest difference between full-time employment rates in the financial intermediation and the services sectors was registered in the Netherlands and the United Kingdom, where the proportion of persons employed on a full-time basis was at least 10 percentage points above the services average.

⁽¹²⁾ Estonia and Poland, not available.

⁽¹³⁾ Estonia, Austria and Poland, not available.

Table 21.3

Financial intermediation, except insurance and pension funding (NACE Division 65) Labour force characteristics, 2002

	Share of men		Share of full-time		Share of employees	
	Value (%)	Index (services=100)	Value (%)	Index (services=100)	Value (%)	Index (services=100)
EU-25	:	:	:	:	:	:
EU-15	50.6	89.8	86.6	108.0	97.8	121.0
BE	52.5	88.6	83.6	102.3	93.2	120.2
CZ	38.8	73.1	97.6	103.7	89.3	118.6
DK	53.7	90.2	86.8	109.6	98.6	112.5
DE	44.1	86.0	81.8	109.1	97.7	115.2
EE	:	:	:	:	:	:
EL	49.1	79.9	99.2	103.0	99.8	172.6
ES	64.2	111.2	97.8	107.5	98.8	132.9
FR	48.2	84.8	90.1	106.2	99.5	112.1
IE	40.2	75.9	89.1	112.3	97.5	115.7
IT	64.7	104.6	93.6	103.7	94.4	157.1
CY	41.7	78.8	100.0	107.5	99.4	131.5
LV	:	:	100.0	107.6	100.0	109.2
LT	:	:	100.0	109.4	100.0	119.1
LU	53.2	94.7	92.1	104.2	100.0	111.2
HU	26.8	49.8	97.0	101.1	96.0	119.0
MT	37.2	53.6	96.5	109.3	100.0	123.7
NL	53.3	90.9	71.8	123.8	99.6	113.5
AT	44.5	90.0	:	:	99.3	114.4
PL	:	:	:	:	:	:
PT	56.3	100.8	94.8	102.3	100.0	141.5
SI	30.6	58.0	94.5	99.8	99.7	114.9
SK	28.4	54.7	100.0	102.1	96.2	111.9
FI	22.8	43.0	92.0	110.5	98.3	112.6
SE	44.2	74.6	89.0	112.4	99.2	116.1
UK	47.3	84.2	82.4	114.9	98.0	111.7

Source: Eurostat, Labour Force Survey.

The average proportion of the services sector workforce in the EU-15 that was male was 56.3 % in 2002, compared with 50.6 % in the financial intermediation sector. The gender balance was more frequently tilted in favour of women, as among the 25 Member States, only the Benelux countries, Denmark, and the three southern Member States of Spain, Italy and Portugal reported a higher proportion of men (as opposed to women) working in the financial intermediation sector ⁽¹⁴⁾. The same three southern Member States were the only countries where the proportion of men working in the financial intermediation sector was higher than national averages for the whole of services.

⁽¹⁴⁾ Estonia, Lithuania and Poland, not available.

21.2: 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.

INSURANCE

The insurance sector has been touched by a number of factors in recent years, including renewed concern for terrorist threats, a number of major natural disasters, corporate scandals and the decline in equity markets in 2001 and 2002. The terrorist attacks in the United States on 11 September 2001 are estimated to have resulted in USD 20.3 billion of insured losses (property and related damage only), while flood damage in central Europe in 2002 resulted in USD 2.5 billion of losses.

Insurance markets in many EU Member States have seen the volume of business controlled by insurance companies with their headquarters in another Member State increase considerably. However, while there has been growth in cross-border insurance activity in the area of major industrial and commercial risks, changes in relation to retail products have been less significant. The absence of harmonisation on consumer protection, the diversity of national tax regimes and legal systems, the lack of a single European contract law and the cost of researching information may explain the relatively low level of take-up of cross-border insurance by households.

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. Additional legislature 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.

The directives adopted, which lay down the conditions for conducting insurance business in the EU, are based on three generations of life and non-life Directives. On 5 November 2002, a directive was adopted on life assurance ⁽¹⁵⁾, its main objective was to recast in a single text all the existing directives in the field of life assurance to facilitate comprehension and application. A similar operation was carried out

⁽¹⁵⁾ Directive 2002/83/EC of the European Parliament and of the Council concerning life assurance.

for non-life insurance, leading to the adoption of an amending directive on 29 June 1995 ⁽¹⁶⁾. In relation to motor vehicle insurance (considered as part of the non-life market), there have been four directives, which aim to guarantee the free movement of vehicles within the EU such that all vehicles are covered by compulsory third party insurance. The directives also guarantee protection for victims of accidents, including those caused by unidentified or uninsured vehicles. The fourth motor insurance directive ⁽¹⁷⁾ of 16 May 2000 provides an efficient mechanism for quick settlement of claims when accidents take place outside the victim's Member State of residence. On 7 June 2002, the European Commission adopted a proposal for a fifth motor insurance directive to modernise existing directives in this field and to further improve the protection afforded to victims.

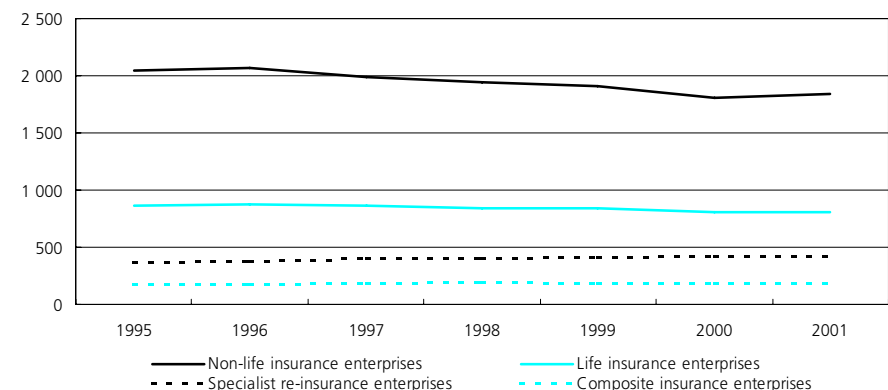
⁽¹⁶⁾ Directive 95/26/EC of the European Parliament and of the Council.

⁽¹⁷⁾ Directive 2000/26/EC of the European Parliament and of the Council.

There has been a process of consolidation in the EU-15's insurance sector, as the total number of insurance enterprises (life, non-life, composite and re-insurance) fell from 3 436 in 1995 to 3 248 in 2001 ⁽¹⁸⁾ - see Figure 21.7. These global figures hide a more marked reduction in the number of non-life insurance enterprises operating in the EU-15, down 9.8 %, while there was a 5.7 % reduction in the number of life insurance enterprises. On the other hand, the number of composite insurance enterprises (dealing in both life and non-life insurance) and the number of re-insurance enterprises rose by 7.1 % and 13.0 % respectively over the same period.

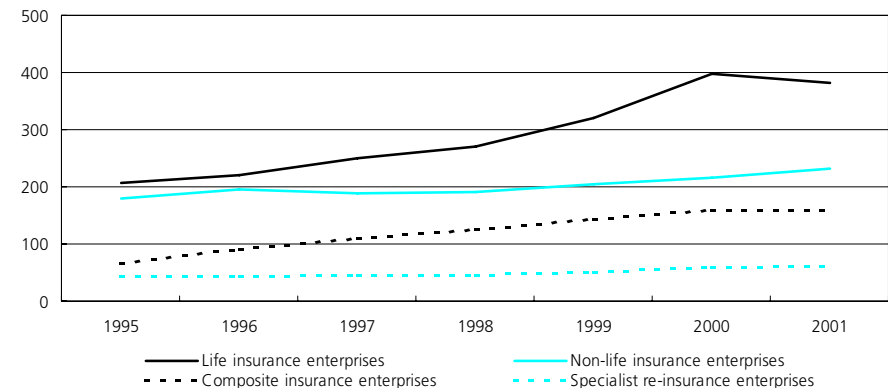
⁽¹⁸⁾ All data in this section on insurance are for an EU-15 aggregate excluding Belgium, Greece and Ireland.

Figure 21.7 Evolution of the total number of insurance enterprises, EU-15 (units) (1)



(1) Belgium, Greece and Ireland, not available; estimates. Source: Eurostat, Structural Business Statistics (theme4/sbs/statonis/serie_5a).

Figure 21.8 Evolution of gross premiums written, EU-15 (EUR billion) (1)



(1) Belgium, Greece and Ireland, not available; estimates. Source: Eurostat, Structural Business Statistics (theme4/sbs/statonis/serie_5a).

Within the EU-15 the highest number of life insurance enterprises was recorded in the United Kingdom, the highest number of non-life insurance enterprises in Germany, the highest number of composite insurance enterprises in Spain, and the highest number of re-insurance enterprises in Luxembourg. The Netherlands reported a relatively high number of life and non-life enterprises, accounting for more than 10 % of the EU-15 total in both of these subsectors.

While the number of enterprises can provide some interesting information on the distribution of insurance activity, it does not give any idea of the amount of business being conducted in each Member State. One measure often used for this purpose is the value of gross premiums written. Figure 21.8 shows that during the second half of the 1990s there was a rapid expansion of gross premiums written in the life insurance subsector, as average growth was 13.9 % per annum in the EU-15 between 1995 and 2000. There was even faster growth recorded in the composite insurance subsector, where the value of premiums written rose on average by 19.6 % per annum. The growth rates for re-insurance (6.3 % per annum) and non-life insurers (3.9 % per annum) were somewhat lower.

In 2001 the value of premiums written in the EU-15's insurance sector stagnated at EUR 834.2 billion, compared with EUR 834.6 billion a year before. Nevertheless, there was an expansion in non-life business (6.6 %) and re-insurance business (1.1 %), while there was no change in the value of premiums written by composites. As such, the only subsector that faced a reduction in its value of premiums written was the life insurance subsector (-3.9 %).

Life insurance accounted for 45.8 % of insurance activity in the EU in 2001 (on the basis of the value of gross premiums written), compared with 27.7 % for non-life insurance, 19.2 % for composites and 7.3 % for re-insurance enterprises. As composites make both life and non-life contracts, it is possible to look at the split in the insurance market broken down by the importance of the life and non-life products (issued by life and non-life insurers, as well as by composite insurers). Overall, for the six Member States ⁽¹⁹⁾ that have data available, life insurance business (of life insurance or composites) accounted for 59.0 % of the premiums written in 2001, leaving 41 % of the market being for non-life business (either non-life insurers or composites).

The United Kingdom accounted for the highest share of total premiums written (again in value terms) in the life insurance subsector (see Table 21.4), with 46.0 % of the total in 2001. Within the non-life insurance subsector (see Table 21.5), Germany (34.2 %) accounted for the highest proportion of premiums written, ahead of the United Kingdom (21.9 %), while

France (19.0 %, 2000) was the only other country to report a double-digit share of the EU total. France (36.2 %) had the highest share of premiums written by composites, while Germany (66.2 %) accounted for the vast majority of premiums written in the re-insurance subsector.

Table 21.4
Life insurance enterprises
Main indicators

	Gross premiums written (EUR million)			Number of persons employed (units)		
	1999	2000	2001	1999	2000	2001
EU-15	:	:	:	:	:	:
BE	1 970	:	:	473	:	:
DK	6 614	7 326	8 145	1 623	1 902	1 838
DE	59 085	61 247	62 458	59 187	58 805	57 849
EL	:	:	:	:	:	:
ES	9 984	12 124	8 207	2 962	2 772	2 470
FR	34 082	38 840	:	:	:	:
IE	8 528	:	:	4 939	:	:
IT	26 219	28 843	37 580	3 339	3 294	3 432
LU	4 688	5 982	5 389	912	1 156	1 412
NL	21 193	23 022	25 814	8 000	9 200	9 400
AT	447	534	:	213	234	:
PT	2 140	2 582	3 039	850	863	884
FI	3 152	2 517	3 330	715	786	851
SE	10 843	14 843	13 000	4 600	3 900	4 100
UK	142 899	199 807	175 944	:	:	:

Source: Eurostat, Structural Business Statistics (theme4/sbs/statonis/serie_5a).

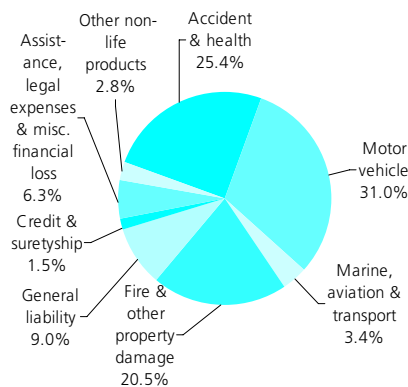
Table 21.5
Non-life insurance enterprises
Main indicators

	Gross premiums written (EUR million)			Number of persons employed (units)		
	1999	2000	2001	1999	2000	2001
EU-15	:	:	:	:	:	:
BE	3 832	4 057	4 578	6 234	:	7 223
DK	3 817	4 015	4 226	13 555	11 860	11 546
DE	73 853	76 203	79 128	160 398	159 735	158 320
EL	:	:	:	:	:	:
ES	6 472	7 927	8 981	14 604	17 181	18 253
FR	42 391	43 892	:	:	:	:
IE	3 376	:	:	4 222	:	:
IT	10 578	10 940	11 117	12 534	12 392	12 095
LU	647	742	831	870	948	890
NL	15 550	17 314	18 219	40 000	38 600	38 100
AT	1 718	1 742	:	4 967	1 211	:
PT	1 595	1 859	1 828	6 219	5 381	5 387
FI	2 416	1 493	2 671	7 485	8 589	10 401
SE	6 310	8 411	8 017	11 600	13 800	13 600
UK	38 456	42 365	50 611	:	:	:

Source: Eurostat, Structural Business Statistics (theme4/sbs/statonis/serie_5a).

⁽¹⁹⁾ Spain, France (2000), Italy, Austria (2000), Portugal and the United Kingdom.

Figure 21.9

Breakdown of gross direct premiums written for non-life insurance products, EU-15, 2001 (1)


(1) Greece and Ireland, not available; premiums written by non-life insurance enterprises only (excluding composites).

Source: Eurostat, Structural Business Statistics (theme4/sbs/statonis/serie_5e).

Figure 21.9 presents a breakdown of premiums written for non-life insurance products in the EU-15 in 2001 ⁽²⁰⁾. Motor vehicle insurance was the largest non-life product, accounting for 31.0 % of the EUR 237.6 billion of premiums written in the EU's non-life market in 2001. Accident and health (25.4 %) and fire and other property damage (20.5 %) were the second and third most important non-life insurance products.

Germany was the largest insurance market for the first two of these products (accounting for 28.7 % and 45.7 % of the premiums written in the EU), while the United Kingdom (25.5 %) had the highest share of premiums written for fire and other property damage. In the smaller product segments, the United Kingdom (38.3 %) also had the highest share of premiums written for assistance, legal expenses and miscellaneous financial loss, while France (26.0 %) had the highest share of premiums written for marine, aviation and transport services (other than motor vehicles). Germany was the largest market for the remaining three product segments.

⁽²⁰⁾ Greece and Ireland, not available.

Table 21.6

Main indicators for autonomous pension funds, 2001 (EUR million)

	Number of pension schemes (units)	Number of active members (thousands)	Pension contributions receivable from members	Pension contributions receivable from employers	Investment income	Total expenditure on pensions
BE	:	270	100	807	-483	1 280
DK	:	11	8	74	-32	205
DE (1)	299	:	:	:	8 815	:
EL	:	:	:	:	:	:
ES	2 450	5 806	4 387	3 127	-203	4 339
FR	:	:	:	:	:	:
IE (2)	86 348	630	:	:	:	:
IT	:	1 811	1 151	1 319	:	2 090
LU	:	:	:	:	:	:
NL	:	5 413	3 031	9 553	-11 513	13 358
AT	8 380	326	18	484	-91	381
PT	828	283	:	:	-347	891
FI	108	75	2	150	192	208
SE	:	427	:	:	427	319
UK	:	:	7 923	18 305	31 124	59 547

(1) 2000.

(2) Number of active members, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/statonis/serie_5a).

PENSION FUNDS

It is widely accepted that the basic pension provision of most European countries is likely to face problems in the future. In extreme cases this could affect the ability of State pension schemes to maintain payments. This situation has arisen out of a number of contributing factors, including an increase in life expectancy, a decrease in the fertility rate, and a shortened working life (early retirement), which have resulted in a higher proportion of the population being dependent on those in employment.

The European Commission has expressed concerns over the long-term equilibrium of State-run pension systems in a number of consultative documents and has encouraged the development of sustainable supplementary pension systems. The Commission encourages systems that are transfer-neutral (whereby payments to future pensioners should be made on the basis of their own contributions), fully funded (allowing the diversification of assets and growth that is independent of GDP) and portable (whereby the ownership of the assets remains in the hands of individuals). Finally, the Commission is concerned with improving the protection afforded to investors. As a result, a directive ⁽²¹⁾ was adopted on 3 June 2003 that provides a framework for the operation and

⁽²¹⁾ Directive 2003/41/EC of the European Parliament and of the Council.

supervision of occupational pension schemes; it is the first step towards a single market for supplementary pensions. Each Member State has two years (from its adoption) in which to implement the provisions of the directive, which establishes standards that aim to ensure that pension fund members and beneficiaries are properly protected. In addition, the directive also provides for pension funds to manage schemes in other Member States and allows pan-European enterprise groups to set up single pension funds that cover all of their subsidiaries across the EU.

According to the European Commission's Directorate-General for the Internal Market, it is estimated that around one quarter of the EU-15's active population is covered by an occupational pension scheme. The value of assets held by pension institutions exceeds EUR 2 trillion, which equates to around one quarter of GDP. The proportion of the population that is covered by occupational pension schemes varies considerably between the Member States, with particularly high rates in the Netherlands and the United Kingdom.

Official statistics on the pension funds sector are scarce. Some information is presented in Table 21.6 suggesting that Ireland, the Netherlands and the United Kingdom were among the countries where the autonomous pension funds industry was most important.

LABOUR AND PRODUCTIVITY

The number of persons employed in the EU-15's insurance and pension funding sector (NACE Division 66) was estimated at 1.2 million in 2002 according to the labour force survey. This equated to 22.7 % of those employed in the financial services sector or to 2.0 % of the services' (NACE Sections G to K) workforce.

The labour force characteristics of the insurance and pension funding sector resembled those of the financial intermediation sector. Full-time employment accounted for 86.5 % of those employed in the EU-15's insurance and pension funding sector in 2002, compared to a services' average of 80.1 %. Belgium, Luxembourg, Malta and Slovenia were the only countries ⁽²²⁾ where the proportion of persons working full-time was lower than the national average for the whole of services.

There was an almost equal gender balance in the insurance and pension funding sector, as 50.3 % of those employed in this sector in the EU-15 in 2002 were men. In 11 of the 21 Member States for which data are available ⁽²³⁾, men made up a majority of the workforce. This was notably the case in Malta, which was the only country where the male proportion of this sector's workforce rose above 60 %. Nevertheless, the proportion of men working in the insurance and pension funding sector was still 6.6 percentage points lower than in the whole of the Maltese services sector. Germany and Austria were the only countries where the proportion of men working in the insurance and pension funding sector was above the national services' average. Women accounted for more than 60 % of the labour force in France, Cyprus and Sweden in the insurance and pension funding sector. These same three countries reported that female employment rates in the insurance and pension funding sector were between 18 and 20 percentage points higher than national services averages (the largest differences within the Member States).

⁽²²⁾ Estonia, Latvia, Lithuania, Austria and Poland, not available.

⁽²³⁾ Estonia, Latvia, Lithuania and Poland, not available.

Table 21.7

**Insurance and pension funding, except compulsory social security (NACE Division 66)
Labour force characteristics, 2002**

	Share of men		Share of full-time	
	Value (%)	Index (services=100)	Value (%)	Index (services=100)
EU-25	:	:	:	:
EU-15	50.3	89.3	86.5	108.0
BE	50.3	84.8	77.0	94.2
CZ	50.1	94.5	94.3	100.1
DK	51.0	85.6	89.7	113.3
DE	54.6	106.6	84.4	112.5
EE	:	:	:	:
EL	53.2	86.7	96.9	100.6
ES	46.5	80.6	92.8	102.0
FR	38.7	68.1	86.3	101.7
IE	41.0	77.5	89.9	113.4
IT	57.6	93.1	90.8	100.5
CY	33.9	64.1	95.6	102.8
LV	:	:	:	:
LT	:	:	:	:
LU	53.9	96.0	81.5	92.1
HU	40.9	76.1	98.8	103.0
MT	62.9	90.5	74.7	84.7
NL	58.1	99.1	72.4	124.9
AT	57.6	116.5	:	:
PL	:	:	:	:
PT	45.2	81.0	95.7	103.2
SI	46.9	88.9	88.3	93.3
SK	42.4	81.6	100.0	102.1
FI	40.5	76.3	92.8	111.5
SE	38.8	65.6	92.2	116.3
UK	44.7	79.8	86.5	120.5

Source: Eurostat, Labour Force Survey.

21.3: 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'. The definition includes the administration of financial markets, securities brokering and fund management (part of NACE Group 67.1), as well as activities of insurance brokers and agents (part of NACE Group 67.2).

EXCHANGES

The reorganisation of stock markets has played an important role in stimulating the supply of financial services and competition between financial intermediaries. The main stock exchanges in the EU are London, Euronext ⁽²⁴⁾, the Deutsche Börse, the Spanish exchanges (BME) (the exchanges of Barcelona, Bilbao, Madrid and Valencia) and the Italian exchange.

⁽²⁴⁾ The result of the merger of the Amsterdam, Brussels, Lisbon and Paris exchanges.

Table 21.8
Market capitalisation, end 2003
(EUR million)

Exchange		Domestic Equity
Prague stock exchange	CZ	12 288
Copenhagen stock exchange	DK	93 701
Deutsche Börse	DE	855 452
Athens exchange	EL	84 547
Spanish exchanges (BME)	ES	575 766
Irish stock exchange	IE	67 444
Italian exchange	IT	487 446
Cyprus stock exchange	CY	3 807
Lithuanian stock exchange	LT	2 783
Luxembourg stock exchange	LU	29 598
Budapest stock exchange	HU	13 228
Malta stock exchange	MT	1 467
Euronext (1)		1 646 178
Wiener Börse	AT	44 811
Warsaw stock exchange	PL	29 350
Ljubljana stock exchange	SI	5 660
Bratislava stock exchange	SK	2 204
Helsinki exchanges	FI	135 001
Stockholmsbörsen	SE	229 355
London stock exchange	UK	1 923 168
Total		6 243 252

(1) Dutch holding company that operates through local subsidiaries, formed from the merger of Amsterdam, Brussels and Paris exchanges, expanded with the acquisition of LIFFE (London International Financial Futures and Options Exchange) and the merger with the Portuguese exchange BVLP (Bolsa de Valores de Lisboa e Porto).

Source: Federation of European Securities Exchanges.

Table 21.9
Listed companies, end 2003 (1)

Exchange		Number of companies with listed shares (units)		
		Domestic	Foreign	Total
Prague stock exchange	CZ	37	1	38
Copenhagen stock exchange	DK	188	7	195
Deutsche Börse	DE	684	182	866
Athens exchange	EL	339	1	340
Spanish exchanges (BME)	ES	3 191	32	3 223
Irish stock exchange	IE	55	11	66
Italian exchange	IT	271	8	279
Cyprus stock exchange	CY	152	0	152
Lithuanian stock exchange	LT	45	0	45
Luxembourg stock exchange	LU	44	198	242
Budapest stock exchange	HU	50	1	51
Malta stock exchange	MT	14	0	14
Euronext (2)		1 047	:	:
Wiener Börse	AT	104	21	125
Warsaw stock exchange	PL	188	1	189
Ljubljana stock exchange	SI	134	:	:
Bratislava stock exchange	SK	366	0	366
Helsinki exchanges	FI	142	3	145
Stockholmsbörsen	SE	262	20	282
London stock exchange	UK	2 311	381	2 692
Total		9 624	:	:

(1) Excluding ETFs, investment trusts, listed unit trusts and UCITS

(2) Dutch holding company that operates through local subsidiaries, formed from the merger of Amsterdam, Brussels and Paris exchanges, expanded with the acquisition of LIFFE (London International Financial Futures and Options Exchange) and the merger with the Portuguese exchange BVLP (Bolsa de Valores de Lisboa e Porto).

Source: Federation of European Securities Exchanges.

Table 21.10
Value of equity trading, 2003 (EUR million) (1)

Exchange		Trading days	Electronic order book transactions	Negotiated deals	Total
Prague stock exchange	CZ	251	169	7 302	7 471
Copenhagen stock exchange	DK	249	35 348	20 696	56 044
Deutsche Börse	DE	253	830 538	309 361	1 139 899
Athens exchange	EL	249	25 337	7 168	32 505
Spanish exchanges (BME)	ES	251	494 347	326 091	820 437
Irish stock exchange	IE	253	4 938	33 820	38 758
Italian exchange	IT	252	679 017	42 509	721 525
Cyprus stock exchange	CY	244	264	0	264
Lithuanian stock exchange	LT	254	89	72	161
Luxembourg stock exchange	LU	250	233	-	233
Budapest stock exchange	HU	252	7 205	26	7 231
Malta stock exchange	MT	246	31	-	31
Euronext (2)		255	1 359 388	305 839	1 665 227
Wiener Börse	AT	248	9 804	-	9 804
Warsaw stock exchange	PL	251	7 379	1 397	8 777
Ljubljana stock exchange	SI	249	393	233	627
Bratislava stock exchange	SK	243	39	549	588
Helsinki exchanges	FI	250	114 139	31 507	145 646
Stockholmsbörsen	SE	249	207 166	62 157	269 323
London stock exchange	UK	253	1 034 492	2 139 630	3 174 122
Total			4 810 316	3 465 330	8 723 442

(1) Other stock movement: Spanish exchanges EUR 445 264 million; Euronext EUR 820 044 million; Italian exchange EUR 53 124 million.

(2) Dutch holding company that operates through local subsidiaries, formed from the merger of Amsterdam, Brussels and Paris exchanges, expanded with the acquisition of LIFFE (London International Financial Futures and Options Exchange) and the merger with the Portuguese exchange BVLP (Bolsa de Valores de Lisboa e Porto).

Source: Federation of European Securities Exchanges.

In terms of market capitalisation the largest EU market at the end of 2003 was the London stock exchange, with a market capitalisation of domestic companies reaching EUR 1 923 billion (see Table 21.8). In terms of the number of companies with shares listed on each exchange, the Spanish exchanges (BME) were the largest with 3 200 domestic listings, followed by the London stock exchange with 2 300, these two together accounting for more than half of all of the domestic listings within the EU (see Table 21.9). The London stock exchange recorded EUR 3 174 billion of equity trading in 2003, out of a total for the EU-25 ⁽²⁵⁾ of EU 8 723 billion (see Table 21.10). Table 21.11 shows that since 2000 many exchanges have seen a contraction in their value of equity trading, resulting in part from the falling value of many stocks in 2001 and 2002. Indeed, the value of trading has more than halved between 2000 and 2002 in several markets, and among the larger markets only Euronext has recorded growth over these two years. As can be seen from the information given for the main Japanese and American markets, this contraction in the value of equity trading has been observed worldwide, and reflects a number of issues, notably the slower global economy, the end of rapid growth associated with technology stocks, as well as accounting and fraud problems in various large enterprises.

Tables 21.12 and 21.13 give information on bond exchanges within the EU. For domestic bonds, the German and London stock exchanges have the largest number of bonds listed, each with over 5 000, while the Spanish, Copenhagen and Vienna exchanges each have between 2 000 and 3 000 domestic bonds listed. In terms of international bonds, the leader in the EU is clearly Luxembourg with some 21 300 international listings, far ahead of London (4 300) and Ireland (3 200). However, in turnover terms the Spanish and London stock exchanges are the largest bond markets in the EU with EUR 2 763 billion and EUR 1 913 billion in 2003.

⁽²⁵⁾ Estonia and Latvia, not available.

Table 21.11
Index of the total value (USD) of share trading
(domestic and foreign, including investment funds) (2000=100) (1)

Exchange		1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Copenhagen	DK	22	23	27	28	36	46	63	65	100	69	52
Deutsche Börse	DE	21	27	28	28	38	50	70	73	100	67	57
Athens	EL	2	3	6	6	9	22	53	201	100	40	25
Spain (2)	ES	:	:	:	:	30	57	71	75	100	95	41
Irish	IE	-	-	-	-	82	120	277	331	100	158	231
Italy	IT	3	6	12	9	10	20	48	53	100	62	62
Luxembourg	LU	18	66	62	29	47	63	101	86	100	42	30
Budapest	HU	:	:	:	:	:	:	:	:	100	40	49
Malta	MT	-	-	-	70	6	11	188	28	100	25	25
Euronext (3)		10	14	17	20	27	41	60	73	100	115	108
Vienna	AT	53	76	91	139	111	132	194	132	100	80	63
Warsaw	PL	1	10	27	14	29	41	46	58	100	51	40
Ljubljana	SI	-	-	45	38	53	59	92	130	100	129	165
Helsinki	FI	1	4	6	9	11	17	29	53	100	87	86
Stockholmsbörsen	SE	6	9	18	19	28	36	47	65	100	79	58
London	UK	15	19	23	25	31	44	63	75	100	99	88
Tokyo and Osaka	JP	23	35	40	43	45	42	35	72	100	69	64
Nasdaq	US	5	7	7	12	17	23	28	53	100	55	37
NYSE	US	16	21	22	28	37	52	66	81	100	95	93

(1) Exchanges use different reporting systems and therefore comparisons between stock exchanges belonging to a different category are not valid.

(2) 1996-2001, Barcelona, Bilbao and Madrid; 2002 Spanish exchanges (BME); estimates.

(3) Dutch holding company that operates through local subsidiaries, formed from the merger of Amsterdam, Brussels and Paris exchanges, expanded with the acquisition of LIFFE (London International Financial Futures and Options Exchange) and the merger with the Portuguese exchange BVLP (Bolsa de Valores de Lisboa e Porto).

Source: World Federation of Exchanges (www.fibv.com).

Table 21.12
Number of listed bonds, end 2003 (units)

Exchange		Domestic public	Domestic non-public	International	Total
Prague stock exchange	CZ	14	20	13	47
Copenhagen stock exchange	DK	140	2 111	69	2 320
Deutsche Börse	DE	1 028	4 927	1 260	7 215
Athens exchange	EL	67	67	:	:
Spanish exchanges (BME)	ES	381	2 204	68	2 653
Irish stock exchange	IE	33	508	3 175	3 716
Italian exchange	IT	113	324	72	509
Cyprus stock exchange	CY	56	10	:	:
Lithuanian stock exchange	LT	37	:	:	:
Luxembourg stock exchange	LU	6	0	21 279	21 285
Budapest stock exchange	HU	24	40	1	65
Malta stock exchange	MT	39	27	:	:
Euronext (1)		:	:	:	:
Wiener Börse	AT	146	2 311	114	2 571
Warsaw stock exchange	PL	58	8	4	70
Ljubljana stock exchange	SI	39	53	:	:
Bratislava stock exchange	SK	40	28	2	70
Helsinki exchanges	FI	18	242	6	266
Stockholmsbörsen	SE	114	1 255	43	1 412
London stock exchange	UK	140	5 282	4 341	9 763

(1) Dutch holding company that operates through local subsidiaries, formed from the merger of Amsterdam, Brussels and Paris exchanges, expanded with the acquisition of LIFFE (London International Financial Futures and Options Exchange) and the merger with the Portuguese exchange BVLP (Bolsa de Valores de Lisboa e Porto).

Source: Federation of European Securities Exchanges.

Tables 21.14 and 21.15 provide information on some derivative markets, namely for futures and options on stocks, stock indices and bonds. By far the biggest exchanges for options are EUREX and Euronext, the latter including LIFFE. For futures, both of these exchanges are also important, although several other exchanges are very active for single stock futures, for example, a large number of contracts are traded on the Spanish exchanges (BME).

Table 21.13
Bond turnover, 2003 (EUR million)

Exchange		Electronic order book transactions	Negotiated deals	Total
Prague stock exchange	CZ	0	33 560	33 560
Copenhagen stock exchange	DK	48 894	876 649	925 542
Deutsche Börse	DE	2	400 590	400 592
Athens exchange	EL	41	0	41
Spanish exchanges (BME)	ES	750 959	2 012 467	2 763 426
Irish stock exchange	IE	-	37 234	37 234
Italian exchange	IT	148 874	:	148 874
Cyprus stock exchange	CY	4	0	4
Lithuanian stock exchange	LT	10	391	401
Luxembourg stock exchange	LU	380	-	380
Budapest stock exchange	HU	1 124	87	1 212
Malta stock exchange	MT	119	-	119
Euronext (1)		23 462	:	23 462
Wiener Börse	AT	508	-	508
Warsaw stock exchange	PL	821	507	1 328
Ljubljana stock exchange	SI	136	342	478
Bratislava stock exchange	SK	2 884	22 948	25 832
Helsinki exchanges	FI	-	42	42
Stockholmsbörsen	SE	357	1 096 721	1 097 078
London stock exchange	UK	:	1 913 677	1 913 677

(1) Dutch holding company that operates through local subsidiaries, formed from the merger of Amsterdam, Brussels and Paris exchanges, expanded with the acquisition of LIFFE (London International Financial Futures and Options Exchange) and the merger with the Portuguese exchange BVL (Bolsa de Valores de Lisboa e Porto).
Source: Federation of European Securities Exchanges.

Table 21.14
Stock/index options and futures, 2003

Derivative exchange		Stock options		Single stock futures		Stock index options		Stock index futures	
		Contracts traded (units)	Notional turnover (EUR million)	Contracts traded (units)	Notional turnover (EUR million)	Contracts traded (units)	Notional turnover (EUR million)	Contracts traded (units)	Notional turnover (EUR million)
Copenhagen stock exchange	DK	142 362	780	160	3	8 440	46	610 908	4 071
EUREX	DE/CH	190 183 744	379 249	-	-	110 808 600	2 314 190	153 208 368	5 180 155
ADEX	EL	14 700	11	477 464	540	1 388 985	6 682	2 886 150	13 681
Spanish exchanges (BME)	ES	9 704 682	10 734	10 041 683	8 699	268 482	18 036	3 327 775	224 219
IDEM	IT	7 924 068	30 940	468 083	5 462	2 505 347	153 998	6 834 482	590 453
Budapest stock exchange	HU	50	0	1 095 887	:	0	0	596 205	1 296
Euronext (1)		244 682 224	224 230	7 004 235	18 103	103 986 656	1 573 658	56 689 804	2 446 019
otob market.at	AT	1 252 041	2 943	-	-	27 608	633	49 441	1 257
WSE	PL	-	-	93 055	196	109 842	5	4 132 749	12 693
Helsinki exchange	FI	320 255	273	1 649 143	797	0	0	79	1
Stockholmsbörsen	SE	43 098 768	24 094	1 424 890	890	6 371 380	38 826	14 567 240	87 398

(1) Dutch holding company that operates through local subsidiaries, formed from the merger of Amsterdam, Brussels and Paris exchanges, expanded with the acquisition of LIFFE (London International Financial Futures and Options Exchange) and the merger with the Portuguese exchange BVL (Bolsa de Valores de Lisboa e Porto).
Source: Federation of European Securities Exchanges.

Table 21.15
Bond options and futures, 2003

Derivative exchange		Bond options		Bond futures	
		Contracts traded (units)	Notional turnover (EUR million)	Contracts traded (units)	Notional turnover (EUR million)
EUREX	DE/CH	49 538 160	5 550 654	512 622 816	57 669 160
Spanish exchanges (BME)	ES	-	-	1 263	126
Budapest stock exchange	HU	-	-	0	:
Euronext (1)		77 862 816	73 665 480	197 961 840	173 532 900
Stockholmsbörsen	SE	0	0	6 674 408	666 602

(1) Dutch holding company that operates through local subsidiaries, formed from the merger of Amsterdam, Brussels and Paris exchanges, expanded with the acquisition of LIFFE (London International Financial Futures and Options Exchange) and the merger with the Portuguese exchange BVL (Bolsa de Valores de Lisboa e Porto).
Source: Federation of European Securities Exchanges.

AGENTS AND BROKERS: INSURANCE, PENSION FUNDS AND MORTGAGES

The distribution channels of insurance, pension and mortgage policies vary greatly between countries and work either through direct writing by pension 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, selecting the appropriate product for each of their clients. 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.

In 2002 the insurance mediation directive ⁽²⁶⁾ was adopted, which aims to improve choice and reinforce customer protection, as well as to facilitate the cross-border provision of services and to ensure professionalism and competence among insurance intermediaries. Notably the directive will require insurance intermediaries to give customers clear explanations for the advice they give on which products to buy and to specify in writing, in terms comprehensible to the customer, why they have recommended particular products in the light of the customer's individual requirements.

In 2001 the Commission adopted a recommendation laying down guidelines on harmonised information to be made available to consumers concerning home loans. The aim of the guidelines is to make it easier for consumers to compare loan products available from different lenders and so allow consumers to make an informed choice. The guidelines incorporated in the recommendation were agreed in the form of a voluntary code of conduct.

⁽²⁶⁾ Directive 2002/92/EC of the European Parliament and of the Council of 9 December 2002 on insurance mediation.

LABOUR FORCE

According to the LFS, employment in the EU's financial auxiliary activities (NACE Division 67) was estimated at some 807 700 persons employed in 2002. Men made up 56.5 % of this workforce, a higher share than in either of the other financial services' divisions, which both recorded a very gender-balanced workforce, but a fairly typical share for services in general.

In terms of working status, the labour force in this part of financial services registered a strong contribution from self-employed workers, 18.2 % of the EU-15 total, higher than the services' average (17.3 %) and far above the financial services' average (6.7 %). This high rate of self-employment can be explained by the importance of agents and brokers within this sector, as well as other small independent financial advisers.

In terms of the incidence of part-time work, the financial auxiliaries workforce was similar to the other parts of financial services, as 14.1 % of those employed in the EU-15 worked part-time in 2002, compared with a financial intermediation average of 13.5 %.

Table 21.16 Activities auxiliary to financial intermediation (NACE Division 67)
Labour force characteristics, 2002

	Share of men		Share of full-time		Share of employees	
	Value (%)	Index (services=100)	Value (%)	Index (services=100)	Value (%)	Index (services=100)
EU-25	:	:	:	:	:	:
EU-15	56.5	100.3	85.9	107.2	81.4	100.8
BE	64.0	108.0	85.1	104.1	79.7	102.8
CZ	46.0	86.7	95.5	101.4	66.6	88.5
DK	:	:	:	:	:	:
DE	61.0	119.1	84.1	112.2	52.8	62.2
EE	:	:	:	:	:	:
EL	62.1	101.1	98.8	102.5	74.7	129.2
ES	51.9	89.9	90.8	99.8	60.0	80.6
FR	50.1	88.1	89.7	105.7	77.7	87.5
IE	48.7	91.9	91.7	115.6	82.1	97.4
IT	58.7	94.8	86.4	95.7	63.0	104.9
CY	55.3	104.6	92.5	99.4	42.3	55.9
LV	:	:	:	:	:	:
LT	:	:	:	:	:	:
LU	53.4	95.0	90.9	102.8	87.8	97.7
HU	:	:	86.2	89.8	79.6	98.7
MT	56.2	81.0	81.8	92.7	100.0	123.7
NL	57.8	98.5	66.1	114.1	83.1	94.6
AT	65.6	132.7	:	:	48.6	56.0
PL	:	:	:	:	:	:
PT	:	:	:	:	:	:
SI	:	:	94.2	99.5	100.0	115.2
SK	:	:	:	:	:	:
FI	:	:	100.0	120.1	93.4	107.0
SE	50.7	85.6	82.8	104.6	87.7	102.6
UK	56.2	100.3	86.9	121.1	93.7	106.9

Source: Eurostat, Labour Force Survey.

Table 21.17

Central banking (NACE Class 65.11)
Main indicators, 2001

	BE (1)	CZ	DK (1)	DE (1)	EE	EL (1)	ES (1)	FR (1)	IE	IT (1)	CY	LV	LT	LU (1)
Turnover (EUR million)	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Value added at factor cost (EUR million) (2)	846	:	809	:	:	789	2 877	3 257	345	2 812	:	:	:	:
Purchases of goods and services (EUR million)	47	:	36	490	:	28	122	347	:	957	:	:	:	:
Gross investment in tangible goods (EUR million) (2)	29	:	:	:	:	:	20	163	18 768	3 989	:	:	:	:
Number of persons employed (thousands) (3)	3	:	1	16	:	3	3	15	1	9	:	:	:	0
App. labour productivity (EUR thous./pers. emp.) (4)	297.5	:	1 466.0	:	:	248.6	946.1	213.4	516.3	325.5	:	:	:	:
Average personnel costs (EUR thous./employee) (4)	65.3	:	71.2	61.6	:	:	57.5	85.8	44.9	:	:	:	:	:
Wage adjusted labour productivity (%) (4)	455.3	:	2 058.7	:	:	:	1 644.0	248.8	1 151.1	:	:	:	:	:
Gross operating rate (%)	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	HU	MT	NL (1)	AT	PL	PT (1)	SI	SK	FI (1)	SE (1)	UK (1)	BG	RO	TR
Turnover (EUR million)	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Value added at factor cost (EUR million)	:	:	2 031	1 821	:	473	:	:	390	1 020	0	:	:	:
Purchases of goods and services (EUR million)	:	:	98	108	:	39	:	:	16	57	0	:	:	:
Gross investment in tangible goods (EUR million)	:	:	16	33	:	:	:	:	9	9	:	:	:	:
Number of persons employed (thousands) (3)	:	:	2	1	:	2	:	1	1	0	2	:	:	:
App. labour productivity (EUR thous./pers. emp.) (4)	:	:	1 225.0	1 649.2	:	257.9	:	:	536.5	2 175.1	0.0	:	:	:
Average personnel costs (EUR thous./employee) (4)	:	:	58.0	82.2	:	52.3	:	:	63.9	69.3	:	:	:	:
Wage adjusted labour productivity (%) (4)	:	:	2 111.3	2 006.5	:	493.5	:	:	0.0	3 405.1	0.0	:	:	:
Gross operating rate (%)	:	:	:	:	:	:	:	:	:	:	:	:	:	:

(1) 2000.

(2) Ireland, 1999.

(3) Ireland and Austria, 2000.

(4) Austria, 2000; Ireland, 1999.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 21.18

Other monetary intermediation; other financial intermediation (NACE Class 65.12 and Group 65.2)
Main indicators, 2001

	BE (1)	CZ	DK (1)	DE (1)	EE	EL (1)	ES (1)	FR (1)	IE (1)	IT (1)	CY	LV	LT	LU (1)
Turnover (EUR million)	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Value added at factor cost (EUR million)	9 847	:	6 189	:	164	5 594	20 234	45 490	:	40 880	:	:	147	5 922
Purchases of goods and services (EUR million)	5 511	:	2 788	42 680	77	1 961	9 816	28 493	:	24 218	:	:	107	3 034
Gross investment in tangible goods (EUR million)	657	:	279	:	15	:	2 513	539	:	38 402	:	:	26	:
Number of persons employed (thousands)	76	:	49	757	4	57	249	367	35	344	:	9	9	22
App. labour productivity (EUR thous./pers. emp.)	129.1	:	127.5	:	43.6	98.4	81.3	124.1	:	118.8	:	:	16.7	265.7
Average personnel costs (EUR thous./employee)	66.9	:	58.1	57.2	14.5	:	48.5	62.5	:	:	:	:	10.4	:
Wage adjusted labour productivity (%)	193.0	:	219.4	:	300.6	:	167.4	198.5	:	:	:	:	159.9	:
Gross operating rate (%)	:	:	:	:	:	:	:	:	:	:	:	:	:	:
	HU	MT	NL (1)	AT	PL	PT (1)	SI	SK (1)	FI (1)	SE (1)	UK (1)	BG	RO	TR
Turnover (EUR million)	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Value added at factor cost (EUR million) (2)	1 381	:	15 279	8 026	:	5 404	668	:	2 986	7 419	83 539	:	:	:
Purchases of goods and services (EUR million) (2)	782	:	7 055	4 440	:	1 880	250	:	1 325	3 878	53 616	:	:	:
Gross investment in tangible goods (EUR million) (3)	112	:	0	1 114	:	:	:	:	:	5 216	:	:	202	:
Number of persons employed (thousands) (2)	34	:	131	73	:	60	11	22	26	480	19	41	:	:
App. labour productivity (EUR thous./pers. emp.) (2)	40.1	:	116.6	109.7	:	90.6	59.2	:	115.9	:	174.0	:	:	:
Average personnel costs (EUR thous./employee) (2)	16.8	:	51.1	59.7	:	36.3	:	:	37.1	:	44.3	:	8.3	:
Wage adjusted labour productivity (%) (2)	238.9	:	228.2	183.7	:	249.8	:	:	312.3	:	393.0	:	:	:
Gross operating rate (%)	:	:	:	:	:	:	:	:	:	:	:	:	:	:

(1) 2000.

(2) Austria, 2000.

(3) Austria, 1999.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 21.19

Life Insurance (NACE Class 66.01)
Main indicators, 2001

	BE (1)	CZ	DK	DE	EE	EL	ES	FR (2)	IE (1)	IT	CY	LV	LT	LU
Turnover (EUR million)	1 970	0	8 145	62 458	23	:	8 207	38 840	8 528	37 580	:	0	19	5 389
Value added at factor cost (EUR million) (3)	:	:	-61	3 310	:	:	6 684	:	:	:	:	:	:	:
Purchases of goods and services (EUR million) (3)	:	:	:	10 300	:	:	321	:	:	:	:	:	:	:
Gross investment in tangible goods (EUR million)	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Number of persons employed (thousands)	0	0	2	58	0	:	2	:	5	3	:	0	0	1
App. labour productivity (EUR thous./pers. emp.) (3)	:	:	-33.0	56.3	:	:	2 706.1	:	:	:	:	:	:	:
Average personnel costs (EUR thous./employee)	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Wage adjusted labour productivity (%)	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Gross operating rate (%) (3)	:	:	-2.2	-0.1	:	:	77.7	:	:	:	:	:	:	:
	HU	MT	NL	AT (2)	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	255	:	25 814	534	2 522	3 039	0	52	3 330	13 000	175 944	45	:	:
Value added at factor cost (EUR million)	32	:	6 046	:	:	107	:	:	:	:	:	:	:	:
Purchases of goods and services (EUR million)	75	:	2 731	:	:	48	:	:	:	:	:	:	:	:
Gross investment in tangible goods (EUR million)	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Number of persons employed (thousands) (4)	3	:	9	0	9	1	0	1	1	4	:	1	:	:
App. labour productivity (EUR thous./pers. emp.)	10.3	:	643.2	:	:	120.9	:	:	:	:	:	:	:	:
Average personnel costs (EUR thous./employee)	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Wage adjusted labour productivity (%)	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Gross operating rate (%)	8.1	:	19.3	:	:	1.8	:	:	:	:	:	:	:	:

(1) 1999.

(2) 2000.

(3) Denmark, 2000.

(4) Slovakia, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 21.20

Pension funding (NACE Class 66.02)
Main indicators, 2001

	BE	CZ	DK	DE (1)	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	1 159	469	82	17 941	:	:	10 508	:	:	3 422	:	:	:	:
Value added at factor cost (EUR million)	:	:	194	:	:	:	22 723	:	:	:	:	:	:	:
Purchases of goods and services (EUR million)	177	25	3	383	:	:	521	:	:	:	:	:	:	:
Gross investment in tangible goods (EUR million)	:	:	:	184	:	:	92	:	:	:	:	:	:	:
Number of persons employed (thousands)	0	0	0	5	:	:	:	:	:	:	:	:	:	:
App. labour productivity (EUR thous./pers. emp.)	:	:	4 972.0	:	:	:	:	:	:	:	:	:	:	:
Average personnel costs (EUR thous./employee)	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Wage adjusted labour productivity (%)	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Gross operating rate (%) (2)	:	:	233.2	:	:	:	:	:	:	:	:	:	:	:
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	:	:	14 199	813	:	2 170	15 096	:	153	470	34 138	:	:	:
Value added at factor cost (EUR million)	:	:	9 103	-181	:	940	29 691	:	154	:	:	:	:	:
Purchases of goods and services (EUR million)	:	:	373	24	:	65	2 410	:	1	:	:	:	:	:
Gross investment in tangible goods (EUR million) (2)	:	:	:	1	:	:	637	:	1	:	:	:	:	:
Number of persons employed (thousands)	:	:	8	0	:	:	:	:	0	0	:	:	:	:
App. labour productivity (EUR thous./pers. emp.)	:	:	1 083.7	-738.8	:	:	:	:	3 422.2	:	:	:	:	:
Average personnel costs (EUR thous./employee)	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Wage adjusted labour productivity (%)	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Gross operating rate (%) (2)	:	:	61.6	-23.9	:	:	187.4	:	141.6	:	:	:	:	:

(1) 2000.

(2) Finland, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 21.21

Non-life insurance (NACE Class 66.03)

Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR (1)	IE (2)	IT	CY	LV	LT	LU
Turnover (EUR million)	4 578	103	4 226	79 128	94	:	8 981	43 892	3 376	11 117	:	0	114	831
Value added at factor cost (EUR million) (3)	:	:	:	15 230	:	:	14 029	:	:	:	:	:	:	:
Purchases of goods and services (EUR million) (3)	:	:	:	19 460	:	:	1 135	:	:	:	:	:	:	:
Gross investment in tangible goods (EUR million)	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Number of persons employed (thousands)	7	1	12	158	1	:	18	:	4	12	:	0	4	1
App. labour productivity (EUR thous./pers. emp.) (3)	:	:	:	95.3	:	:	768.6	:	:	:	:	:	:	:
Average personnel costs (EUR thous./employee)	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Wage adjusted labour productivity (%)	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Gross operating rate (%) (3)	:	:	:	8.9	:	:	146.7	:	:	:	:	:	:	:
	HU	MT	NL	AT (1)	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	18	:	18 219	1 742	3 574	1 828	220	12	2 671	8 017	50 611	201	:	:
Value added at factor cost (EUR million)	5	:	1 488	:	:	357	:	:	:	:	:	:	:	:
Purchases of goods and services (EUR million)	8	:	2 677	:	:	94	:	:	:	:	:	:	:	:
Gross investment in tangible goods (EUR million)	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Number of persons employed (thousands) (4)	1	:	38	1	23	5	0	0	10	14	:	3	:	:
App. labour productivity (EUR thous./pers. emp.)	6.4	:	39.1	:	:	66.2	:	:	:	:	:	:	:	:
Average personnel costs (EUR thous./employee)	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Wage adjusted labour productivity (%)	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Gross operating rate (%)	-11.8	:	1.0	:	:	7.4	:	:	:	:	:	:	:	:

(1) 2000.

(2) 1999.

(3) Germany, 2000.

(4) Slovakia, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Business services



In this chapter, the term 'business services' is used to refer to the aggregate of three activities: renting and leasing activity (NACE Division 71, covered in Subchapter 22.1); research and development (NACE Division 73, covered in Subchapter 22.2) and other business activities (NACE Division 74, the components of which are covered in Subchapters 22.3 to 22.9). Business services enterprises, using their expertise, enable their clients to focus on their own field of competence and hence reduce the need to occupy their own personnel on ancillary tasks. In this sense business service enterprises contribute to the competitiveness of their clients. At the end of 2003 the European Commission released a communication entitled *The competitiveness of business-related services and their contribution to the performance of European enterprises*, COM(2003) 747 final. It deals with a wide range of market services directly affecting the competitiveness of enterprises, both manufacturers and other services providers. The main political issues identified within the communication are: i) market integration and competition in business-related services markets is not vigorous enough to ensure and strengthen their competitiveness; ii) that the inputs necessary for production (labour qualifications, integration of ICT and capital) are lacking in quality and quantity; iii) that outputs from business-related services enterprises are not sufficiently transparent (standards), valued (reporting on intangible assets) or documented (quality); iv) that the provision and use of business-related services is limited in less developed regions and the new Member States / candidate countries, mainly affecting SMEs and convergence processes; v) that knowledge about the sector and its markets is scarce, hampering the decision making of enterprises and policy makers.

For business services enterprises, the transfer of some services to non-Community countries, as

witnessed with call centres, has meant that EU enterprises have to face new competitors in a way that manufacturing enterprises have done for some time.

For consumers of business services, be they enterprises or individuals, comparing and choosing services providers is still rather difficult given the intangible characteristic of the services they sell. Judging their quality often means buying them and trying them.

According to the Enterprise Directorate-General of the European Commission ⁽¹⁾, the business services sector is usually characterised by a high level of regulation, in the form of either State regulation or self-regulation by professional bodies ⁽²⁾. At the beginning of 2004, the European Commission proposed a directive to create a real internal market in services ⁽³⁾. Requirements were that Member States cut administrative burdens and excessive red tape that can currently prevent enterprises from offering their services across borders or from opening premises in other Member States. Services covered include, among many others, professional services such as consulting, architecture, engineering or legal advice, as well as technical testing, customer base management, data processing, employment and advertising agencies, security services and trade fairs. The scope of the proposed directive is not limited to business services, as it also extends to cover, among others, retail services, travel agencies, hotels, restaurants and entertainment, as well as health services and environmental services.

⁽¹⁾ *Enterprise Europe, Enterprise policy news and reviews*, published by the European Commission's Directorate-General for Enterprise; No°14 January-March 2004.

⁽²⁾ *Report on competition in professional services*, European Commission, COM(2004) 83 final.

⁽³⁾ The full texts of the proposal and impact assessment are available at: http://www.europa.eu.int/comm/internal_market/en/services/services/index.htm.

Business services include the technical, professional and operational services generally supplied to the business community or the public administration, rather than to households, for the support of their operation or organisation. Renting and leasing, research and development, legal, tax and management consultancy, advertising and market research activities, engineering services, human resources services, and cleaning and security services are all included within NACE Divisions 71, 73 and 74 and are covered by this chapter. NACE Section K also covers real estate services (NACE Division 70) and computing services (NACE Division 72), which are included as parts of Chapter 15 and Chapter 23 respectively.

NACE

- 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;
- 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.

STRUCTURAL PROFILE

Value added generated in 2001 by the EU-25 business services sector was estimated at EUR 595.5 billion, some 24.5 % of non-financial services (NACE Sections G to I and K). There were 15.3 million persons employed in the EU-25 ⁽⁴⁾ (14.1 million in the EU-15), accounting for 23.6 % of the total number of persons employed in non-financial services. For comparison, the EU-25 business services sector generated more value added than hotels and restaurants (NACE Section H) or transport and communications (NACE Section I). Other business activities (NACE Division 74) generated EUR 527.5 billion of value added in the EU-25 in 2001, and as such contributed most (88.6 %) of the EU-25 business services value added. Renting and leasing (NACE Division 71) accounted for 9.2 % of sectoral value added and the activity of research and development (NACE Division 73) for the remaining share.

The United Kingdom, with EUR 171.2 billion of value added, accounted for the largest part of the EU-25's business services sector in 2001. Germany generated EUR 121.3 billion (2000) of value added and was the second largest contributor. Other Member States that contributed highly to the EU-25 level of value added were France (EUR 92.9 billion) and Italy (EUR 56.0 billion). Among the 10 new Member States ⁽⁵⁾, Poland (EUR 10.2 billion) had by far the largest value added in the business services sector. As a share of value added in the non-financial services sector (NACE Sections G to I and K), business services represented 29.6 % in the United Kingdom, and over 25 % in both Germany (2000) and France ⁽⁶⁾. Among the 10 new Member States the highest shares were reported in Slovenia (20.1 %) and the Czech Republic (19.1 %) and the lowest in Latvia (7.8 %) and Lithuania (8.7 %).

⁽⁴⁾ Cyprus and Malta (NACE Divisions 71 and 73), not available, Poland (NACE Division 73 only) and Slovakia, number of employees.

⁽⁵⁾ Cyprus and Malta, not available.

⁽⁶⁾ Germany and the Netherlands, 2000; Greece, Cyprus and Malta, not available.

Table 22.1

**Business services (NACE Divisions 71, 73 and 74)
Structural profile, 2001**

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (1) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (171.2)	United Kingdom (123)	United Kingdom (3 313.5)
2	France (92.9)	France (106)	Germany (2 587.3)
3	Italy (56.0)	Belgium (103)	France (2 145.5)
4	Spain (36.1)	Luxembourg (96)	Italy (1 612.0)
5	Belgium (16.5)	Italy (91)	Spain (1 539.3)

(1) Germany, Greece, Cyprus, Malta and the Netherlands, not available.

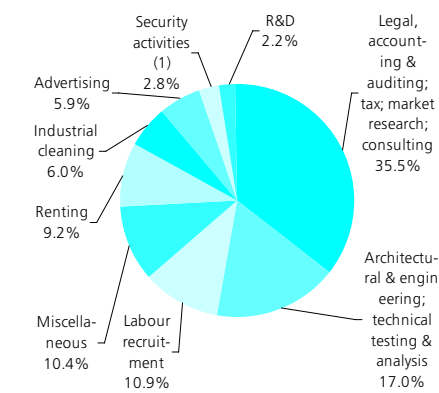
(2) Informa estimates.

(3) Greece, Cyprus, Malta, Poland and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 22.1

**Business services (NACE Divisions 71, 73 and 74)
Share of value added at factor cost, EU-25, 2001**



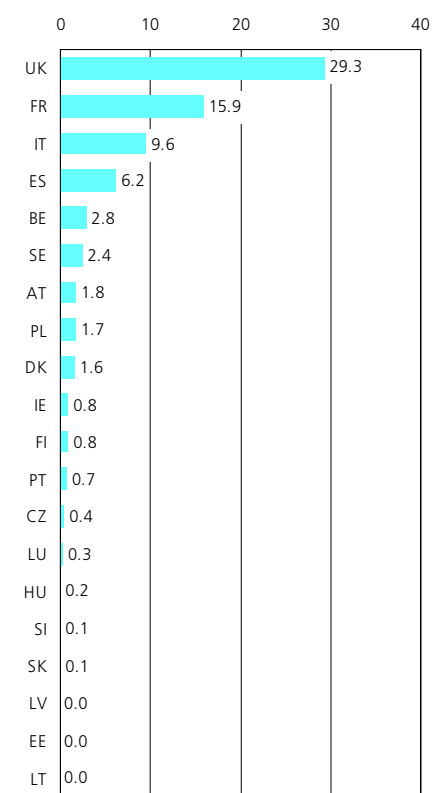
(1) Informa estimate.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

In 2001, a breakdown of EU-25 value added in the business services sector showed that micro enterprises (with less than 10 persons employed), small enterprises (with 10 to 49 persons employed) and medium-sized enterprises (with 50 to 249 persons employed) each accounted for a slightly higher share of this sector's value added than their average contributions to value added for the whole of non-financial services (NACE Sections G to I and K). As a result the contribution of large enterprises (250 or more persons employed) to the business services sector's value added was 6.0 percentage points lower than the corresponding average for non-financial services. Among the three NACE divisions that compose the business services sector, 54.9 % of the value added in research and development (NACE Division 73) was made by large enterprises in contrast to a 31.0 % average for business services as a whole.

Figure 22.2

**Business services (NACE Divisions 71, 73 and 74)
Share of EU-25 value added, 2001 (%) (1)**



(1) Informa estimates. Germany, Greece, Cyprus, Malta and the Netherlands, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 22.2

Business services (NACE Divisions 71, 73 and 74)

Value added at factor cost and persons employed, by enterprise size-class, 2001 (% of total)

	Micro enterprises		Small enterprises		Medium-sized enterprises		Large enterprises	
	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed
EU-25	29.4	29.1	20.8	17.6	18.9	16.6	31.0	36.8
EU-15	29.5	27.6	20.7	17.8	18.6	16.5	31.2	38.2

Source: Eurostat, Structural Business Statistics (theme4/sbs/sizclass).

Table 22.3

Share of value added for selected business services in GDP, 2001 (per thousand)

	EU-25 (1)	BE	CZ	DK	DE (2)	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK
Total	14.7	18.5	10.3	13.0	10.0	13.2		17.6	22.7	7.2	9.3		9.5	2.9	14.7	6.0	6.3	24.4	12.4	14.5	12.1	7.0	6.2	10.2	12.8	27.3
Advertising	3.8	2.9	4.2	3.7	2.6	3.7		5.0	3.9	1.5	1.6		5.4	1.3	1.6	1.6	3.3	5.1	3.5	7.6	2.7	1.8	2.5	3.0	5.5	6.3
Labour recruitment & provision of personnel	7.0	10.1	0.8	2.8	2.7	2.8		4.3	13.3	2.2	1.6		0.7	0.2	6.4	1.2	1.0	13.2	4.8	0.7	3.7	0.7	0.3	1.9	0.6	15.0
Investigation and security activities		1.7	2.9	0.4	1.0	5.3		2.6	2.0	1.6	1.5		2.6	1.1	2.5	1.9	1.1		0.8	4.2	2.9	2.1	2.3	1.3	2.1	2.7
Industrial cleaning	3.9	3.8	2.4	6.0	3.8	1.4		5.6	3.5	1.8	4.7		0.9	0.4	4.3	1.2	0.9	6.1	3.3	2.0	2.7	2.5	1.0	4.0	4.7	3.2

(1) Based on data for available countries.

(2) 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs) and National Accounts - ESA95 - aggregates (theme2/aggs).

Table 22.4

Specialisation in business services, 2001 (relative to EU-25) (1)

BE Personnel services Renting	CZ Advertising Architecture, engineering, technical testing	DK Industrial cleaning Architecture, engineering, technical testing
DE :	EE Advertising	EL :
ES Industrial cleaning Advertising	FR Personnel services Renting	IE Legal, accountancy and management services Architecture, engineering, technical testing
IT Industrial cleaning Legal, accountancy and management services	CY :	LV Advertising Miscellaneous business activities
LT Architecture, engineering, technical testing Advertising	LU Legal, accountancy and management services Renting	HU Advertising Architecture, engineering, technical testing
MT Legal, accountancy and management services Miscellaneous business activities	NL Personnel services Renting	AT Renting Advertising
PL Advertising Miscellaneous business activities	PT Renting Advertising	SI Architecture, engineering, technical testing Industrial cleaning
SK Advertising Architecture, engineering, technical testing	FI Industrial cleaning Architecture, engineering, technical testing	SE Advertising Miscellaneous business activities
UK Miscellaneous business activities Personnel services		

(1) Two most specialised business services activities; specialisation ratio defined as the share of each NACE Group in the value added of the business services sector (defined here as NACE Divisions 71 and 74), relative to the same ratio for the EU-25; NACE Group 74.6, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs).

LABOUR AND PRODUCTIVITY

According to LFS data, the breakdown of employment between genders shows that male employment represented 52.6 % of the total number of persons employed in the EU-15 business services sector in 2002. This share was slightly lower than in the services sector as a whole (NACE Sections G to K, 56.3 %). Nonetheless, this breakdown was not the same across the three divisions that compose the business services sector. Indeed, men accounted for more than 60 % of the workforce in the EU-15's renting and leasing subsector (NACE Division 71) and the research and development subsector (NACE Division 73). In the other business activities subsector (NACE Division 74), male employment (51.7 %) was notably lower. The proportion of men in the workforce of the other business activities was significantly lower than the services' average in Cyprus, Luxembourg and Italy⁽⁷⁾. In business services activities as a whole, in Germany, Spain, Ireland, Cyprus and Luxembourg the share of women in the number of persons employed passed 50 %, while this was not the case in their services sectors as a whole.

In the EU-15's business services sector 78.2 % of the persons employed worked on a full-time basis, slightly less than the services average. Part-time employment was more important in the EU-15 other business services subsector (NACE Division 74) than in either of the other NACE divisions that compose the business services sector.

The share of paid employees in the number of persons employed in the EU-15 business services sector was slightly lower (77.4 %) than for the services sector as a whole, resulting from the higher importance of self-employment (21.8 % for business services compared to 17.3 % for the services sector). Nonetheless, in the renting and leasing subsector (NACE Division 71) and in the research and development subsector (NACE Division 73) self-employment accounted for a lower share of the number of persons employed than the average for business services. The high proportion of self-employment (23.0 %) in the other business activities (NACE Division 74) reflected high self-employment rates that were common among many of the liberal professions.

⁽⁷⁾ Poland, not available.

Table 22.5

Business services (NACE Divisions 71, 73 and 74)
Labour force characteristics, 2002

	Share of men		Share of full-time		Share of employees	
	Value (%)	Index (services=100)	Value (%)	Index (services=100)	Value (%)	Index (services=100)
EU-25	:	:	:	:	:	:
EU-15	52.6	93.3	78.2	97.6	77.4	95.8
BE	54.8	92.4	79.8	97.5	74.0	95.4
CZ	51.2	96.4	90.7	96.3	61.2	81.3
DK	52.3	87.7	80.5	101.6	78.1	89.0
DE	48.4	94.5	71.1	94.7	78.6	92.7
EE	56.6	109.2	90.5	95.6	96.6	105.5
EL	52.3	85.2	95.7	99.3	51.2	88.6
ES	49.4	85.6	85.1	93.5	77.6	104.3
FR	53.0	93.3	82.8	97.6	88.4	99.6
IE	49.2	93.1	81.5	102.7	80.4	95.5
IT	52.0	84.0	85.0	94.1	53.7	89.4
CY	42.8	81.0	92.5	99.4	74.9	99.1
LV	45.1	97.2	89.3	96.1	86.8	94.7
LT	54.8	104.8	90.6	99.1	88.9	105.9
LU	46.0	81.8	84.7	95.8	81.6	90.7
HU	51.7	96.2	94.8	98.8	72.4	89.7
MT	68.2	98.1	89.9	101.9	81.8	101.1
NL	56.6	96.5	59.2	102.1	82.3	93.7
AT	46.6	94.1	:	:	78.9	90.8
PL	:	:	:	:	:	:
PT	50.6	90.7	89.3	96.3	76.0	107.6
SI	53.0	100.5	93.0	98.3	81.8	94.3
SK	56.6	109.1	96.7	98.7	76.7	89.3
FI	50.6	95.2	83.5	100.4	85.4	97.8
SE	57.9	97.7	80.7	101.9	82.4	96.5
UK	56.9	101.4	77.2	107.6	80.5	91.9

Source: Eurostat, Labour Force Survey.

In 2001, apparent labour productivity for the business services sector was generally lower than for the non-financial services average (NACE Sections G to I and K) among the Member States⁽⁸⁾, although this was not the case in Germany (2000 data), Ireland, Italy, Lithuania, Austria and the United Kingdom, with Slovakia registering the same level for both activities. Apparent labour productivity for the business services sector for the EU-15 was EUR 40 200 per person employed in 2000.

In a majority of the Member States⁽⁹⁾, average personnel costs per employee were higher in the business services sector than in the non-financial services sector as a whole, although differences were generally small. For the EU-15, average personnel costs for business services were EUR 26 400 per employee in 1999.

⁽⁸⁾ Germany and the Netherlands, 2000; Greece, Cyprus, Malta, Poland and Slovenia, not available.

⁽⁹⁾ Germany, the Netherlands and Slovenia, 2000; Greece, Cyprus and Malta, not available.

Such levels of apparent labour productivity and average personnel costs led to a wage adjusted labour productivity ratio of 161.2 % in the business services sector in 1999 for the EU-15. This ratio was lowest in the research and development subsector (104.9 % in 1999), higher in the other business activities subsector (137.8 % in 2001), and highest in the renting and leasing subsector (350.1 % in 2001). Among the Member States⁽¹⁰⁾, a large majority reported a lower wage adjusted labour productivity ratio in the business services sector than in the non-financial services sector as a whole, with Italy and Ireland the main exceptions, as this ratio was more than 10 % higher in the business services sector.

⁽¹⁰⁾ Germany and the Netherlands, 2000; Greece, Cyprus, Malta, Poland and Slovenia, not available.

Table 22.6

Business services (NACE Divisions 71, 73 and 74)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Business services (1)	40.2	161.2	26.4
Renting of mach. & equip. without operator & of personal & household goods	102.9	350.1	29.4
Research and development (1)	41.8	104.9	42.9
Legal, accounting & auditing; tax; market research; consulting	59.4	151.6	39.2
Architectural & engineering; technical testing & analysis	50.7	123.4	41.1
Advertising	47.9	138.1	34.7
Labour recruitment and provision of personnel	24.9	115.5	21.6
Investigation and security activities	:	:	:
Industrial cleaning	14.6	111.5	13.1
Miscellaneous business activities n.e.c.	40.9	130.7	31.3

(1) Apparent labour productivity, 2000; wage adjusted labour productivity and average personnel costs, 1999.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

22.1: 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). There are a wide variety of items that can be rented, among which the most important 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 21). The renting and leasing of real estate is also treated separately in Chapter 15.

In general durable goods can be rented or leased. 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.

According to Leaseurope (European Federation of Leasing Company Associations) ⁽¹⁾, based on results for 12 Member States ⁽²⁾, the proportion of investment financed by leasing was 12.5 % in 2002, with rates equal to or above 16 % in Italy and France.

⁽¹⁾ *Leasing activity in Europe - Key Facts and Figures*, September 2003.

⁽²⁾ EU-15 Member States excluding Greece, Ireland and Luxembourg.

STRUCTURAL PROFILE

Value added in EU-25 renting and leasing activities (NACE Division 71) was EUR 54.8 billion in 2001 (EUR 53.6 billion in the EU-15), some EUR 16.5 billion (or 30.2 % of the EU-25 total) of which was generated in the United Kingdom, while value added was EUR 10.8 billion in Germany (2000), and EUR 9.5 billion (or 18.9 % of the EU-25 total) in France. In 2001, EU-25 value added in renting and leasing activities accounted for an estimated 9.2 % of the wealth generated by the business services sector (NACE Divisions 71, 73 and 74). The number of persons employed was 549 100 in the EU-25,

of which 519 700 worked in the EU-15. Renting and leasing activities therefore contributed a very small proportion of total employment within the EU-25's business services sector in 2001 (0.9 %). In terms of their contribution to value added in non-financial services (NACE Sections G to I and K), Portugal, Austria, the United Kingdom, France, Belgium, Germany (2000 data) and Luxembourg were all relatively specialised in the renting and leasing sector ⁽¹³⁾.

⁽¹³⁾ Germany and the Netherlands, 2000; Greece, Cyprus and Malta, not available.

Table 22.7

Renting of machinery and equipment without operator and of personal and household goods (NACE Division 71)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (16.5)	Portugal (143)	United Kingdom (174.3)
2	France (10.3)	Austria (132)	France (82.4)
3	Netherlands (4.0)	United Kingdom (127)	Germany (74.9)
4	Spain (3.6)	France (126)	Spain (68.3)
5	Belgium (1.8)	Belgium (121)	Italy (31.0)

(1) Germany, Greece, Cyprus and Malta, not available.

(2) Germany, Greece, Cyprus, Malta and the Netherlands, not available.

(3) Greece, Cyprus, Malta and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

The renting of automobiles and other transport equipment (NACE Groups 71.1 and 71.2) generated EUR 30.2 billion of value added in the EU-25 in 2001, which was 55.2 % of the total for the renting and leasing sector. In the renting of other machinery and equipment subsector (NACE Group 71.3) the EU-25 generated EUR 18.8 billion of value added, 34.2 % of the renting and leasing sectoral total. With a value added of EUR 5.8 billion, the renting of personal and household goods subsector (NACE Group 71.4) accounted for the remaining 10.6 % of value added that was generated in the EU-25's renting and leasing sector.

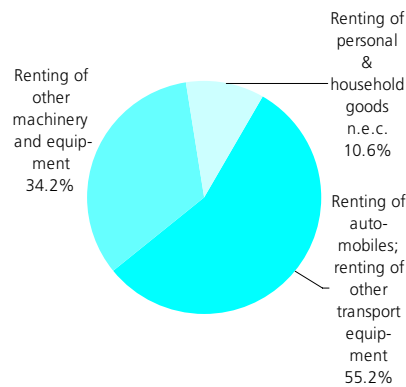
According to the European Federation of Leasing Company Associations (Leaseurope), an analysis of leasing activities by type of asset indicates that motor cars generated 31.9 % of EU-25 turnover in 2002, industrial equipment accounted for 24.8 %, while other road transport vehicles and other transport vehicles accounted together for 22.7 % (see Figure 22.4).

LABOUR AND PRODUCTIVITY

According to LFS data, in 2002, 65.7 % of the persons employed in EU-15 renting and leasing activities were men. This share was 13.1 percentage points higher than the business services average (NACE Divisions 71, 73 and 74) and 9.4 percentage points higher than the average for services as a whole (NACE Sections G to K). In Malta, where the male employment rate in renting and leasing activities was 90.5 %, and in Sweden, where it was 79.5 %, the male employment rate was more than 20 percentage points higher than the respective national average for the services sector as a whole.

Some 83.3 % of the persons employed in EU-15 renting and leasing activities worked full-time, which was a slightly higher proportion than for the services sector. Full-time employment rates in renting and leasing activities were 10 percentage points or more higher than the services average in the Netherlands, the United Kingdom, Malta and Sweden. In EU-15 renting and leasing activities, 84.8 % of total employment was made up of paid employees, higher than the services average (80.8 %). In Greece, where self-employed persons represented more than one third (35.7 %) of total employment within the services sector, the proportion of the self-employed was much higher for renting and leasing activities, at 61.7 %.

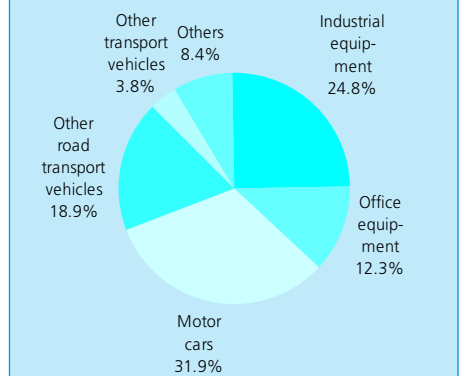
Figure 22.3
Renting of machinery and equipment without operator and of personal and household goods (NACE Division 71)
Share of value added at factor cost, EU-25, 2001



Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

The EU-15 reported an extremely high level of apparent labour productivity for renting and leasing activities, not only the highest of the business services sector at a NACE division level, but also the highest of all the NACE divisions that compose non-financial services (NACE Sections G to I and K). Indeed, apparent labour productivity was EUR 102 900 per person employed in the EU-15, more than twice the level in the two other divisions that make up the business services sector. This can in part be explained by the specific nature of this activity, where the main costs of enterprises are likely to be financial ones and depreciation charges, neither of which impact on gross value added. EU-15 apparent labour productivity was EUR 85 400 per person employed for the renting of other machinery and equipment (NACE Group 71.3) and EUR 39 700 for the renting of personal and household goods (NACE Group 71.4). However, apparent labour productivity was highest, at EUR 183 200 per person employed within the renting of automobiles and other transport equipment subsector (NACE Groups 71.1 and 71.2).

Figure 22.4
Equipment leased by type of asset, EU-25, 2002 (share of turnover) (1)



(1) Excluding Belgium, Cyprus, Ireland, Latvia, Lithuania and Luxembourg.
Source: Leaseurope, Annual Statistics 2002, available at <http://www.leaseurope.org>.

Average personnel costs for renting and leasing activities were EUR 28 500 per employee in the EU-25 and EUR 29 400 in the EU-15, the latter being close to the non-financial services average in the EU-15 (EUR 27 500). In the EU-25's renting of other machinery and equipment subsector (NACE Group 71.4) average personnel costs were EUR 21 000 per employee, notably lower than in the other two renting and leasing subsectors, where average personnel costs were just over EUR 30 000 per employee.

The wage adjusted labour productivity ratio was 350.1 % for the EU-15's renting and leasing sector, the highest of any division in non-financial services and the second highest figure for any division within the non-financial business economy (NACE Sections C to I and K), after the extraction of crude oil and petroleum and natural gas (NACE Division 11).

22.2: 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 22.3. In addition, the statistics presented 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.

STRUCTURAL PROFILE

Value added in the EU-25's research and development activities (NACE Division 73) was estimated at EUR 13.3 billion in 2001, of which EUR 11.9 billion were generated in the EU-15. Research and development activities were therefore the smallest of the business services activities, with a 2.2 % share of business services value added in the EU-25. In value added terms, the United Kingdom had the largest research and development sector in the EU-25, having generated EUR 3.8 billion of value added in 2001, while Poland recorded EUR 1.1 billion of value added, the fourth highest value added among the Member States after Germany (EUR 2.5 billion, 2000) and France (EUR 1.7 billion). There were 289 700 persons employed in this sector in the EU-15 in 2001, and 365 500 in the EU-25 ⁽¹⁴⁾.

LABOUR AND PRODUCTIVITY

According to LFS data, in 2002, men represented 60.1 % of the persons employed in EU-15 research and development activities, some 3.8 percentage points above the services average (NACE Sections G to K). Among the Member States ⁽¹⁵⁾, male employment was particularly high in Slovenian research and development activities (86.5 %), some 33.8 percentage points higher than the national average for the services sector. In contrast, the male proportion of the research and development activities workforce was 10.8 percentage points lower than the services average in Belgium.

In 2002 the labour force in the EU-15's research and development sector was characterised by a high proportion of full-time employment. Some 87.4 % of the persons employed worked full-time, compared with a services average of 80.1 %.

⁽¹⁴⁾ Cyprus and Malta, not available; Poland and Slovenia, number of employees.

⁽¹⁵⁾ Estonia, Greece, Ireland, Cyprus, Latvia, Lithuania, Luxembourg, Malta, Poland and Portugal, not available.

Table 22.8
Research and development (NACE Division 73)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (1)	Largest number of persons employed (thousands) (2)
1	United Kingdom (3.8)	Luxembourg (535)	United Kingdom (96.1)
2	France (1.7)	Poland (296)	Germany (57.5)
3	Poland (1.1)	Slovakia (206)	Netherlands (34.9)
4	Italy (0.9)	Belgium (136)	France (31.1)
5	Belgium (0.5)	Slovenia (124)	Italy (22.5)

(1) Germany, Greece, Cyprus, Malta and the Netherlands, not available.

(2) Greece, Cyprus, Malta, Poland and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 22.9
Research and development (NACE Division 73)
Labour force characteristics, 2002

	Share of men		Share of full-time		Share of employees	
	Value (%)	Index (services=100)	Value (%)	Index (services=100)	Value (%)	Index (services=100)
EU-25	:	:	:	:	:	:
EU-15	60.1	106.7	87.4	109.1	94.7	117.2
BE	48.5	81.8	85.3	104.3	95.7	123.4
CZ	53.0	99.8	92.4	98.1	90.2	119.7
DK	50.2	84.2	92.8	117.1	100.0	114.0
DE	61.8	120.6	80.5	107.3	94.2	111.0
EE	:	:	:	:	:	:
EL	:	:	:	:	:	:
ES	56.4	97.7	98.2	107.9	95.5	128.4
FR	59.8	105.2	87.2	102.8	99.7	112.3
IE	:	:	:	:	:	:
IT	63.9	103.3	94.3	104.4	73.9	123.0
CY	:	:	100.0	107.5	100.0	132.3
LV	:	:	:	:	:	:
LT	:	:	:	:	96.2	114.6
LU	:	:	:	:	:	:
HU	54.0	100.5	98.4	102.5	95.9	118.9
MT	:	:	:	:	:	:
NL	65.8	112.3	75.7	130.5	97.1	110.6
AT	49.9	100.8	:	:	83.8	96.6
PL	:	:	:	:	:	:
PT	:	:	100.0	107.9	100.0	141.5
SI	86.5	164.0	100.0	105.7	85.9	99.0
SK	47.5	91.5	97.6	99.7	98.7	114.8
FI	51.4	96.8	92.0	110.6	97.4	111.5
SE	59.7	100.8	89.4	112.8	98.6	115.4
UK	63.3	112.9	91.2	127.1	93.1	106.2

Source: Eurostat, Labour Force Survey.

Apparent labour productivity in the EU-15's research and development sector was EUR 41 800 per person employed in 2000 and average personnel costs were equal to EUR 43 000 per employee in 1999. The wage adjusted labour productivity ratio in this sector was 104.9 % in 1999, indicating that value

added was only slightly higher than personnel costs. In several countries the wage adjusted productivity ratio was below 100 % in 2001, most notably in the Nordic Member States and the United Kingdom ⁽¹⁶⁾.

⁽¹⁶⁾ Germany and the Netherlands, 2000; Greece, Cyprus, Malta, Poland and Slovenia, not available.

22.3: LEGAL, ACCOUNTANCY AND MANAGEMENT SERVICES

This subchapter extends across 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; they are 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, for instance when they need an accountant, a lawyer, a notary or a tax adviser.

STRUCTURAL PROFILE

The EU-25's legal, accountancy and management services sector (NACE Group 74.1) generated EUR 211.5 billion of value added in 2001, some 40.1 % of the other business activities total (NACE Division 74), which was the highest contribution from any of the NACE groups within this division. There were 3.7 million persons employed in this sector in the EU-25 in 2001, equivalent to 26.0 % of the total number of persons employed in other business activities, which was a much lower share than the corresponding contribution of these activities to value added, while remaining the highest proportion of any group within this NACE division. The United Kingdom made the largest contribution to value added among the Member States for legal, accountancy and management services, with EUR 59.5 billion of added value, equivalent to 28.1 % of the EU-25 total. Germany was the second highest contributor with EUR 52.5 billion of value added in 2000, while value added in Italy and France was about half this level in 2001.

In terms of value added specialisation ratios (which compare the share of this sector in the non-financial services total (NACE Sections G to I and K)) to the EU-25 average for the same ratio), the most specialised Member States ⁽¹⁷⁾ in 2001 were Germany (2000), Italy, Ireland, the United Kingdom, Belgium and Luxembourg, while in all other Member States the legal, accountancy and management services sector's contribution to value added in non-financial services was below the EU-25 average of 8.7 %.

⁽¹⁷⁾ Germany and the Netherlands, 2000; Greece and Cyprus, not available.

Table 22.10

Legal, accountancy and management services (NACE Group 74.1) Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (59.5)	Italy (120)	United Kingdom (847.7)
2	Italy (26.7)	Ireland (118)	Italy (477.6)
3	France (26.6)	United Kingdom (118)	France (444.7)
4	Netherlands (10.7)	Belgium (111)	Spain (338.8)
5	Spain (10.1)	Luxembourg (104)	Netherlands (293.5)

(1) Germany, Greece and Cyprus, not available.

(2) Germany, Greece, Cyprus and the Netherlands, not available.

(3) Germany, Greece, Cyprus and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

According to the SBS data, for the period 1997 to 2001, for an aggregate of 15 Member States ⁽¹⁸⁾ (that together accounted for 68.3 % of the EU-25's value added in this sector in 2001) there was an annual average growth rate of 13.8 % for value added (at current prices) within this sector. Value added grew at a slower pace in 2001 (11.0 %) than it had in 1998 (19.6 %), reflecting the economic slowdown for the business economy in general.

A breakdown of value added by enterprise size-class shows that 58.5 % of the value added generated in the legal, accountancy and management services sector was accounted for by micro (less than 10 persons employed) and small enterprises (from 10 to 49 persons employed), which was a higher share than the average for the whole of the non-financial services sector (46.7 %). The importance of these two enterprise size-classes was even more marked in terms of employment, as they employed 71.9 % of the total number of persons employed in the legal, accountancy and management services sector, a proportion that was 18.0 percentage points higher than the non-financial services average.

Legal services

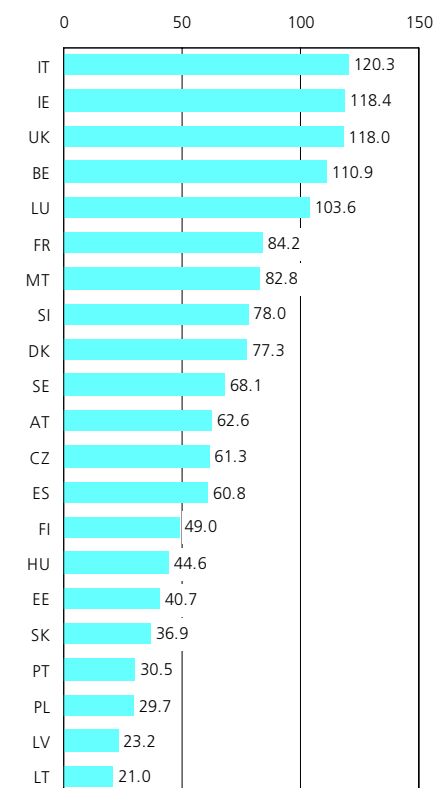
Legal services cover the activities of advocates, barristers, solicitors, notaries, registered lawyers and legal consultants, as classified under NACE Class 74.11. According to figures published by the Council of the Bars and Law Societies of the European Union (CCBE), there were about 753 700 fully qualified lawyers in the EU-25 ⁽¹⁹⁾ in 2002. Directive 98/5/EC of 16 February 1998 allows lawyers to practise in another EU Member State under their home-country professional title.

⁽¹⁸⁾ The Czech Republic, Denmark, Germany, Estonia, Greece, Spain, Cyprus, Lithuania, Hungary and Malta, not available.

⁽¹⁹⁾ The United Kingdom, number of barristers and solicitors only; Latvia, Lithuania and Malta, not available.

Figure 22.5

Legal, accountancy and management services (NACE Group 74.1) Value added specialisation ratio relative to non-financial services, 2001 (EU-25=100) (1)



(1) Germany, Greece, Cyprus and the Netherlands, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Accountancy services

The range of activities covered by NACE Class 74.12 is composed of the recording of commercial transactions from enterprises or others, the preparation of financial accounts, examination of such accounts and certification of their accuracy, the preparation of personal and enterprise income tax returns, as well as advisory activities and representation (other than legal representation) on behalf of clients before tax authorities. The representative organisation for the accountancy profession in Europe, the European Federation of Accountants (FEE) groups bodies having a combined membership of approximately 470 000 individuals (20). About 55 % of the accountants represented in 2002 worked in various capacities in industry, trade, government and education, while the remaining share worked in public practice.

Market research and public opinion polling

The market research and public opinion polling sector (NACE Class 74.13) generated EUR 6.8 billion of value added in the EU-25, equivalent to 3.2 % of the total for legal, accountancy and management services (NACE Group 74.1). This subsector employed 181 100 persons in the EU-25 (21), while in the EU-15 there were 170 400 persons employed, equivalent to 4.9 % of the total number of persons employed in the EU-15's legal, accountancy and management services sector. By far the largest contribution to value added among the Member States (22) came from the United Kingdom, with a 26.9 % share of the EU-25 value added. France (15.8 %), Italy (14.7 %) and the Netherlands (10.6 %) were the only other countries to contribute more than 10 %.

Management consultancy

According to the European Federation of Management Consulting Associations (FEACO), consultancies based in Europe (23) accounted for about half (EUR 46.5 billion) of the worldwide market (in terms of turnover) for management consultancy in 2002. In both the United Kingdom and Germany this market was valued at more than EUR 13 billion. France (EUR 6.2 billion), Spain (EUR 2.4 billion) and Italy (EUR 2.1 billion) had the next largest markets for these services. The number of management consultants working in Europe was about 300 000.

(20) Including EU-15 and the Czech Republic, Cyprus, Hungary, Malta, Poland, Slovenia, Slovakia, Bulgaria, Romania.

(21) Poland and Slovenia, number of employees; Cyprus and Greece, not available.

(22) Detailed data for Germany, Greece and Cyprus are not available but it is estimated that together they accounted for less than 10 % of the EU-25's value added in this subsector.

(23) EU-15 excluding Ireland, Luxembourg and the Netherlands, plus the Czech Republic, Cyprus, Hungary, Poland, Slovenia, Bulgaria, Romania, Norway and Switzerland.

Table 22.11

Breakdown of turnover, by client, for selected business services activities, 2001 (EUR million)

	Accounting			Market research and public opinion polling			Business and management consultancy activities		
	Enterprises	Public sector	Households	Enterprises	Public sector	Households	Enterprises	Public sector	Households
DK	1 255	68	111	111	8	6	876	238	105
ES	5 359	116	271	969	84	13	2 431	120	78
FR	8 335	221	1 433	2 206	129	82	13 549	673	809
IE	843	93	64	128	3	0	:	:	:
PT	711	3	8	:	:	:	1 287	83	9
FI	652	12	35	103	5	1	953	141	9
SE	2 170	69	29	238	17	3	4 630	604	28
UK	15 594	1 731	1 232	3 013	255	34	33 143	4 569	940

Source: Eurostat, Structural Business Statistics (theme4/sbs/bus_serv).

A limited set of Member States (24) provide SBS turnover data for management consultancy that can be broken down by product. In Denmark, strategic consultancy services generated the highest part of turnover (EUR 203.6 million), while in France the largest share came from business organisation consultancy services (EUR 5.1 billion). In the United Kingdom the highest amount of turnover in management consultancy was derived from human resources management consulting services (EUR 7.9 billion) and in Spain, Portugal, Finland and Sweden the largest product (in terms of turnover) was other business and management consultancy services.

LABOUR AND PRODUCTIVITY

The EU-15 legal, accountancy and management services sector registered apparent labour productivity of EUR 59 400 per person employed in 2001, some EUR 20 600 above the average recorded for other business activities (NACE Division 74). Average personnel costs were EUR 39 200 per employee in the EU-15, also higher than the other business activities average. These figures for apparent labour productivity and average personnel costs led to a wage adjusted labour productivity ratio of 151.6 % in the EU-15. Among Member States (25), in Malta, Latvia, Germany (in 2000) and Italy, value added in the legal, accountancy and management services sector was more than twice as high as personnel costs (after adjusting for the ratio of persons employed to employees), while in Portugal, Sweden and the Czech Republic value added did not cover personnel costs.

(24) Only Denmark, Spain, France, Portugal, Finland, Sweden and the United Kingdom available.

(25) Germany, 2000; Greece, Cyprus and Slovenia, not available.

Table 22.12

Top ten global market research companies by turnover, 2002

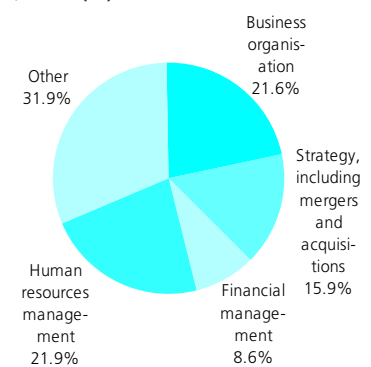
	Global research turnover (EUR million) (1)	
VNU	NL	2 945
IMS Health Inc.	US	1 276
The Kantar Group	UK	1 081
Taylor Nelson Sofres Plc.	UK	950
Information Resources Inc.	US	581
GfK Group	DE	553
Ipsos Group S.A.	FR	533
NFO WorldGroup Inc.	US	488
Westat	US	358
NOP World	UK	335

Source: Industry report, ESOMAR, 2002 website: www.esomar.org.

Data has been converted from USD to EUR, average EUR exchange rates for 2002, Eurostat, Economy and finance (theme2/exint).

Figure 22.6

Breakdown of management consulting turnover by product, for selected Member States, 2001 (%)



(1) Only Denmark, Spain, France, Portugal, Finland, Sweden and the United Kingdom.

Source: Eurostat, Structural Business Statistics (theme4/sbs/bus_serv).

22.4: ARCHITECTS 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.

Consulting engineering and architectural groups have experienced a growing trend towards internationalisation, as private consulting companies are creating an increasing number of offices and subsidiaries among the 10 new Member States, as well as in other industrialised countries, according to the Swedish Federation of Consulting Engineers and Architects (STD). For industrial consultants, competition comes not only from other enterprises in this activity, but also from the industrial clients themselves, as they tend to avoid outsourcing some stages of their activity and rely instead on in-house work.

STRUCTURAL PROFILE

Value added in the architectural, engineering and technical activities sector (NACE Groups 74.2 and 74.3) was EUR 101.2 billion in 2001 in the EU-25 (EUR 97.7 billion in the EU-15), representing 19.2 % of the value added generated in other business activities (NACE Division 74). Germany (2000) contributed EUR 25.7 billion of value added to the EU-25 total, with the United Kingdom reporting a slightly smaller figure of EUR 24.6 billion. The next largest country in this sector was France, with value added that was about half the size of the two largest contributors, at EUR 12.7 billion⁽²⁶⁾. There were 2.2 million persons employed in this sector in the EU-25 in 2001, of which 1.9 million worked in the EU-15. This represented 15.2 % of employment in the EU-25's other business activities sector (NACE Division 74).

⁽²⁶⁾ Greece and Cyprus, not available.

Table 22.13

Architectural and engineering activities; technical testing and analysis (NACE Groups 74.2 and 74.3) Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (24.6)	Slovenia (179)	United Kingdom (378.2)
2	France (12.7)	Sweden (123)	Italy (300.8)
3	Italy (9.1)	Denmark (122)	France (238.5)
4	Spain (6.8)	Finland (113)	Spain (194.2)
5	Netherlands (5.6)	Czech Republic (112)	Netherlands (122.9)

(1) Germany, Greece and Cyprus, not available.

(2) Germany, Greece, Cyprus and the Netherlands, not available.

(3) Germany, Greece, Cyprus, Poland and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Slovenia, Germany (2000), the Nordic Member States of Sweden, Denmark and Finland, as well as the Czech Republic and the United Kingdom were all relatively specialised in architectural, engineering and technical activities in value added terms⁽²⁷⁾, compared to non-financial services (NACE Sections G to I and K) as a whole.

A special survey⁽²⁸⁾ of architectural and engineering activities and related technical consultancy (NACE Group 74.2) was carried out for the 2001 reference year. A breakdown between residential and non-residential clients showed that non-residential clients contributed almost 40 % of the turnover generated in Denmark, but that the corresponding share in Finland, the United Kingdom and France was lower at around 20 %. A breakdown by type of clients showed that the main type (more than 70 % of total turnover) for these services were other enterprises, in all the reporting Member States, as opposed to the public sector or households.

In terms of value added (at current prices) the sector showed uninterrupted year-on-year growth during the period 1997 to 2001. Indeed, according to an EU aggregate based on the SBS data for 16 Member States⁽²⁹⁾ (that accounted together for 71.1 % of the EU-25's value added in 2001) there was an average increase of 8.5 % per annum. For the latest year available (2001), value added growth slowed to 6.5 %.

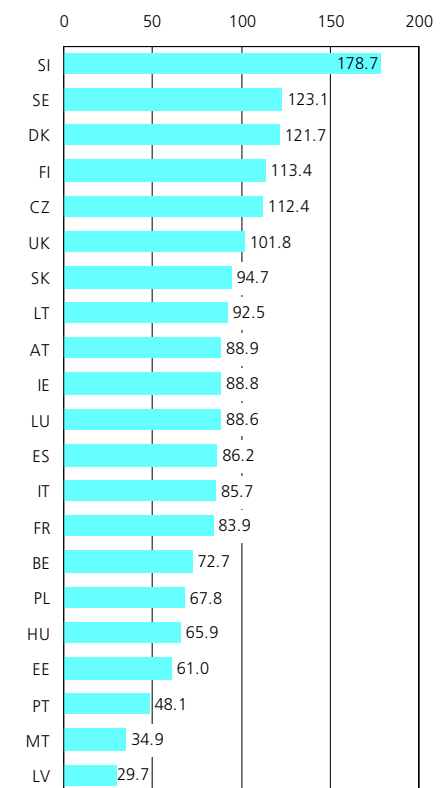
⁽²⁷⁾ Germany and the Netherlands, 2000, Greece and Cyprus, not available.

⁽²⁸⁾ See Statistics in Focus, theme 4 No 11/2004, *Architectural and engineering activities and related technical consultancy*, Eurostat, KS-NP-04-011-EN-N.

⁽²⁹⁾ The Czech Republic, Denmark, Germany, Estonia, Greece, Cyprus, Lithuania, Hungary and Malta, not available.

Figure 22.7

Architectural and engineering activities; technical testing and analysis (NACE Groups 74.2 and 74.3) Value added specialisation ratio relative to non-financial services, 2001 (EU-25=100) (1)



(1) Germany, Greece, Cyprus and the Netherlands, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Engineering consultancy

The range of activities provided by engineering consultancy enterprises includes advice, design, monitoring, management and assistance for various building and construction projects. Engineering consultancy activities apply to residential and non-residential buildings, and to civil engineering projects like transmission lines, power plants, transport infrastructure and facilities, public works facilities, industrial plants; other technical services include for instance geology, hydrology, ship-building and marine engineering. According to the European Federation of Engineering Consultancy Associations (EFCA), in 2002 there were 8 300 enterprises ⁽³⁰⁾ in the EU-15 engineering consultancy subsector, with 178 500 persons employed. Turnover generated by these enterprises was EUR 56.1 billion. Among the new Member States, the Czech Republic, Hungary, Poland and Slovenia together had 160 enterprises, 4 400 persons employed and a turnover of EUR 182.5 million.

Landscape contractors

Activities carried out by landscaping enterprises include maintaining gardens, private and public parks, and also the landscaping of leisure centres and sports grounds, creating slow traffic areas, landscaping roads and accompanying paths, as well as the renaturalisation of stream beds. According to the European Landscape Contractors Association (ELCA), at the beginning of 2002, there were 42 500 landscaping enterprises in the EU-15 ⁽³¹⁾, with 271 000 employees.

LABOUR AND PRODUCTIVITY

In 2001, apparent labour productivity was significantly higher in the EU-15's architectural, engineering and technical activities sector (EUR 50 700 of value added per person employed) than in other business activities as a whole (EUR 38 800). Average personnel costs were also relatively high at EUR 41 100 per employee in the EU-15, compared to EUR 28 100 on average in the other business activities. The resulting wage adjusted labour productivity ratio for the EU-15 was 123.4 %, which was lower than the other business activities average of 137.8 %.

⁽³⁰⁾ The United Kingdom, not available.

⁽³¹⁾ Greece, Luxembourg and Portugal, not available.

Table 22.14**Main indicators for architectural and engineering activities and related technical consultancy (NACE Group 74.2), for selected Member States, 2001**

	Number of enterprises (units)	Number of persons employed (units)	Turnover (EUR million)	Value added (EUR million)	Personnel costs (EUR million)
DK	:	:	2 807	:	:
ES	75 358	150 513	11 286	5 384	2 224
FR	3 721	20 412	2 454	1 307	906
PT	3 994	20 339	1 338	505	378
FI	5 686	23 287	2 227	1 155	854
SE	24 062	49 215	6 213	3 048	:
UK	:	:	25 325	:	:

Source: Eurostat, Structural Business Statistics (theme4/sbs/bus_serv).

Table 22.15**Top ten consulting engineering and architectural groups, EU-15, 2002**

		Number of employees (units)	Turnover (EUR million)
Altran Technologies	F	17 862	1 392
WS Atkins plc	UK	15 450	1 357
Arcadis Group	NL	8 020	819
Fugro N.V	NL	7 003	946
ARUP Group	UK	6 300	584
Mott MacDonald Group	UK	6 265	618
WSP Group plc	UK	5 019	419
Jaakko Pöyry Group	FIN	4 635	407
Grontmij Group	NL	4 000	495
Rambøll-Scandiaconsult Group (proforma)	DK	3 998	380

Source: Swedish Federation of Consulting Engineers and Architects (STD), Sector Review, November 2003.

22.5: 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.

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, expenditures for those activities tend to increase faster than the general economy given the strategic issues and leading advantages they can bring. Recently, the sector was affected by the slowdown observed in the EU (and global) economy in 2002 and 2003 and more particularly by the collapse in 2001 of the dot-com boom. In the direct marketing subsector, the legal framework is a key element as this activity often deals with personal data and ICT increased the number of communication media, for example, advertising by the Internet or on mobile phones (through the use of SMS). Thus, the electronic commerce regulation (2002)⁽³²⁾ applies to spam (unsolicited e-mail) and obliges direct marketing enterprises using the Internet as a communications support to provide the user with some clear information about the subject and the sender of the e-mail, allowing customers to be given the opportunity to refuse to receive such information. The privacy directive⁽³³⁾, that was adopted in 2003, imposes more restriction on the use of personal information databases.

⁽³²⁾ Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002, concerning the processing of personal data and the protection of privacy in the electronic communications sector (directive on privacy and electronic sector).

⁽³³⁾ Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector (directive on privacy and electronic communications).

Table 22.16

Advertising (NACE Group 74.4) Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (10.1)	Poland (154)	Spain (108.7)
2	France (5.8)	Czech Republic (145)	France (105.6)
3	Spain (3.3)	Sweden (134)	United Kingdom (101.2)
4	Netherlands (2.2)	United Kingdom (121)	Netherlands (53.8)
5	Italy (2.0)	Spain (119)	Italy (50.7)

(1) Germany, Greece and Cyprus, not available.

(2) Germany, Greece, Cyprus and the Netherlands, not available.

(3) Germany, Greece, Cyprus, Poland and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

STRUCTURAL PROFILE

The EU-25's advertising activities (NACE Group 74.4) generated EUR 35.2 billion of value added (6.7 % of the other business activities total) in 2001 and employed 752 400 persons, 5.3 % of total employment in other business services. The 10 new Member States' contribution to EU-25 value added was 6.1 % in 2001, by far the highest among the NACE groups within other business activities (NACE Division 74).

In 2001, EUR 10.1 billion of value added was generated in the United Kingdom, by far the highest figure in this sector among the Member States. France (EUR 5.8 billion) and Germany (EUR 5.3 billion, 2000) contributed the next largest shares. In terms of value added specialisation compared to the non-financial services total (NACE Sections G to I and K), Poland was the most specialised country in advertising activities⁽³⁴⁾, while the Czech Republic, Sweden, the United Kingdom and Spain, were also relatively highly specialised. In contrast, using the same measure, Luxembourg was the least specialised Member State in this activity.

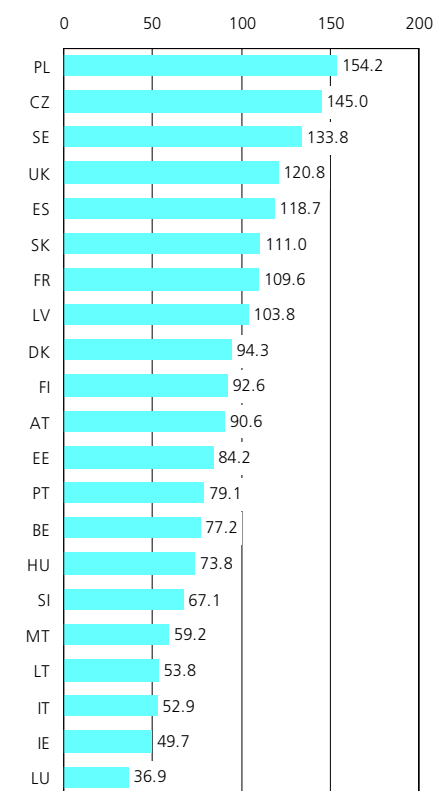
For a time-series analysis of value added (at current prices) in this sector, an aggregate was compiled based on 15 Member States⁽³⁵⁾ that together accounted for 72.5 % of the EU-25's value added in 2001 (based on SBS data). This aggregate highlighted a five-year period of growth between 1997 and 2001: on average, value added grew by 14.7 % per annum during this period, although growth was much slower at the end of this five-year period, as value added grew by 2.6 % in 2001. As stated above, communication activities (such as advertising) are among those activities for which budgets are reduced during an economic slowdown, for example, that experienced in 2001.

⁽³⁴⁾ Germany and the Netherlands, 2000; Greece and Cyprus, not available.

⁽³⁵⁾ The Czech Republic, Denmark, Germany, Estonia, Greece, Spain, Cyprus, Lithuania, Hungary and Malta, not available.

Figure 22.8

Advertising (NACE Group 74.4) Value added specialisation ratio relative to non-financial services, 2001 (EU-25=100) (1)



(1) Germany, Greece, Cyprus and the Netherlands, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Advertising expenditure

According to Zenithmedia ⁽³⁶⁾ advertising expenditures in the EU-15 by major media (newspapers, magazines, television, radio, cinema, outdoor and the Internet) in 2002 were valued at EUR 81.2 billion, of which 22.1 % were in Germany, 19.9 % in the United Kingdom, 11.8 % in France, 9.2 % in Italy and 6.6 % in Spain.

⁽³⁶⁾ Zenithmedia press release, 8 December, 2003; source data in US dollars, average euro exchange rates for 2002 used.

Direct marketing

Direct marketing includes means such as TV and radio advertising (for instance when using free-phone numbers that connect to a direct-sales operation), direct mail and print advertising. The fragmentation of the television audience and therefore the increasing costs of reaching consumers en masse and the improvements of database techniques (data mining that allows vast amounts of information on customers to be accessed) are two developments that boosted direct marketing. In order to provide an idea of the size of the direct marketing activities, according to the SBS data on business services, direct marketing products represented EUR 2.0 billion of turnover in the United Kingdom in 2001.

LABOUR AND PRODUCTIVITY

In 2001, apparent labour productivity in the EU-15's advertising and direct marketing sector was EUR 47 900 per person employed, some EUR 9 200 higher than the average for other business activities and EUR 7 300 higher than the average for non-financial services as a whole. This level of apparent labour productivity was also higher than that registered for market research and public opinion polling, a complementary service for advertising and direct marketing (EUR 38 600, NACE Class 74.13). Average personnel costs in the advertising and direct marketing sector were EUR 34 700 in the EU-15, which was EUR 7 200 above the EU-15 average for non-financial services. The wage adjusted labour productivity ratio was 138.1 % in the EU-15 for advertising and direct marketing activities. Among Member States ⁽³⁷⁾, Latvia and Malta recorded the highest values for this ratio.

⁽³⁷⁾ Germany, 2000; Greece, Cyprus, Poland and Slovenia, not available.

22.6: 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). In some cases, temporary work represents a first step for recruiting permanent personnel, and it is also a way for agency workers to get their first work experience. In other cases, some persons may turn to temporary work as a result of not finding a permanent job.

According to the Directorate-General for Employment and Social Affairs ⁽³⁸⁾, in 2001, the 10 new Member States had temporary work rates that were below those registered by the EU-15, except in Poland and Slovenia, which had similar rates to the EU-15. Moreover, in a majority of the 10 new Member States, temporary work was accepted due to the inability of workers to find permanent jobs rather than out of choice.

⁽³⁸⁾ *Employment in Europe 2002*, July 2002.

Table 22.17
Labour recruitment and provision of personnel (NACE Group 74.5)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (24.0)	France (201)	United Kingdom (757.8)
2	France (19.6)	United Kingdom (155)	France (656.8)
3	Netherlands (5.7)	Belgium (144)	Netherlands (367.1)
4	Spain (2.8)	Luxembourg (82)	Spain (214.1)
5	Belgium (2.6)	Austria (69)	Belgium (129.9)

(1) Germany, Greece and Cyprus, not available.

(2) Germany, Greece, Cyprus and the Netherlands, not available.

(3) Germany, Greece, Cyprus, Poland and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

STRUCTURAL PROFILE

Value added in the personnel services sector (NACE Group 74.5) was EUR 65.1 billion in the EU-25, of which 99.5 % was generated in the EU-15, indicating the lowest contribution of the 10 new Member States to EU-25 value added of any NACE group in other business activities, and lower than in many other services activities. In the EU-25 this sector contributed 2.7 % of the wealth created in non-financial services (NACE Sections G to I and K) in 2001, and 12.4 % of the total for other business activities (NACE Division 74). There were 2.6 million persons employed in personnel services in the EU-25, of which 40 100, equivalent to just 1.0 %, were occupied in the 10 new Member States. Overall employment in this sector

accounted for 18.2 % of the total number of persons employed in other business activities, which was more than six times greater than this sector's share of value added, reflecting the nature of many of the enterprises in this sector, namely to employ people to work for clients in other sectors.

Two of the larger Member States dominated this sector: in the United Kingdom EUR 24.0 billion of value added was created in the personnel services sector in 2001, 36.9 % of the EU-25 total, and in France the level of value added was EUR 19.6 billion, equivalent to 30.1 % of the EU-25 total. The next largest countries in terms of value added were the Netherlands (with EUR 5.7 billion of value added) and Germany (EUR 5.4 billion of value added in 2000). In terms of this sector's contribution to non-financial services (NACE Sections G to I and K) value added, the countries⁽³⁹⁾ most specialised in personnel services were France, the United Kingdom, Belgium and the Netherlands (2000), and all other Member States generated a smaller proportion of their non-financial services value added from this sector than the EU-25 average.

In employment terms the concentration of this activity within the two largest Member States was less evident, as the United Kingdom and France recorded 757 800 and 656 800 persons employed respectively, equivalent to an estimated 29.1 % and 25.2 % of the EU-25 total.

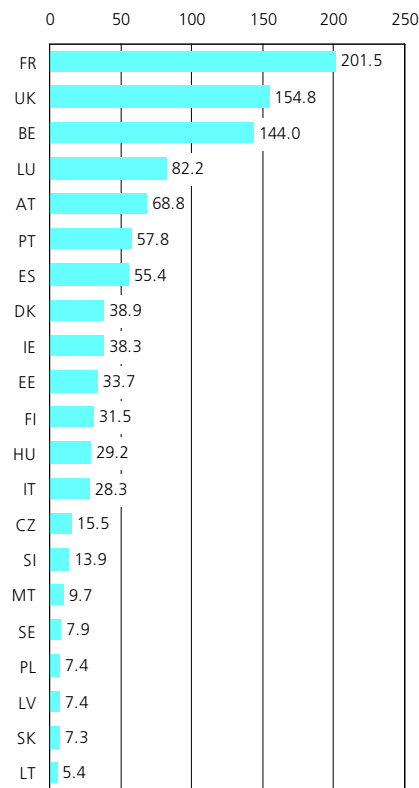
Between 1997 and 2001, the EU's personnel services sector showed a rapid development of value added (at current prices), according to SBS data. An aggregate of 15 Member States⁽⁴⁰⁾, who accounted for 86.4 % of the EU-25's value added in 2001, reported 18.1 % average growth per annum, a relatively fast increase compared to the other NACE groups within other business activities (NACE Division 74). Nonetheless, the 2001 general economic slowdown was rather evident, as value added rose by only 2.1 % in the EU after having recorded 28.7 % growth in 1998.

The breakdown of value added by enterprise size-class shows the importance of large enterprises (250 and more persons employed) in the EU-25's personnel services sector, as they generated almost two thirds of total value added in 2001 (65.1 %), twice the average for the non-financial services sector. Micro (less than 10 persons employed) and small enterprises (from 10 to 49 persons employed) together accounted for (15.8 %) of value added, one third of the non-financial services average.

⁽³⁹⁾ Germany and the Netherlands, 2000; Greece and Cyprus, not available.

⁽⁴⁰⁾ The Czech Republic, Denmark, Germany, Estonia, Greece, Spain, Cyprus, Lithuania, Hungary and Malta, not available.

Figure 22.9
Labour recruitment and provision of personnel (NACE Group 74.5)
Value added specialisation ratio relative to non-financial services, 2001 (EU-25=100) (1)



(1) Germany, Greece, Cyprus and the Netherlands, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

LABOUR AND PRODUCTIVITY

Labour and productivity indicators were generally lower in the personnel services sector than averages for the whole of non-financial services. Indeed, in 2001, the EU-15's apparent labour productivity was EUR 24 900 per person employed for personnel services, EUR 15 700 less than the non-financial services average. Average personnel costs were also rather low, at EUR 21 600 per employee in the EU-15 for personnel services, EUR 5 900 below the non-financial services average.

Table 22.18
Sectoral share of manufacturing expenditure on agency workers, EU-15, 2001 (%) (1)

Food products, beverages & tobacco	8.4
Textiles	1.4
Clothes	0.5
Leather	0.2
Wood	1.4
Pulp & paper	2.2
Publishing, printing & recorded media	3.3
Chemicals	9.6
Rubber & plastics	6.7
Other non-metallic mineral products	3.1
Basic metals	4.0
Fabricated metal products	12.7
Machinery & equipment n.e.c.	11.7
Electrical & optical equipment	13.8
Motor vehicles	12.0
Other transport equipment	4.5
Furniture & manufacturing n.e.c.	3.2

(1) Excluding NACE Divisions 23 and 37 (hence the total does not sum to 100 %); Greece and Luxembourg, not available; Denmark, excluding NACE Groups 19.1 and 19.3; Ireland, excluding NACE Class 36.22 and NACE Groups 36.3, 36.5 and 36.6.
Source: Eurostat, Structural Business Statistics (theme4/sbs).

The relatively low apparent labour productivity and average personnel costs in this sector may, in part, be influenced by the incidence of part-time employment in this sector. This is not the case however for the wage adjusted labour productivity ratio of the personnel services sector, which stood at 115.5 % in 2001, compared to 147.6 % for non-financial services. In most of the Member States⁽⁴¹⁾ this ratio exceeded 100 % indicating that value added covered personnel costs; nonetheless, this was not the case in Italy, Portugal, Sweden or Luxembourg.

⁽⁴¹⁾ Germany, 2000; Greece, Cyprus, Poland and Slovenia, not available.

22.7: SECURITY SERVICES

The services covered in this subchapter include investigative and surveillance activities, the transport of valuables, bodyguard activities, security guard/watchman activities for apartment buildings, offices and factories, as well as consultancy for security services (NACE Group 74.6). The installation of alarm systems is not covered.

The EU-25's security services sector is dominated by a small number of large enterprises, with some of the world's largest enterprise groups based in the EU, notably Securitas of Sweden, Securicor of the United Kingdom, and Group 4 Falck of Denmark, the two latter having announced in February 2004 plans for a merger.

STRUCTURAL PROFILE

Value added in the EU-25 security services sector (NACE Group 74.6) was estimated at EUR 16.7 billion in 2001, approximately 2.8 % of other business activities (NACE Division 74). The United Kingdom contributed EUR 4.3 billion to the EU-25's value added in this sector, ahead of France (EUR 2.9 billion of value added), while in Germany (2000), Italy and Spain value added was between EUR 1.8 billion and EUR 2.0 billion), with Poland recording the next highest share, with EUR 878.9 million of value added. In terms of employment, the security services sector employed an estimated 869 700 persons in the EU-25, of which 647 400 persons worked in the EU-15. The EU-25 security services sector thus employed 6.1 % of the total number of persons employed in other business activities (NACE Division 74). The United Kingdom, where the security services sector employed 157 400 persons, was also the largest contributor to EU-25 employment, followed by France (130 300 persons employed). The level of employment in this sector is not available for Poland, but was estimated to be in excess of 120 000 persons, which would rank this Member States as the third largest employer in the EU-25. In the EU-25's security services sector large enterprises (with 250 or more persons employed) accounted for 60.2 % of the total number of persons employed in 2001, compared to an average of 36.8 % for other business activities.

Table 22.19
Investigation and security activities (NACE Group 74.6)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Largest number of persons employed (thousands) (2)
1	United Kingdom (4.3)	United Kingdom (157.4)
2	France (3.0)	France (130.3)
3	Italy (1.8)	Spain (89.9)
4	Spain (1.7)	Italy (56.6)
5	Poland (0.9)	Czech Republic (44.3)

(1) Germany, Greece, Cyprus and the Netherlands, not available.
(2) Germany, Greece, Cyprus, Poland and Slovenia, not available.
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

According to annualised short-term statistics, the turnover index for security services in the EU-15 grew on average by 12.3 % per annum between 2000 and 2003, with growth that was only slightly below this average in 2003 (10.1 %). These growth rates were mainly influenced by the two largest Member States in the security services sector, where uninterrupted growth through to 2003 was registered for the turnover index from 1997 (first year of the time-series) in the United Kingdom and at least since 1990 for France. In the other Member States for which data are available ⁽⁴²⁾, turnover grew between 2000 and 2003, generally at a pace similar to the EU-15 average, but notably faster in Estonia and Slovakia, and slower in the Czech Republic and Denmark. Average growth rates for turnover in France and in the United Kingdom were also around the EU-15 average rate, at respectively 10.1 % and 13.7 % per annum between 2000 and 2003.

Cash transportation

According to the European Security Transport Association (ESTA), there were 433 enterprises in the security transport services activity in the EU-15 in 2002. This rather low number can be explained by the high concentration of these activities in most of the EU-15 Member States. Indeed, apart from Germany (159 enterprises) and Italy (205 enterprises), there were less than 10 enterprises in the security transport services sector in each of the Member States. According to the same source, there were 41 400 persons employed in security transport services sector in the EU-15 in 2002 and a fleet of 10 600 vehicles in operation.

⁽⁴²⁾ The Czech Republic, Denmark, Estonia, Spain, Latvia, Lithuania, Slovakia, Finland and Sweden.

Table 22.20
Main indicators of security transport services, EU-15, 2002 (units)

Cash transportation	
Number of enterprises	433
Number of persons employed	41 390
Number of vehicles	10 619

Source: ESTA.

LABOUR AND PRODUCTIVITY

An analysis of labour and productivity ratios in the security services sector shows a situation of relatively low personnel costs and productivity. The following analysis is based on data available for the EU-25 Member States except for Germany, Greece, Cyprus, the Netherlands, Poland and Slovenia. In 2001, apparent labour productivity in the security services sector (NACE Group 74.6) was lower than the average for other business activities in all countries except for Portugal. In many cases, apparent labour productivity was considerably lower than the average for other business activities, although only in Slovakia did the security services sector have the lowest apparent labour productivity of any NACE group in other business activities. With the exceptions of Italy, Spain and Belgium, average personnel costs in the security services sector were below the average for other business activities in all Member States, although to a lesser extent than for apparent labour productivity. In the vast majority of Member States average personnel costs in the security services sector were among the lowest at the NACE group level within other business activities, without ever being actually the lowest. The wage adjusted labour productivity ratio was also below the average for other business activities in nearly all countries, and in approximately one third of the Member States the security services sector recorded the lowest level for this ratio among the NACE groups in other business activities. Nevertheless, in all countries this ratio remained above 100 %.

22.8: INDUSTRIAL CLEANING SERVICES

Industrial cleaning services cover the interior cleaning of buildings of all types, including offices, hospitals, factories or multi-unit residential buildings, the cleaning of public means of transport, window cleaning, chimney sweeping, as well as disinfecting and exterminating activities (NACE Group 74.7). This NACE group excludes agricultural pest control, steam cleaning, sand blasting and similar activities for building exteriors, as well as domestic household cleaning.

Industrial cleaning companies respond to the needs of their clients to outsource this kind of service. Clients needs are rather different between, for example, a hospital, a hotel or office space. Environmental issues are also important for enterprises in this sector, as they are often users of chemicals and may also be responsible for the collection of items for recycling.

In terms of employment characteristics, workers in this sector are often women working part-time, as cleaning activities are often performed outside of normal working hours. Indeed, according to the European Federation of Cleaning Industries (EFCI) working hours are early in the morning or late in the evening, night work being limited to some specific tasks (for instance certain industrial premises and airports). According to the same source, in 2001, 71 % of cleaners in the EU-15 ⁽⁴³⁾ were working part-time and more than 75 % of the workforce was female.

⁽⁴³⁾ EU-15, excluding Greece, plus the Czech Republic.

Table 22.21
Industrial cleaning (NACE Group 74.7)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	Italy (5.7)	Italy (152)	United Kingdom (396.7)
2	France (5.2)	Denmark (151)	Italy (350.2)
3	United Kingdom (5.1)	Spain (130)	Spain (335.5)
4	Spain (3.7)	Finland (125)	France (267.2)
5	Netherlands (2.6)	Sweden (113)	Netherlands (157.8)

(1) Germany, Greece and Cyprus, not available.

(2) Germany, Greece, Cyprus and the Netherlands, not available.

(3) Germany, Greece, Cyprus, Poland and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

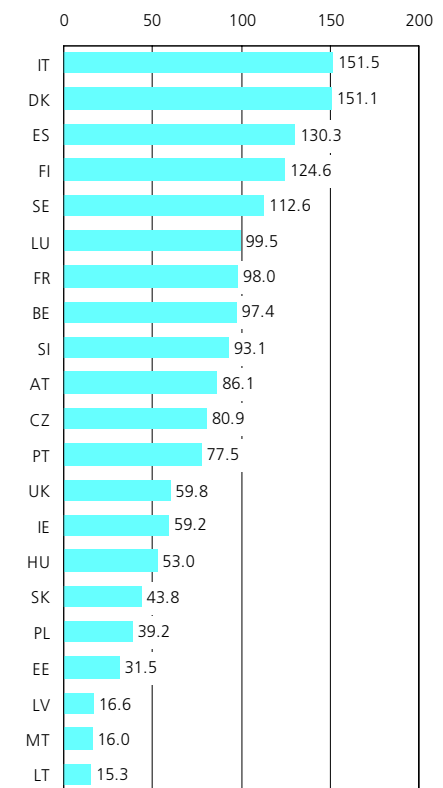
STRUCTURAL PROFILE

In 2001, value added in EU-25 cleaning services (NACE Group 74.7) was EUR 35.8 billion (EUR 35.0 billion in the EU-15), which represented 6.0 % of the business services total (NACE Divisions 71, 73 and 74). Germany (2000), with EUR 7.7 billion of value added had by far the largest cleaning services sector. Italy, France and the United Kingdom all generated between EUR 5.0 billion and EUR 5.7 billion of value added in this sector in 2001. There were 2.5 million persons employed in the EU-25's cleaning services sector (2.4 million persons in the EU-15), thus accounting for 16.7 % of the total number of persons employed in the business services sector (NACE Divisions 71, 73 and 74), nearly three times this sector's share in terms of value added. When analysing the cleaning services workforce it should be borne in mind that the SBS employment figures used here are head counts and part-time employment is very important in this sector. In employment terms, Germany confirmed its position as having the largest cleaning services sector in the EU-25, with 631 100 persons employed (2000), while the United Kingdom had the second largest workforce in this sector with 396 700 persons employed.

In terms of value added specialisation compared to non-financial services (NACE Sections G to I and K), Italy and Denmark were the most specialised Member States ⁽⁴⁴⁾ in the cleaning services sector, both generating 2.2 % of their non-financial services value added in this sector, while for Lithuania, Malta and Latvia the corresponding proportion was 0.2 %.

⁽⁴⁴⁾ Germany and the Netherlands, 2000; Greece and Cyprus, not available.

Figure 22.10
Industrial cleaning (NACE Group 74.7)
Value added specialisation ratio relative to non-financial services, 2001 (EU-25=100) (1)



(1) Germany, Greece, Cyprus and the Netherlands, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

According to a breakdown of turnover made by the European Federation of Cleaning Industries (EFCI) ⁽⁴⁵⁾ in 2001, the most important market segment for cleaning services enterprises in the EU-15 ⁽⁴⁶⁾ was offices (51.7 % of turnover). Two other segments accounted for more than 10 % of total turnover, specialised cleaning (for example, in hospitals) which accounted for 10.2 % of turnover, and industrial cleaning (for example, the food processing sector) which accounted for 10.1 % of turnover.

⁽⁴⁵⁾ *The cleaning industry in Europe 2003*, an EFCI survey, July 2003.

⁽⁴⁶⁾ EU-15, excluding Greece, including Norway.

In 2001, a breakdown by enterprise size-class shows that large enterprises (with more than 250 persons employed) in the EU-25's cleaning services sector accounted for half of total value added, which was 1.6 times more than the corresponding proportion of value added that was generated by large enterprises in other business activities (NACE Division 74). In contrast, micro enterprises (with less than 10 persons employed) accounted for 14.8 % of sectoral value added, which was less than half the average for other business activities as a whole. Quite unusually, the share of medium-sized enterprises (with 50 to 249 persons employed) and large enterprises in sectoral employment was higher than their corresponding share of value added.

During the period 1997 to 2001, value added at current prices in the cleaning services sector grew on average by 9.0 % per annum in the EU according to SBS data, while the growth registered for the latest year available, 2001, was 5.8 %. These growth rates are based on data for 15 Member States ⁽⁴⁷⁾ that together accounted for 64.6 % of the EU-25's value added in 2001.

⁽⁴⁷⁾ The Czech Republic, Denmark, Germany, Estonia, Greece, Spain, Cyprus, Lithuania, Hungary and Malta, not available.

LABOUR AND PRODUCTIVITY

Apparent labour productivity in the cleaning services sector was EUR 14 600 per person employed in the EU-15 in 2001, a level that was relatively low compared to other NACE groups within other business activities (NACE Division 74), although this ratio could well be influenced by the high incidence of part-time work in this sector. Average personnel costs are also affected by the part-time employment rate, and stood at EUR 13 100 per employee in the EU-15 in 2001, less than half the average recorded for non-financial services. The wage adjusted labour productivity ratio is not directly influenced by the rate of part-time work, and this was 111.5 % in the EU-15 in 2001. Although still relatively low, this ratio was much closer to the average for other business activities and for non-financial services than was the case for the two previous indicators, and in all Member States ⁽⁴⁸⁾ the wage adjusted labour productivity ratio surpassed 100 % in the cleaning services sector in 2001.

⁽⁴⁸⁾ Germany, 2000; Greece, Cyprus, Poland and Slovenia, not available.

22.9: MISCELLANEOUS BUSINESS ACTIVITIES

Miscellaneous business activities correspond to Group 74.8 of the NACE. They include services such as photographic activities, packaging activities and secretarial and translation activities. In addition, this NACE group also covers the following activities: bill collecting, credit rating, fashion design, activities of interior decorators, activities of fairs and exhibition organisers and activities of agents for artists.

STRUCTURAL PROFILE

The residual NACE Group 74.8 brings together several heterogeneous business services activities. These activities generated EUR 61.9 billion of value added in the EU-25 in 2001 and accounted therefore for 11.8 % of total value added in the other business activities sector (NACE Division 74). There were 1.7 million persons employed in this sector in the EU-25 in 2001 (191 300 less in the EU-15), accounting for 11.5 % of the total number of persons employed in other business activities. The United Kingdom, with EUR 23.2 billion of value added and 404 100 persons employed accounted for a 37.5 % share of EU-25 value added and a 24.5 % share of EU-25 employment. For comparison, Germany (2000) was the next largest Member State in this sector and generated EUR 9.3 billion of value added and had 207 300 persons employed in this sector.

An analysis of the value added in the miscellaneous business services sector shows that micro and small enterprises (with less than 50 persons employed) were dominant, together generating 59.5 % of total value added in the EU-25, compared with 51.0 % in other business activities (NACE Division 74). Large enterprises (with 250 or more persons employed) generated 22.5 % of the EU-25's value added in this sector, which was 8.5 percentage points less than the average contribution of large enterprises to added value within other business activities. In employment terms, the dominance of smaller enterprises in this sector was even more evident, as micro and small enterprises employed 65.4 % of the total number of persons employed in miscellaneous business services, significantly more than the 46.8 % average recorded for other business activities.

Table 22.22

Miscellaneous business activities n.e.c. (NACE Group 74.8) Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	Italy (5.7)	Italy (152)	United Kingdom (396.7)
2	France (5.2)	Denmark (151)	Italy (350.2)
3	United Kingdom (5.1)	Spain (130)	Spain (335.5)
4	Spain (3.7)	Finland (125)	France (267.2)
5	Netherlands (2.6)	Sweden (113)	Netherlands (157.8)

(1) Germany, Greece and Cyprus, not available.

(2) Germany, Greece, Cyprus and the Netherlands, not available.

(3) Germany, Greece, Cyprus, Poland and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Annualised short-term statistics are available for miscellaneous business activities for a limited set of Member States. In each country for which data are available ⁽⁴⁹⁾, turnover growth was registered between 2000 and 2003, with overall growth rates ranging from 3.9 % in the Czech Republic to a situation where the turnover index more than doubled overall between 2000 and 2003 in Latvia and Slovakia. In the United Kingdom, the Member State with the highest contribution to value added for these activities, there was continuous growth in the turnover index between 1998 (the first year of the time-series) and 2003, with an annual average growth rate of 6.0 % per annum, while the latest growth rate was 9.4 % in 2003.

⁽⁴⁹⁾ The Czech Republic, Denmark, Estonia, Spain, France, Latvia, Lithuania, Slovakia, Finland, Sweden and the United Kingdom.

LABOUR AND PRODUCTIVITY

In 2001, apparent labour productivity was EUR 40 900 per person employed in the EU-15's miscellaneous business services sector, a very similar level to the same indicator for the whole of non-financial services (EUR 40 600) and EUR 2 100 above the other business activities average. Personnel costs per employee averaged EUR 31 300 in the EU-15, which was EUR 3 100 more than the other business activities average. Consequently, wage adjusted labour productivity for the EU-15 was 130.7 %, some 7.1 percentage points below the other business activities average. Among the Member States ⁽⁵⁰⁾, the wage adjusted labour productivity ratio was particularly high in Latvia (1.7 times the level recorded for other business activities). In nearly all of the other Member States the wage adjusted labour productivity ratio for miscellaneous business services was quite close to the average for other business activities (NACE Division 74). In three countries, namely the Czech Republic, Portugal and Sweden the wage adjusted labour productivity ratio for the miscellaneous business services sector was below 100 %.

⁽⁵⁰⁾ Germany, 2000; Greece, Cyprus, Poland and Slovenia, not available.

Table 22.23

Business activities (NACE Divisions 71, 73 and 74)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	39 974	8 450	18 690	204 351	620	72 902	209 999	9 764	108 319	:	585	461	2 860	
Value added at factor cost (EUR million) (1)	16 482	2 604	9 477	121 270	236	36 125	92 884	4 957	55 984	:	238	186	1 483	
Purchases of goods and services (EUR million) (1)	23 808	5 809	9 804	84 297	385	38 216	122 649	4 811	54 459	:	336	284	1 403	
Gross investment in tangible goods (EUR million) (2)	5 797	478	1 576	19 018	55	6 734	22 956	440	5 397	:	44	64		
Number of persons employed (thousands)	387	319	227	2 587	27	1 539	2 145	110	1 612	:	26	29	36	
App. labour productivity (EUR thous./pers. emp.) (1)	42.5	8.2	41.7	48.1	8.7	23.5	43.3	45.0	34.7	:	9.1	6.3	40.8	
Average personnel costs (EUR thous./employee) (3)	34.2	7.7	33.0	27.5	6.2	17.0	35.6	27.0	22.4	:	4.3	4.2	32.5	
Wage adjusted labour productivity (%) (1)	124.4	106.1	126.4	174.7	141.9	137.9	121.5	166.7	155.3	:	212.0	152.5	125.5	
Gross operating rate (%) (3)	14.5	12.3	14.5	31.6	12.6	20.1	8.5	24.5	33.7	:	21.8	17.3	13.1	

	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	4 173	:	74 032	21 101	16 198	11 518	2 469	1 652	9 689	34 594	300 313	776	2 034	:
Value added at factor cost (EUR million) (1)	1 261	:	29 796	10 320	10 187	4 330	789	589	4 805	14 267	171 163	185	806	:
Purchases of goods and services (EUR million) (1)	2 930	:	35 755	10 711	3 539	7 249	1 607	1 045	5 085	21 948	126 941	627	1 354	:
Gross investment in tangible goods (EUR million)	315	:	5 474	3 367	1 337	2 709	121	179	541	2 387	25 474	123	229	:
Number of persons employed (thousands)	107	:	1 154	225	:	261	:	62	122	400	3 313	91	174	:
App. labour productivity (EUR thous./pers. emp.) (1)	11.8	:	27.1	45.9	:	16.6	:	9.5	39.2	35.7	51.7	2.0	4.6	:
Average personnel costs (EUR thous./employee) (3)	7.7	:	20.8	31.2	8.4	14.7	13.0	5.7	30.8	39.4	32.0	1.9	3.0	:
Wage adjusted labour productivity (%) (1)	153.5	:	130.7	147.0	:	112.9	:	167.6	127.5	90.7	161.5	107.3	156.8	:
Gross operating rate (%) (3)	10.9	:	15.5	20.4	43.1	7.8	7.2	15.2	13.9	4.7	24.8	7.1	17.1	:

(1) Germany and the Netherlands, 2000.

(2) Germany, 2000.

(3) Germany, the Netherlands and Slovenia, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 22.24

Renting of machinery and equipment without operator and of personal and household goods (NACE Division 71)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	4 458	339	1 475	23 113	36	7 200	20 455	786	4 368	:	36	18	385	
Value added at factor cost (EUR million) (2)	1 807	103	603	10 808	15	3 573	10 341	345	1 581	:	16	10	145	
Purchases of goods and services (EUR million) (2)	2 619	169	928	10 405	22	3 443	11 528	438	2 746	:	22	13	236	
Gross investment in tangible goods (EUR million) (2)	3 222	145	644	10 026	7	3 530	14 904	171	2 196	:	11	10		
Number of persons employed (thousands)	10	7	8	75	1	68	82	8	31	:	1	1	1	
App. labour productivity (EUR thous./pers. emp.) (2)	173.2	14.4	73.4	147.9	19.4	52.3	125.5	42.5	50.9	:	11.6	7.4	208.7	
Average personnel costs (EUR thous./employee) (2)	39.5	7.9	26.4	34.7	5.4	19.2	32.3	26.7	27.9	:	6.3	2.8	40.5	
Wage adjusted labour productivity (%) (2)	438.2	183.0	278.0	426.2	357.1	273.1	389.0	159.1	182.8	:	184.2	262.3	515.0	
Gross operating rate (%) (2)	34.9	20.3	27.9	39.0	30.9	35.5	38.4	21.4	26.3	:	20.6	37.4	31.4	

	HU	MT (1)	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	237	40	8 493	2 598	1 242	1 398	21	113	602	2 372	28 357	17	96	:
Value added at factor cost (EUR million)	125	26	4 007	1 659	821	946	5	52	284	965	16 543	6	62	:
Purchases of goods and services (EUR million)	116	15	4 485	914	197	474	15	62	327	1 482	11 553	12	35	:
Gross investment in tangible goods (EUR million)	125	12	3 887	2 590	719	1 637	0	46	241	826	12 259	9	48	:
Number of persons employed (thousands)	3	1	31	8	14	10	:	2	3	12	174	1	3	:
App. labour productivity (EUR thous./pers. emp.)	44.0	22.8	130.2	203.2	59.9	98.2	:	28.9	88.6	78.0	94.9	4.1	22.9	:
Average personnel costs (EUR thous./employee)	8.1	8.6	31.5	30.1	11.7	15.7	8.3	5.5	31.4	34.6	29.5	1.4	3.2	:
Wage adjusted labour productivity (%)	545.8	264.8	412.7	674.3	512.8	625.0	:	529.0	281.9	225.7	322.2	281.0	711.6	:
Gross operating rate (%)	43.2	46.2	38.5	55.8	59.7	58.7	6.4	37.8	31.8	27.7	41.6	26.8	57.4	:

(1) 2000.

(2) Germany, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 22.25

Research and development (NACE Division 73)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	794	152	456	3 857	2	:	796	5 249	143	1 955	:	27	9	230
Value added at factor cost (EUR million) (1)	493	62	165	2 525	1	:	451	1 672	85	940	:	16	3	123
Purchases of goods and services (EUR million) (1)	399	87	321	2 426	1	:	676	3 922	58	1 261	:	12	6	117
Gross investment in tangible goods (EUR million) (2)	78	14	184	1 033	0	:	148	455	6	160	:	2	1	:
Number of persons employed (thousands)	6	6	5	57	0	:	15	31	1	22	:	3	1	2
App. labour productivity (EUR thous./pers. emp.) (1)	78.0	9.8	34.3	45.1	5.1	:	29.6	53.8	84.7	41.8	:	5.3	6.5	60.6
Average personnel costs (EUR thous./employee) (1)	60.7	9.2	53.0	43.5	4.6	:	29.7	50.6	32.0	42.2	:	3.7	3.3	60.0
Wage adjusted labour productivity (%) (1)	128.4	106.6	64.7	103.8	112.1	:	99.4	106.4	265.2	99.0	:	143.9	195.4	101.0
Gross operating rate (%) (1)	16.4	4.3	-19.6	6.6	7.2	:	8.3	2.0	41.8	23.4	:	17.6	21.1	0.6
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	163	:	2 713	402	1 125	11	65	116	139	1 614	11 157	10	185	:
Value added at factor cost (EUR million) (1)	54	:	1 490	180	1 145	6	27	41	34	167	3 766	4	108	:
Purchases of goods and services (EUR million) (1)	110	:	2 031	299	412	7	37	75	120	1 556	7 285	8	159	:
Gross investment in tangible goods (EUR million)	14	:	208	46	128	15	10	6	6	150	2 331	1	18	:
Number of persons employed (thousands)	4	:	35	3	:	0	:	6	2	14	96	1	30	:
App. labour productivity (EUR thous./pers. emp.) (1)	15.1	:	41.9	54.0	:	33.5	:	7.1	15.5	11.9	39.2	3.1	3.5	:
Average personnel costs (EUR thous./employee) (1)	11.8	:	36.9	50.7	11.3	32.9	6.3	6.2	34.9	54.4	51.0	2.7	2.9	:
Wage adjusted labour productivity (%) (1)	128.4	:	113.6	106.4	:	101.8	:	114.4	44.4	21.9	76.8	115.7	120.9	:
Gross operating rate (%) (1)	8.0	:	7.2	4.8	48.9	4.2	5.7	4.6	-28.7	-32.2	-9.4	6.8	14.5	:

(1) Germany and the Netherlands, 2000.

(2) Germany, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 22.26

Other business activities (NACE Division 74)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	34 722	7 959	16 759	177 381	582	:	64 905	184 295	8 835	101 996	:	522	434	2 245
Value added at factor cost (EUR million) (1)	14 182	2 439	8 710	107 937	220	:	32 101	80 871	4 527	53 463	:	207	172	1 214
Purchases of goods and services (EUR million) (1)	20 790	5 553	8 554	71 466	362	:	34 098	107 199	4 315	50 453	:	302	265	1 049
Gross investment in tangible goods (EUR million) (1)	2 498	320	748	7 959	48	:	3 056	7 598	263	3 041	:	31	53	:
Number of persons employed (thousands)	371	306	214	2 455	26	:	1 456	2 032	101	1 558	:	22	27	34
App. labour productivity (EUR thous./pers. emp.) (1)	38.3	8.0	40.6	45.1	8.5	:	22.1	39.8	44.8	34.3	:	9.5	6.3	36.1
Average personnel costs (EUR thous./employee) (2)	33.6	7.6	32.7	26.9	6.2	:	16.8	35.5	27.0	22.0	:	4.3	4.2	30.6
Wage adjusted labour productivity (%) (1)	114.0	104.5	124.2	167.7	136.8	:	131.3	112.0	166.1	156.0	:	222.3	148.3	118.2
Gross operating rate (%) (2)	11.8	12.1	14.3	31.2	11.5	:	18.5	5.4	24.5	34.2	:	22.1	16.4	11.3
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	3 774	232	62 827	18 101	13 831	10 108	2 382	1 423	8 949	30 608	260 798	749	1 753	:
Value added at factor cost (EUR million)	1 082	195	29 843	8 482	8 221	3 377	758	495	4 487	13 135	150 854	175	636	:
Purchases of goods and services (EUR million)	2 705	40	33 071	9 498	2 931	6 768	1 556	909	4 638	18 910	108 103	607	1 160	:
Gross investment in tangible goods (EUR million)	176	12	1 380	731	490	1 057	110	127	295	1 411	10 884	113	163	:
Number of persons employed (thousands)	100	7	1 088	213	581	252	:	54	117	373	3 043	89	140	:
App. labour productivity (EUR thous./pers. emp.)	10.8	26.7	27.4	39.8	14.1	13.4	:	9.1	38.3	35.2	49.6	2.0	4.5	:
Average personnel costs (EUR thous./employee) (2)	7.6	9.9	21.3	30.9	7.9	14.6	13.8	5.6	30.7	38.9	31.5	1.9	3.0	:
Wage adjusted labour productivity (%)	143.1	268.5	128.5	128.5	178.9	91.8	:	162.3	124.9	90.5	157.5	105.2	152.8	:
Gross operating rate (%) (2)	9.0	64.7	15.5	15.7	41.2	0.8	7.2	14.3	13.4	4.9	24.5	6.7	15.2	:

(1) Germany, 2000.

(2) Germany and Slovenia, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 22.27

Legal, accountancy and management services (NACE Group 74.1)
Main indicators, 2001

	BE	CZ	DK	DE (1)	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	16 606	2 285	5 364	72 110	191	:	15 624	69 193	3 589	43 957	:	110	86	1 114
Value added at factor cost (EUR million)	6 412	729	3 251	52 532	68	:	10 090	26 609	2 494	26 703	:	62	39	578
Purchases of goods and services (EUR million)	10 106	1 505	2 493	23 703	125	:	5 816	46 077	1 096	17 622	:	52	49	536
Gross investment in tangible goods (EUR million)	1 208	92	288	3 967	31	:	1 030	3 639	128	901	:	10	21	:
Number of persons employed (thousands)	99	79	59	647	7	:	339	445	39	478	:	4	4	8
App. labour productivity (EUR thous./pers. emp.)	64.8	9.2	55.1	81.2	10.1	:	29.8	59.8	64.1	55.9	:	13.9	9.6	69.7
Average personnel costs (EUR thous./employee)	63.7	10.9	42.0	36.6	7.0	:	22.5	52.5	32.9	27.5	:	5.5	5.9	45.8
Wage adjusted labour productivity (%)	101.8	84.0	131.3	222.1	143.5	:	132.1	113.9	194.8	203.4	:	252.3	163.5	152.2
Gross operating rate (%)	13.7	14.8	20.0	45.7	13.7	:	32.8	6.0	40.4	48.4	:	34.6	22.6	22.6
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	1 118	130	19 090	5 120	3 223	2 655	664	283	2 467	11 029	87 256	176	319	:
Value added at factor cost (EUR million)	344	119	10 673	3 038	1 834	781	267	118	1 272	4 102	59 489	46	125	:
Purchases of goods and services (EUR million)	775	12	8 435	2 084	459	1 864	391	164	1 257	7 916	26 629	140	195	:
Gross investment in tangible goods (EUR million)	62	9	485	354	114	635	59	20	86	677	3 588	27	25	:
Number of persons employed (thousands)	20	3	294	57	107	55	:	8	25	113	848	19	19	:
App. labour productivity (EUR thous./pers. emp.)	17.2	34.5	36.4	53.1	17.2	14.3	:	15.1	51.4	36.3	70.2	2.4	6.5	:
Average personnel costs (EUR thous./employee) (2)	11.5	11.8	28.7	36.8	13.2	25.4	15.1	7.9	41.1	51.9	42.1	3.0	5.6	:
Wage adjusted labour productivity (%)	149.0	292.7	126.8	144.5	130.8	56.2	:	190.6	125.0	69.9	166.5	78.4	116.6	:
Gross operating rate (%) (2)	10.5	74.7	21.6	26.3	38.3	-18.0	10.7	21.5	16.3	-2.0	33.6	8.7	13.1	:

(1) 2000.

(2) Slovenia, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 22.28

Architectural and engineering activities and related technical consultancy; technical testing and analysis (NACE Groups 74.2 and 74.3)
Main indicators, 2001

	BE	CZ	DK	DE (1)	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	4 741	2 122	5 186	37 406	115	:	13 704	33 257	1 714	17 586	:	134	159	420
Value added at factor cost (EUR million)	2 011	639	2 448	25 726	49	:	6 842	12 676	894	9 103	:	38	82	236
Purchases of goods and services (EUR million)	2 991	1 447	2 807	11 642	64	:	7 359	21 170	821	9 237	:	77	79	212
Gross investment in tangible goods (EUR million)	363	105	171	1 348	7	:	684	1 173	36	727	:	8	10	:
Number of persons employed (thousands)	40	69	41	420	5	:	194	239	16	301	:	5	11	4
App. labour productivity (EUR thous./pers. emp.)	50.4	9.2	59.9	61.3	9.0	:	35.2	53.1	55.3	30.3	:	7.7	7.2	59.5
Average personnel costs (EUR thous./employee)	50.5	9.4	50.1	40.0	6.8	:	26.2	46.9	39.3	35.4	:	4.9	5.3	45.2
Wage adjusted labour productivity (%)	99.9	98.0	119.5	153.1	132.6	:	134.4	113.3	140.8	85.4	:	156.4	137.7	131.4
Gross operating rate (%)	17.8	11.5	11.6	32.7	11.5	:	26.5	4.7	21.8	39.7	:	10.3	20.0	19.1
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	946	29	11 494	5 023	3 480	1 502	1 132	420	2 691	7 235	44 179	138	370	:
Value added at factor cost (EUR million)	243	24	5 578	2 064	2 000	589	292	145	1 408	3 544	24 559	42	225	:
Purchases of goods and services (EUR million)	678	4	5 940	2 842	654	906	804	263	1 343	3 949	20 244	105	171	:
Gross investment in tangible goods (EUR million) (2)	35	1	284	171	138	173	29	52	72	336	2 209	51	40	:
Number of persons employed (thousands)	18	1	123	42	:	23	:	15	28	80	378	14	35	:
App. labour productivity (EUR thous./pers. emp.)	13.5	25.5	45.4	49.2	:	25.3	:	9.8	50.8	44.6	64.9	2.9	6.5	:
Average personnel costs (EUR thous./employee) (3)	9.1	11.8	43.8	40.8	10.4	20.1	16.9	6.5	41.0	43.8	42.9	3.0	3.8	:
Wage adjusted labour productivity (%)	147.8	216.3	103.7	120.6	:	126.4	:	150.9	123.7	101.8	151.5	96.9	170.5	:
Gross operating rate (%) (3)	8.6	60.9	12.9	15.0	37.4	10.3	5.7	13.3	13.2	10.5	23.1	8.5	28.7	:

(1) 2000.

(2) The Netherlands, 2000.

(3) Slovenia, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 22.29

Advertising (NACE Group 74.4)
Main indicators, 2001

	BE	CZ	DK	DE (1)	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	4 537	1 391	2 397	15 235	118	:	17 336	21 260	625	11 375	:	120	100	170
Value added at factor cost (EUR million)	744	287	660	5 339	23	:	3 282	5 769	174	1 957	:	46	17	34
Purchases of goods and services (EUR million)	3 800	1 232	1 744	10 357	96	:	14 159	15 500	453	9 620	:	74	83	135
Gross investment in tangible goods (EUR million)	145	37	88	811	2	:	293	487	18	287	:	4	9	:
Number of persons employed (thousands)	16	21	18	163	2	:	109	106	3	51	:	3	3	1
App. labour productivity (EUR thous./pers. emp.)	47.2	13.5	36.0	32.8	12.4	:	30.2	54.6	59.2	38.6	:	17.0	5.1	34.3
Average personnel costs (EUR thous./employee)	39.2	11.5	28.8	20.6	7.8	:	22.3	43.1	39.0	31.7	:	5.4	2.7	35.4
Wage adjusted labour productivity (%)	120.4	117.1	125.1	159.7	158.6	:	135.7	126.7	151.6	121.8	:	316.9	186.3	96.8
Gross operating rate (%)	8.3	9.1	7.6	17.2	7.8	:	6.4	6.2	11.3	8.9	:	26.7	8.9	2.2
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	550	29	6 604	3 140	1 976	1 978	211	267	1 473	4 580	33 272	274	387	:
Value added at factor cost (EUR million)	95	14	2 168	733	1 584	337	38	59	400	1 342	10 145	22	46	:
Purchases of goods and services (EUR million)	458	15	4 436	2 405	119	1 657	165	209	1 084	3 300	22 885	257	344	:
Gross investment in tangible goods (EUR million)	19	1	147	63	31	51	8	20	25	124	722	22	16	:
Number of persons employed (thousands)	3	1	54	16	:	11	:	5	8	34	101	7	9	:
App. labour productivity (EUR thous./pers. emp.)	31.5	25.6	40.3	44.6	:	29.4	:	12.5	52.7	39.3	100.3	3.1	5.3	:
Average personnel costs (EUR thous./employee) (2)	18.4	9.1	36.2	35.7	11.2	18.8	16.6	7.1	38.0	39.0	60.2	2.0	3.9	:
Wage adjusted labour productivity (%)	170.8	281.3	111.3	125.1	:	156.1	:	177.0	138.8	100.7	166.5	155.1	135.2	:
Gross operating rate (%) (2)	7.3	36.0	16.1	9.1	73.1	7.6	6.0	10.1	8.8	6.4	14.1	4.4	5.2	:

(1) 2000.

(2) Slovenia, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 22.30

Labour recruitment and provision of personnel (NACE Group 74.5)
Main indicators, 2001

	BE	CZ	DK	DE (1)	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	2 897	130	614	6 507	21	:	3 174	21 898	457	2 385	:	12	6	154
Value added at factor cost (EUR million)	2 562	57	503	5 388	17	:	2 831	19 589	248	1 933	:	6	3	141
Purchases of goods and services (EUR million)	336	73	117	1 121	3	:	362	1 668	209	488	:	7	3	12
Gross investment in tangible goods (EUR million)	39	3	10	96	0	:	42	171	8	23	:	0	1	:
Number of persons employed (thousands)	130	7	30	214	2	:	214	657	9	115	:	1	1	12
App. labour productivity (EUR thous./pers. emp.)	19.7	8.2	16.7	25.2	9.0	:	13.2	29.8	28.6	16.8	:	9.4	5.7	12.0
Average personnel costs (EUR thous./employee)	19.2	6.9	15.8	23.2	8.8	:	12.6	28.5	19.4	16.9	:	4.8	4.5	22.7
Wage adjusted labour productivity (%)	102.7	120.0	105.9	108.5	102.4	:	105.1	104.5	147.9	99.5	:	194.1	127.5	52.8
Gross operating rate (%)	2.5	8.1	5.2	10.1	2.6	:	5.1	3.9	19.1	1.0	:	24.5	15.3	-81.6
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	116	4	12 688	1 231	334	576	42	13	313	253	36 698	12	33	:
Value added at factor cost (EUR million)	70	4	5 681	1 029	141	456	15	7	252	146	24 025	9	20	:
Purchases of goods and services (EUR million)	46	0	7 018	210	40	124	21	5	64	112	12 209	8	13	:
Gross investment in tangible goods (EUR million)	2	0	106	14	14	8	1	2	4	6	762	1	1	:
Number of persons employed (thousands)	10	0	367	33	:	48	:	1	11	4	758	7	5	:
App. labour productivity (EUR thous./pers. emp.)	6.7	10.2	15.5	31.4	:	9.5	:	6.5	23.0	36.0	31.7	1.2	4.2	:
Average personnel costs (EUR thous./employee) (2)	6.0	7.5	12.8	29.9	7.1	9.7	24.3	4.1	21.9	37.0	23.5	1.2	3.7	:
Wage adjusted labour productivity (%)	111.1	136.3	120.8	105.1	:	98.5	:	158.3	105.0	97.4	135.0	101.8	112.4	:
Gross operating rate (%) (2)	6.5	27.7	8.3	4.7	32.0	-1.2	4.7	21.2	4.9	1.2	17.7	2.6	10.8	:

(1) 2000.

(2) Slovenia, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 22.31

Investigation and security activities (NACE Group 74.6)
Main indicators, 2001

	BE	CZ	DK	DE (1)	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	563	323	128	2 855	53	:	2 126	4 436	258	2 444	:	38	29	64
Value added at factor cost (EUR million)	429	196	75	1 995	33	:	1 723	2 953	188	1 774	:	22	15	55
Purchases of goods and services (EUR million)	135	121	55	876	20	:	407	1 411	71	653	:	16	14	9
Gross investment in tangible goods (EUR million)	18	11	8	79	3	:	62	121	8	55	:	3	7	:
Number of persons employed (thousands)	12	44	2	110	5	:	90	130	7	57	:	5	4	2
App. labour productivity (EUR thous./pers. emp.)	35.4	4.4	31.7	18.2	6.7	:	19.2	22.7	25.9	31.3	:	4.5	3.8	32.4
Average personnel costs (EUR thous./employee)	34.5	4.2	27.9	19.6	5.2	:	17.4	21.6	25.0	28.7	:	3.0	3.2	29.0
Wage adjusted labour productivity (%)	102.6	106.4	113.6	92.5	127.9	:	110.4	105.1	103.7	109.2	:	146.5	117.6	111.6
Gross operating rate (%)	5.2	6.8	11.0	0.9	13.8	:	8.6	3.7	5.1	10.7	:	18.9	8.1	9.5
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	325	6	:	239	1 005	417	77	75	237	682	5 529	82	133	:
Value added at factor cost (EUR million)	112	5	:	172	879	353	46	54	178	508	4 312	39	77	:
Purchases of goods and services (EUR million)	214	2	:	68	107	65	30	22	61	184	1 220	45	57	:
Gross investment in tangible goods (EUR million) (2)	20	0	14	13	47	17	2	3	15	42	116	5	9	:
Number of persons employed (thousands)	19	0	26	8	:	25	:	13	7	17	157	32	40	:
App. labour productivity (EUR thous./pers. emp.)	6.0	10.7	:	21.2	:	14.2	:	4.1	25.0	30.2	27.4	1.2	1.9	:
Average personnel costs (EUR thous./employee) (3)	4.6	8.7	:	18.8	4.9	12.6	9.5	3.7	21.5	24.9	21.8	1.2	1.6	:
Wage adjusted labour productivity (%)	130.7	123.9	:	112.9	:	112.7	:	112.0	116.2	121.3	125.4	98.2	118.3	:
Gross operating rate (%) (3)	8.5	17.3	:	9.5	31.7	10.5	5.5	8.3	12.2	14.5	17.2	4.8	11.6	:

(1) 2000.

(2) The Netherlands, 1999.

(3) Slovenia, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 22.32

Industrial cleaning (NACE Group 74.7)
Main indicators, 2001

	BE	CZ	DK	DE (1)	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	1 549	311	1 459	9 859	16	:	4 445	7 362	298	8 489	:	17	9	124
Value added at factor cost (EUR million)	953	163	1 075	7 674	9	:	3 658	5 237	211	5 691	:	8	5	94
Purchases of goods and services (EUR million)	592	146	396	2 154	7	:	821	1 973	88	2 770	:	10	4	29
Gross investment in tangible goods (EUR million)	93	7	56	268	1	:	110	167	19	352	:	2	1	:
Number of persons employed (thousands)	45	39	45	631	3	:	335	267	17	350	:	2	2	5
App. labour productivity (EUR thous./pers. emp.)	21.3	4.2	23.8	12.2	3.0	:	10.9	19.6	12.8	16.3	:	4.1	2.4	17.7
Average personnel costs (EUR thous./employee)	19.3	3.7	20.5	12.0	2.7	:	10.3	17.9	10.0	14.3	:	2.8	1.9	15.5
Wage adjusted labour productivity (%)	110.1	112.0	116.3	101.6	112.6	:	106.4	109.3	127.4	113.3	:	148.6	127.3	114.0
Gross operating rate (%)	9.6	14.2	15.8	14.2	6.4	:	7.5	7.4	16.4	14.8	:	14.9	12.4	10.0
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	170	4	3 814	942	696	460	83	36	741	1 721	7 124	7	41	:
Value added at factor cost (EUR million)	69	4	2 604	708	409	336	54	24	547	1 146	5 105	3	17	:
Purchases of goods and services (EUR million)	102	1	1 247	231	135	125	27	13	203	590	1 979	4	24	:
Gross investment in tangible goods (EUR million)	8	0	70	38	19	16	2	2	39	64	210	1	3	:
Number of persons employed (thousands)	17	0	158	38	:	49	:	5	28	40	397	2	6	:
App. labour productivity (EUR thous./pers. emp.)	4.1	16.7	16.5	18.4	:	6.8	:	4.7	19.3	28.6	12.9	1.9	2.8	:
Average personnel costs (EUR thous./employee) (2)	3.3	7.6	13.6	15.9	4.9	6.2	8.2	3.5	16.1	26.1	10.1	1.5	2.0	:
Wage adjusted labour productivity (%)	122.3	219.1	121.5	116.3	:	109.9	:	133.4	119.9	109.7	126.8	122.0	138.2	:
Gross operating rate (%) (2)	8.1	52.4	14.4	12.5	30.2	7.9	6.7	16.7	16.2	10.8	16.4	12.1	14.6	:

(1) 2000.

(2) Slovenia, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 22.33

Miscellaneous business activities n.e.c. (NACE Group 74.8)

Main indicators, 2001

	BE	CZ	DK	DE (1)	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	3 829	1 398	1 611	29 405	68	:	8 497	26 890	1 894	15 760	:	92	45	199
Value added at factor cost (EUR million)	1 072	368	697	9 283	21	:	3 676	8 038	318	6 302	:	25	12	77
Purchases of goods and services (EUR million)	2 829	1 028	942	21 613	47	:	5 174	19 400	1 577	10 062	:	68	33	116
Gross investment in tangible goods (EUR million)	632	64	126	1 390	4	:	835	1 839	47	698	:	4	4	:
Number of persons employed (thousands)	29	46	19	207	2	:	175	189	10	207	:	2	2	2
App. labour productivity (EUR thous./pers. emp.)	36.7	8.0	37.5	44.8	9.7	:	21.1	42.6	30.4	30.4	:	11.1	5.3	48.1
Average personnel costs (EUR thous./employee)	35.8	9.0	30.2	30.4	5.7	:	16.9	37.0	23.4	27.2	:	2.8	3.0	38.6
Wage adjusted labour productivity (%)	102.5	89.8	124.1	147.3	169.9	:	124.8	114.9	129.8	111.8	:	393.7	173.8	124.5
Gross operating rate (%)	9.2	12.4	16.2	14.4	14.2	:	17.6	5.0	6.4	25.9	:	20.6	14.4	12.7
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	550	29	9 137	2 408	3 117	2 520	175	329	1 026	5 109	46 741	61	471	:
Value added at factor cost (EUR million)	149	24	3 140	738	1 375	526	47	88	429	2 347	23 218	15	126	:
Purchases of goods and services (EUR million)	432	6	5 996	1 659	1 417	2 027	119	234	626	2 860	22 937	48	356	:
Gross investment in tangible goods (EUR million)	29	0	318	79	127	159	10	29	54	163	3 278	6	69	:
Number of persons employed (thousands)	13	1	67	18	:	40	:	8	11	86	404	7	27	:
App. labour productivity (EUR thous./pers. emp.)	11.4	19.7	46.8	39.9	:	13.0	:	11.4	40.7	27.4	57.4	2.2	4.7	:
Average personnel costs (EUR thous./employee) (2)	7.7	6.5	32.4	34.3	8.3	14.5	11.0	5.9	31.4	28.8	36.5	2.0	2.2	:
Wage adjusted labour productivity (%)	148.5	302.0	144.2	116.3	:	89.8	:	193.1	129.6	95.2	157.4	111.1	213.9	:
Gross operating rate (%) (2)	9.0	69.5	16.2	10.3	34.6	7.0	7.1	13.5	14.1	7.1	23.5	9.7	15.5	:

(1) 2000.

(2) Slovenia, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Information and communication services



At the Lisbon Summit in March 2000, European Heads of State or Government set a new ambitious goal for the European Union: to become the most competitive knowledge-based society in the world by 2010. Information and communications services were seen as the corner stone of this objective. Indeed, the summit conclusions notably stressed that businesses and citizens must have access to an inexpensive, world-class communications infrastructure and a wide range of services and that every citizen must be equipped with the skills needed to live and work in the information society ⁽¹⁾. More information on the subject of the information society is provided in the general overview at the beginning of this publication.

A tool intended to help reach these objectives is the 'eEurope' initiative, aimed at ensuring that the EU fully benefits from the potential changes that the information society can offer. The action plan eEurope 2005, running from 2003 to 2005, includes three main objectives: (i) bringing every citizen, home and school and every business and administration into the digital age; (ii) creating a digitally literate Europe, supported by an entrepreneurial culture ready to finance and develop new ideas; (iii) ensuring the whole process is socially inclusive, building consumer trust and strengthening social cohesion. These political objectives were supported by a series of actions ⁽²⁾ centred around three main goals: 'a cheaper, faster, secure Internet; investing in people and skills; stimulating the use of the Internet (for example, support for e-commerce, and e-government)'.

⁽¹⁾ Information society: expression referring to a society whose wealth and growth is based on its ability to process, store, retrieve and communicate information.

⁽²⁾ See *eEurope - an Information Society for all*, Communication on a Commission initiative for the Special European Council of Lisbon, 23 and 24 March 2000, available at http://europa.eu.int/information_society/europe/2005/index_en.htm.

As regards enterprises, one of the most dramatic effects of the development of the information society in recent years has been the expansion of electronic commerce. Indeed, e-commerce has proved to be a powerful and increasingly important tool at the disposal of enterprises to purchase and sell goods and services. According to a recent survey on ICT usage and e-commerce by enterprises, at the start of 2002 practically all European enterprises were equipped with computers ⁽³⁾. Computers were present on average in 95 % of enterprises (see Table 23.1 overleaf), with little variation from one sector to another. Nevertheless, the use that was made of these computers varied considerably across sectors and countries. Indeed, while more than half of employees (also excluding the Netherlands) had access to computers in distribution (56 %) and business services (54 %), less than one third did in hotels and accommodation services (30 %). In addition, while around two thirds of employees in Nordic countries used computers, about half this share did so in Spain and Portugal. When looking at Internet access during 2001 (also excluding Ireland), this survey revealed that European enterprises had strongly adopted Internet technologies. Some 81 % of PC equipped enterprises had an Internet connection, a proportion that exceeded 95 % in the three Nordic countries. However, only 17 % of employees working in the accommodation sectors used a computer connected to the Internet, which was less than half the proportion of those working in business services - see Figure 23.1 overleaf. Similarly, while only 19 % of employees in Spain and Portugal had access to the Internet, more than half did in Denmark, Finland and Sweden, almost twice the EU average (27 %). Note that enterprises in banking (NACE Division 65) and insurance (NACE Division 66) were not covered by the survey.

⁽³⁾ EU-15, excluding Belgium, France and the United Kingdom; NACE Sections D, G, I and K and Groups 55.1 and 55.2; including Division 67, except for Denmark, Germany, Ireland and Italy; the Netherlands, including Divisions 65 and 66; Finland, excluding part of Group 74.5.

This chapter addresses two sectors that share the exchange of information as the principal feature of their activity. It includes data relating to NACE Divisions 64 and 72 that refer to post, courier and telecommunication services, as well as software and computing services.

NACE

64:	post and telecommunications;
64.1:	post and courier activities;
64.2:	telecommunications;
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.

Table 23.1

Computer penetration within enterprises in the EU-15 at the start of 2002 (%) (1)

	Average (2)	BE	DK	DE	EL	ES	FR	IE	IT	LU	NL	AT	PT	FI	SE	UK
Share of enterprises using computers (% of all enterprises)	95	:	98	95	88	95	:	95	95	97	94	93	84	99	99	89
Share of employees using computers (% of all employees)	47	:	59	51	43	34	:	50	42	46	:	51	34	65	72	:
Share of employees using Internet connected computers during 2001 (% of all employees)																
Average	27	:	50	27	23	19	:	:	21	24	:	29	19	51	51	:
Manufacturing	22	:	38	24	20	16	:	:	17	14	:	25	14	44	41	:
Distribution	26	:	60	26	25	18	:	16	21	21	:	28	20	56	51	:
Hotels & accommodation	17	:	14	18	9	11	:	7	16	24	:	15	23	37	37	:
Transport & communication	30	:	48	33	30	26	:	36	20	18	:	27	29	52	52	:
Auxiliary financial activities	:	:	:	:	71	75	:	:	:	60	:	59	59	:	89	:
Business services	37	:	66	35	35	24	:	48	40	40	:	49	32	71	75	:

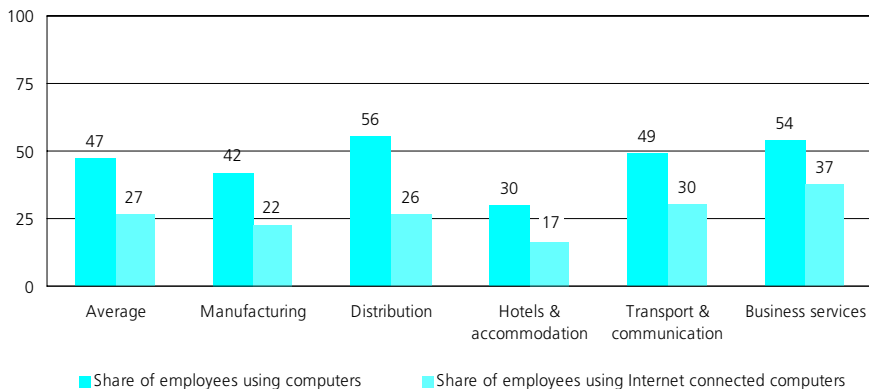
(1) Enterprises in NACE Sections D, G, I and K and Groups 55.1 and 55.2; including Division 67, except for Denmark, Germany, Ireland and Italy; the Netherlands, including Divisions 65 and 66; Finland, excluding part of Group 74.5.

(2) Share of enterprises using computers, excluding Belgium, France, and the United Kingdom; share of employees using computers, excluding Belgium, France, the Netherlands and the United Kingdom; share of employees using Internet connected computers, excluding Belgium, France, Ireland, the Netherlands and the United Kingdom.

Source: Eurostat, e-commerce survey, 2003.

Figure 23.1

Share of employees using computers by activity, EU-15, at the start of 2002 (% of all employees) (1)



(1) EU-15, excluding Belgium, France, Ireland, the Netherlands and the United Kingdom; covering enterprises in NACE Sections D, G, I and K and Groups 55.1 and 55.2; including also Division 67, except for Denmark, Germany, Ireland and Italy; the Netherlands, including Divisions 65 and 66; Finland, excluding part of Group 74.5. Source: Eurostat, e-commerce survey, 2003.

Table 23.2

Post and telecommunications; computer and related activities (NACE Divisions 64 and 72) Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (85.1)	Hungary (183)	United Kingdom (1 133.8)
2	France (48.2)	Ireland (150)	France (810.1)
3	Italy (38.6)	Slovakia (149)	Germany (803.1)
4	Spain (20.0)	Czech Republic (144)	Italy (625.8)
5	Netherlands (18.2)	Luxembourg (137)	Spain (354.6)

(1) Germany, Greece, Cyprus and Poland, not available.

(2) Germany, Greece, Cyprus, the Netherlands and Poland, not available.

(3) Greece, Cyprus, Poland and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

STRUCTURAL PROFILE

Information and communication services enterprises (NACE Divisions 64 and 72) generated a total value added estimated at EUR 326.5 billion in the EU-25 in 2001, representing some 13.4 % of the total for non-financial services (NACE Sections G to I and K). The 10 new Member States contributed 5.4 % of the EU-25's value added, or EUR 17.5 billion, which was higher than the corresponding share of 4.6 % for non-financial services as a whole, indicating a higher specialisation in these activities.

Information and communication services were also an important source of employment in the EU's economy. Some 8.3 % of all persons employed in non-financial services in the EU-15 in 2001 worked in information and communication services, representing a total of 4.7 million persons. Including the 10 new Member States the total number of persons employed is estimated at 5.3 million in the EU-25, or approximately 8.2 % of the total for non-financial services.

Within the information and communication services sector, post and telecommunications (NACE Division 64) accounted for an estimated EUR 195.3 billion of value added in the EU-25 in 2001, equivalent to 59.8 % of the total, hence complemented by 40.2 % for computing services (or EUR 131.2 billion). At a more detailed level, telecommunications (NACE Group 64.2) alone generated EUR 138.8 billion of value added in the EU-25 in 2001, or 42.5 % of the information and communication services' total. Post and courier activities (NACE Group 64.1), in contrast, had value added of EUR 56.5 billion in 2001, or 17.3 % of the sectoral total.

Table 23.3

Post and telecommunications; computer and related activities (NACE Divisions 64 and 72)
Value added at factor cost and persons employed, by enterprise size-class, 2001 (% of total)

	Micro enterprises		Small enterprises		Medium-sized enterprises		Large enterprises	
	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed
EU-25	9.4	14.8	8.0	10.8	9.4	10.6	73.2	63.8
EU-15	9.7	14.9	8.1	11.2	9.3	10.9	72.9	63.1

Source: Eurostat, Structural Business Statistics (theme4/sbs/sizclass).

It is interesting to note that the structure of the sector in terms of employment reveals a completely different picture. Looking at estimates for the number of persons employed for the EU-25, post and courier activities contributed 33.5 % of persons employed in the information and communication services sector, which was double their share of value added, surpassing the share of telecommunications services (22.4 %), but still below that of computing services (44.1 %).

The United Kingdom had by far the largest information and communications services sector, with total value added reaching EUR 85.1 billion in 2001, over one quarter of the EU-25 total (26.0 %). This was more than one and half times the level of output reported by Germany (EUR 51.4 billion, 2000) or France (EUR 48.2 billion) and double that of Italy (EUR 38.6 billion). Among the larger economies, Spain was clearly the least specialised in these activities, with EUR 20.0 billion of value added in information and communications services in 2001.

In relative terms, however, Hungary emerged as the most specialised country in the EU-25 ⁽⁴⁾, as information and communications services generated almost one quarter of the value added in the non-financial services sector in 2001, which was 183.3 % of the corresponding EU-25 average. Other relatively highly specialised countries included Ireland (150.3 %), Slovakia (149.4 %), the Czech Republic (143.8 %) and Luxembourg (136.9 %). Furthermore, among the 10 new Member States only Malta (89.4 %) and Slovenia (77.0 %) reported lower than average value added specialisation ratios, the latter recording the lowest ratio within the EU-25. Spain confirmed the lower importance of this sector in its national non-financial services economy (78.2 %), together with Austria (81.6 %) and Germany (83.3 %, 2000).

⁽⁴⁾ Germany and the Netherlands, 2000; Greece, Cyprus and Poland, not available.

Specialisation ratios calculated at a more detailed level are analysed in the following subchapters. These highlight that post and telecommunications activities, rather than computer activities, were generally responsible for the higher relative specialisation reported by the 10 new Member States.

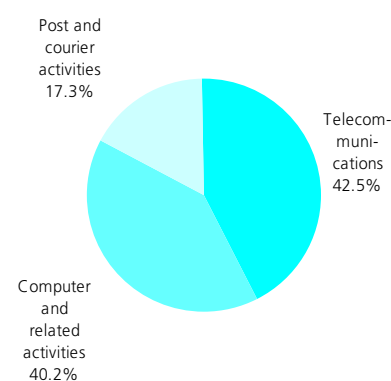
Available time-series from STS show the dynamic nature of the information and communication services sector. The index of turnover in post and telecommunications boasted a 14.8 % increase in the EU-15 in 2000 compared to the year before, slowing down to 11.3 % growth in 2001 and 4.3 % in 2002. That year, only two countries, France (-5.7 %) and Sweden (-5.1 %) saw a decrease in turnover, while only the Czech Republic (0.6 %), Ireland (1.8 %) and Slovakia (3.6 %) reported growth below 5.0 %, with the highest growth in Belgium (14.2 %) and Portugal (14.3 %) ⁽⁵⁾. The slow-down of activity was clearly visible in employment terms, with net job reductions recorded in post and telecommunications in 2003 in the EU-25 (-2.1 %) and in the EU-15 (-1.5 %). At a national level ⁽⁶⁾, notable job reductions in this activity were recorded in 2003 in Poland (-7.6 %), Austria (-6.8 %), Latvia (-6.6 %) and Portugal (-6.0 %). As regards computer services, the analysis provided in Subchapter 23.3 shows that while turnover growth was comparable to that recorded in post and telecommunications in 2001, at 10.8 % in the EU-15, this was accompanied by vigorous net job creation, as the number of persons employed rose 7.2 % in the same year. Nevertheless, computer services experienced a marked dip of activity in 2002, with a decline of turnover of 0.1 % in the EU-15, followed by a rebound of 3.5 % in 2003. Employment clearly suffered from this evolution, with practically no net job creations in this activity in the EU-15 in 2002 (0.5%) and a decline by 1.8 % in 2003, the first decline since the start of the time series in 1996.

⁽⁵⁾ Germany, Greece, Spain, Cyprus, Luxembourg, Hungary, Malta, Austria and Slovenia, not available.

⁽⁶⁾ Belgium, the Czech Republic, Germany, Greece, Ireland, Cyprus, Luxembourg, Hungary, Malta, the Netherlands and Finland, not available.

Figure 23.2

Post and telecommunications; computer and related activities (NACE Divisions 64 and 72)
Share of value added at factor cost, EU-25, 2001



Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

The distribution of value added according to enterprise size shows contrasting results for the different parts of this sector. Large enterprises (with more than 250 persons employed) dominated the sector as they were responsible for almost three quarters (73.2 %) of the value added in the information and communications services sector in the EU-25 in 2001. A more detailed analysis reveals that this dominance could be attributed to post and telecommunications services, where large enterprises accounted for 95.0 % of value added. That was double the share recorded in computer services (41.3 %), where the proportion was more in line with the non-financial services average (36.9 %).

LABOUR AND PRODUCTIVITY

The characteristics of this sector's workforce as seen from the results of the LFS resemble more closely those generally found in manufacturing activities rather than in services, namely a male-dominated workforce, a relatively small proportion of self-employment, and a low share of part-time work. Indeed, more than two thirds (68.4 %) of those employed in information and communication services in the EU-15 in 2002 were men, compared to only 56.3 % in non-financial services as a whole. As a comparison, the share of men in the manufacturing workforce was equal to 71.7 %. It must nevertheless be noted that two countries ⁽⁷⁾, namely the Czech Republic and Estonia, were exceptions to this rule and reported a lower proportion of men in information and communications services than the non-financial services average. They were also the only Member States where there was a higher proportion of women than men working in this sector. In both cases the results were due to a relatively high proportion of women in the post and telecommunications workforce.

Looking at the working status of the persons employed, information and communication services reported a relatively high share of employees, as opposed to self-employed or family workers (in comparison to the non-financial services average). Indeed, employees accounted for as much as 92.4 % of the sector's workforce in the EU-15 in 2002, compared to a services average of 80.8 %.

While part-time work attracted as many as 19.9 % of those employed in services in the EU-15 in 2002, the proportion was significantly lower in information and communication services, equal to 12.0 %. At a national level ⁽⁸⁾, the proportion of persons working on a part-time basis in this sector was most at variance with the average for non-financial services in the United Kingdom (11.7 % against 28.2 %) and Germany (16.5 % against 25.0 %).

⁽⁷⁾ Poland, not available.

⁽⁸⁾ Austria and Poland, not available.

Table 23.4

Post and telecommunications; computer and related activities (NACE Divisions 64 and 72)
Labour force characteristics, 2002

	Share of men		Share of full-time		Share of employees	
	Value (%)	Index (services=100)	Value (%)	Index (services=100)	Value (%)	Index (services=100)
EU-25	:	:	:	:	:	:
EU-15	68.4	121.4	88.0	109.8	92.4	114.3
BE	75.6	127.6	90.9	111.1	94.0	121.2
CZ	49.2	92.8	91.3	96.9	88.2	117.1
DK	66.4	111.4	86.6	109.3	94.5	107.8
DE	66.5	129.8	83.5	111.3	91.6	107.9
EE	:	:	91.8	96.9	98.8	108.0
EL	73.6	119.8	97.6	101.2	94.7	163.8
ES	65.7	113.8	94.2	103.5	94.5	127.0
FR	61.6	108.4	88.4	104.2	97.3	109.6
IE	68.5	129.4	94.5	119.2	90.0	106.8
IT	67.6	109.2	94.5	104.7	87.1	145.0
CY	73.4	138.8	98.9	106.3	93.0	123.0
LV	58.4	125.8	91.7	98.6	95.4	104.2
LT	52.6	100.6	83.5	91.4	97.0	115.5
LU	69.0	122.8	89.1	100.7	97.2	108.1
HU	55.8	103.8	95.9	99.9	89.3	110.7
MT	80.1	115.4	98.7	111.8	97.4	120.4
NL	75.7	129.1	72.1	124.4	92.0	104.8
AT	71.6	144.8	:	:	90.9	104.7
PL	:	:	:	:	:	:
PT	65.2	116.9	97.4	105.1	92.9	131.5
SI	65.0	123.3	98.0	103.6	91.9	105.8
SK	52.0	100.2	95.6	97.6	95.6	111.2
FI	65.3	123.0	87.7	105.4	95.1	109.0
SE	66.5	112.3	88.2	111.4	92.3	108.0
UK	73.7	131.4	88.3	123.0	91.2	104.0

Source: Eurostat, Labour Force Survey.

Apparent labour productivity of information and communication services was significantly higher than in most other non-financial services sectors in all countries. Indeed, each person employed in the EU-15 generated on average EUR 65 400 of value added in 2001, more than 60 % above the corresponding average for non-financial services (EUR 40 600). In the EU-25, a similar difference was apparent, as apparent labour productivity of EUR 62 900 for information and communications services was considerably higher than the EUR 38 800 average for the whole of non financial services ⁽⁹⁾. Labour productivity was higher in post and telecommunications (EUR 71 100 per person employed in the EU-15) than it was in computer and related activities (EUR 58 800), the latter activity also reporting a smaller gap between EU-15 countries and the new Member States.

⁽⁹⁾ Cyprus, Poland and Slovenia, not available in both cases.

Although higher productivity was accompanied by higher personnel costs, wage adjusted labour productivity remained generally above the non-financial services average, with value added exceeding personnel costs by 51.0 % in the EU-15 in 2001, after adjustment for the share of employees in persons employed, compared with 47.6 % for the non-financial services sector as a whole. This result was mainly due to the post and telecommunications sector, since wage adjusted labour productivity in computer services was below the non-financial services average in every country except Ireland and Lithuania ⁽¹⁰⁾.

⁽¹⁰⁾ Germany and the Netherlands, 2000; Greece, Cyprus, Poland and Slovenia, not available.

Table 23.5

Post and telecommunications; computer and related activities (NACE Divisions 64 and 72)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Post and telecommunications; computer and related activities	65.4	151.0	43.3
Post and courier activities	35.6	115.7	30.8
Telecommunications	123.8	246.4	50.3
Computer and related activities	58.8	119.0	49.4

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

23.1 POSTAL AND COURIER SERVICES

This subchapter covers NACE Group 64.1, which includes both national post activities and other courier activities. National post activities (NACE Class 64.11) 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 are covered by NACE Class 64.12 and include mainly express courier services, where enterprises have widened their initial focus on business documents towards the transfer of packages and freight too.

The potential substitution of traditional mail products by alternative means of communicating (for example, telephone, fax, electronic mail and the Internet) presents a major challenge for the postal services sector. Nevertheless, technological developments also contribute positively to postal services activity, for example, by improving automated sorting processes, or by increasing the volume of certain types of postal traffic, for example, deliveries resulting from e-commerce orders.

The market for the delivery of letters is still dominated by formerly public-owned postal operators – or Universal Service Providers (USPs) ⁽¹¹⁾. They generally operate as a monopoly with exclusive rights, balanced by the fact that they are bound by a universal service obligation. On the other hand, private operators play a greater role in the express services or courier markets, providing letter and parcel services in particular for business-to-business, direct mail and business-to-consumer markets.

⁽¹¹⁾ The term USP takes account of the possibility that the operators are no longer public organisations.

The purpose of Community policy in the postal sector is to complete the internal market for postal services and to ensure that efficient, reliable and good-quality postal services are available throughout the European Union at affordable prices to all its citizens. These objectives have been implemented through a framework postal directive ⁽¹²⁾ (the 'postal directive') that entered into force on 10 February 1998. It defined a minimum universal service, the conditions governing the provision of non-reserved services and access to the network, quality of service requirements and the harmonisation of technical standards. In June 2002, the postal directive was amended ⁽¹³⁾ with provisions further pushing the process of gradual market opening and lowering the thresholds for the service sectors that can be protected from competition. As such, the threshold in the weight limit of services which may be reserved to universal service providers was reduced to items weighing less than 100 grams on 1 January 2003 and will be further reduced to items weighing less than 50 grams as of 1 January 2006. Furthermore, all outgoing cross-border mail was opened up to competition as of

1 January 2003. The new Directive states that items of ordinary correspondence weighing between 50 grams and 350 grams represent, on average, approximately 16 % of the total postal revenues of universal service providers in the EU. Out of this total, some 9 % are accounted for by items of ordinary correspondence weighing between 100 grams and 350 grams (which have been open to competition since 1 January 2003). The new Directive sets 1 January 2009 as a possible date for the full accomplishment of the Internal Market for postal services.

⁽¹²⁾ Directive 97/67/EC of the European Parliament and of the Council of 15 December 1997 on common rules for the development of the internal market of Community postal services and the improvement of quality of service.

⁽¹³⁾ Directive 2002/39/EC of the European Parliament and of the Council of 10 June 2002 amending Directive 97/67/EC with regard to the further opening to competition of Community postal services.

Table 23.6

Post and courier activities (NACE Group 64.1)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (12.7)	Luxembourg (168)	Germany (308.5)
2	France (11.2)	Hungary (151)	France (302.0)
3	Italy (5.6)	France (133)	United Kingdom (298.9)
4	Sweden (2.1)	Sweden (131)	Italy (173.6)
5	Spain (2.0)	Slovakia (127)	Spain (110.7)

(1) The Czech Republic, Denmark, Germany, Estonia, Greece, Ireland, the Netherlands and Poland, not available.
 (2) The Czech Republic, Denmark, Germany, Estonia, Greece, Ireland, Cyprus, the Netherlands and Poland, not available.

(3) The Czech Republic, Denmark, Estonia, Greece, Ireland, Poland and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 23.7

Postal services, 2002

	Access to postal services (units)			Number of letter post items treated by the national post (millions)		
	Permanent post offices (1)	Average number of inhabitants served by a permanent post office (1)	Post boxes (2)	Domestic service (3)	International dispatch (4)	International receipt (4)
EU-25	102 677	3 680	695 725	95 586		
BE	1 302	7 918	19 200	3 533	:	:
CZ	3 536	2 886	24 241	716	33	52
DK	1 048	5 122	9 398	1 367	:	:
DE	12 683	6 500	108 000	21 640	:	:
EE	426	3 195	3 680	63	5	7
EL	2 167	4 871	13 995	496	58	53
ES	3 006	13 443	33 084	4 119	174	118
FR	17 015	3 488	100 000	17 602	:	:
IE	1 766	2 208	6 200	673	88	118
IT	13 747	4 208	66 800	6 177	108	219
CY	1 108	637	800	52	10	10
LV	964	2 433	2 464	50	4	4
LT	944	3 682	4 311	40	5	6
LU	108	4 112	1 164	106	45	28
HU	3 269	3 113	18 409	1 253	16	18
MT	50	7 893	473	52	6	9
NL	2 342	6 877	19 814	6 871	:	:
AT	2 072	3 880	22 440	1 050	:	:
PL	8 242	4 687	57 000	1 982	39	48
PT	3 832	2 696	18 573	1 201	65	45
SI	547	3 645	2 843	599	9	12
SK	1 626	3 308	7 096	288	16	13
FI	1 386	3 748	8 000	1 501	42	57
SE	2 248	3 963	29 740	3 602	133	116
UK (5)	17 243	3 472	118 000	20 553	582	389

(1) Belgium, Denmark, Greece, Spain, France, Ireland, Italy, Cyprus, Malta, the Netherlands, Austria, Poland and the United Kingdom, Source: UPU.

(2) Belgium, Denmark, Greece, Spain, France, Ireland, Italy, Cyprus, Hungary, Malta, the Netherlands, Austria and the United Kingdom, Source: UPU.

(3) Belgium, 1999; Denmark and France, including international services; the Netherlands, including international receipt; Belgium, Denmark, Greece, Spain, France, Ireland, Italy, Cyprus, Malta, the Netherlands, Austria and the United Kingdom, Source: UPU.

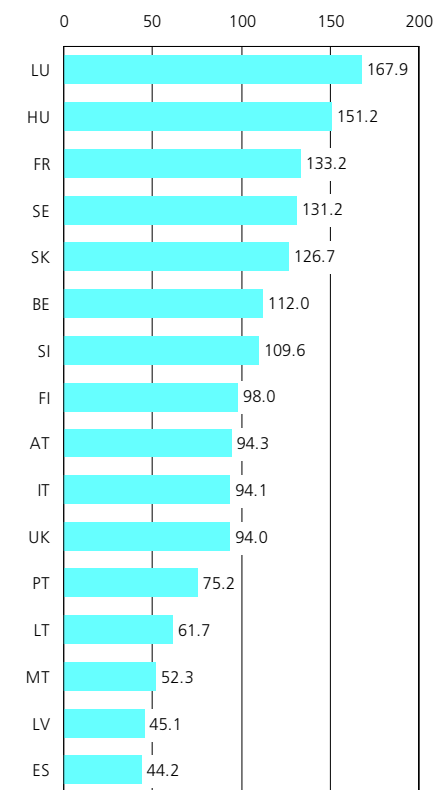
(4) Greece, Spain, France, Ireland, Italy, Cyprus, Hungary, Malta and the United Kingdom, Source: UPU.

(5) Excluding Northern Ireland.

Source: Eurostat, Communications (theme4/coins/post_cou).

Figure 23.3

Post and courier activities (NACE Group 64.1)
Value added specialisation ratio relative to non-financial services, 2001 (EU-25=100) (1)



(1) The Czech Republic, Denmark, Germany, Estonia, Greece, Ireland, Cyprus, the Netherlands and Poland, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

STRUCTURAL PROFILE

Post and courier activities generated an estimated EUR 56.5 billion of value added in the EU-25 in 2001. Employment reached an estimated 1.8 million persons employed in the EU-25 in 2001. Of the 1.5 million persons employed in the EU-15, 98.0 % were paid employees. As such, one characteristic of postal and courier services is their relatively greater reliance on labour input, evidenced by the fact that the workforce in this sector represented an estimated 2.7 % of the total number of persons employed in the EU-25's non-financial services sector in 2001, compared to a 2.3 % share of value added.

Based on available EU-15 estimates, national post activities were by far the largest activity in this sector, as they accounted for 87.0 % of the value added that was generated in 2001 and 83.4 % of the total number of persons employed.

The relative size of post and courier activities within the non-financial business sectors of the Member States in relation to the EU-25 average highlights that Luxembourg (167.9 %) and Hungary (151.2 %) were the most specialised countries in this activity in the EU-25 ⁽¹⁴⁾ in 2001. In contrast, post and courier activities contributed less than half the EU-25 average to non-financial services value added in Latvia (45.1 %) and Spain (44.2 %).

In 2002, national postal services operated approximately 102 700 permanent post offices in the EU-25 (see Table 23.7), while the number of post boxes reached 695 700. Available figures for recent years suggest that national postal services have rationalised their network by closing post offices, while ensuring service access by increasing the number of post boxes. When compared to population, Cyprus had by far the densest postal network, as each permanent post office served on average only 637 inhabitants. Several of the 10 new Member States also reported relatively high densities of postal offices, joined by Ireland and Portugal, with less than 3 500 inhabitants per post office. In comparison, Maltese, Belgian and Spanish post offices each served two to three times as many inhabitants.

Turning to traffic figures, more than 100 billion letter-post items were handled by national postal services in the EU-25 in 2002. This figure includes national and international receipt and dispatch. Most postal traffic in circulation within the EU originates from business, but is destined for private households. It is generally estimated that 80 % of all mail that is posted in the EU is from businesses, but that only one third concerns business to business correspondence. Domestic services generally accounted for more than 90 % of traffic, although this proportion was to some extent linked to the size of each country. For example, Italy and the United Kingdom reported that more than 95 % of their postal traffic was domestic, while the corresponding proportions were less than 80 % in Lithuania, Malta, Ireland and Cyprus and less than 60 % in Luxembourg. Nevertheless, the relationship between country size and international exposure was not always clear-cut: for example, Slovenia and Hungary reported less than 3.3 % of international traffic.

⁽¹⁴⁾ Denmark and Germany, 2000; the Czech Republic, Estonia, Greece, Ireland, Cyprus, the Netherlands and Poland, not available.

Table 23.8
Main indicators of courier activities, 2002 (1)

	Number of enterprises	Number of persons employed	Turnover for postal services (EUR million)
CZ	18	:	:
DK (2)	1 210	2 095	325
DE	46 000	185 000	8 300
EE	12	788	12
ES (2)	6 084	47 965	1 961
IE (2)	3	47	2 413
CY (3)	50	280	9
LV	15	255	9
LT	30	500	11
LU	44	:	:
HU (4)	369	604	25
NL (2)	:	17 114	1 202
PT	7	16 457	173
SK	6	444	23
FI (3)	270	:	305
SE	224	7 771	406

(1) Member States that are not presented in the table, not available.

(2) 2000.

(3) 2001.

(4) Turnover, 2000.

Source: Eurostat, Communications (theme4/coins/post_cou).

Table 23.9
Average number of delivery days for intra-EU-15 mail, 2003 (units) (1)

Destination	BE	DK	DE	EL	ES	FR	IE	IT	LU	NL	AT	PT	FI	SE	UK
Origin															
BE	-	2.2	2.1	2.8	2.6	2.2	2.4	2.3	2.1	2.1	2.4	2.3	2.2	2.2	2.2
DK	2.1	-	1.9	2.6	2.5	2.2	2.2	2.3	2.1	2.0	2.2	2.2	2.0	1.8	2.3
DE	2.0	1.9	-	2.6	2.5	2.1	2.1	2.2	1.9	1.9	2.0	2.1	2.1	2.0	2.1
EL	2.1	2.2	2.1	-	2.4	2.2	2.4	2.3	2.2	2.2	2.4	2.2	2.6	2.1	2.5
ES	2.3	2.2	2.2	3.2	-	2.4	2.5	2.6	2.4	2.3	2.3	2.2	2.5	2.4	2.5
FR	2.1	2.0	2.1	2.7	2.5	-	2.4	2.4	2.2	2.1	2.2	2.3	2.2	2.2	2.3
IE	2.3	2.3	2.3	3.8	3.2	2.4	-	2.6	2.5	2.3	2.8	3.0	2.8	2.4	2.1
IT	2.2	2.2	2.1	2.7	2.6	2.2	2.4	-	2.3	2.2	2.2	2.3	2.4	2.3	2.4
LU	1.9	2.1	1.9	2.7	2.6	2.1	2.5	2.3	-	2.1	2.1	2.1	2.2	2.2	2.2
NL	2.0	2.0	2.0	3.0	2.4	2.2	2.1	2.3	2.2	-	2.2	2.2	2.1	2.1	2.1
AT	2.2	2.0	1.9	2.7	2.7	2.3	2.6	2.3	2.1	2.1	-	2.1	2.2	2.0	2.2
PT	2.1	1.9	2.0	3.4	2.4	2.1	2.4	2.3	2.1	2.0	2.5	-	2.6	2.3	2.2
FI	2.1	1.9	2.0	2.7	2.7	2.1	2.3	2.4	2.3	2.0	2.2	2.1	-	1.9	2.1
SE	2.1	1.9	2.0	2.6	2.5	2.2	2.2	2.3	2.0	2.0	2.1	2.2	2.0	-	2.2
UK	2.3	2.2	2.3	3.2	2.8	2.5	2.3	2.5	2.3	2.6	2.5	2.4	2.4	2.3	-

(1) The method of calculation is based on a five day business week that excludes Saturdays and Sundays, as well as national public holidays in the destination country; the following countries have Saturday mail deliveries - Denmark, Germany, France, Italy, the Netherlands and the United Kingdom.

Source: UNEX - Unipost External Monitoring System, International Post Corporation, 2004.

As regards the quality of postal services, targets have been established by the 'postal directive', that are set at 85 % of deliveries within three days and 98 % of deliveries within five days. Figures from the International Post Corporation show that in 2003, some 93.7 % of first class, intra-EU-15 cross-border mail was delivered to the final addressee within three days of posting (T+3), exceeding the EU objective by 8.7 percentage points. These latest figures also

represented an improvement of 8.1 percentage points compared with five years before and of 24.6 points compared with 1994, the first year of measurement. Meanwhile, the share of mail delivered within five days stabilised at 98.7 %. As a result, the average delivery time in the EU-15 was 2.2 days (see Table 23.9), an improvement of half a day since 1998 and almost one full day since 1994.

LABOUR AND PRODUCTIVITY

On the basis of SBS estimates, apparent labour productivity for postal and courier activities was generally lower than in the other non-financial services activities. It was estimated at EUR 35 600 in the EU-15 in 2001, less than the corresponding average for non-financial services of EUR 40 600. Only two countries ⁽¹⁵⁾, namely Luxembourg and Portugal, reported higher labour productivity in postal and courier activities than in non-financial services as a whole.

⁽¹⁵⁾ Denmark and Germany, 2000; the Czech Republic, Estonia, Greece, Ireland, Cyprus, the Netherlands, Poland and Slovenia, not available.

Furthermore, despite low labour productivity levels, average personnel costs were generally higher in postal and courier activities in comparison to other non-financial services. They stood at EUR 27 600 per employee in the EU-25 in 2001 (EUR 30 800 in the EU-15), above the non-financial services average of EUR 25 400 per employee ⁽¹⁶⁾ (EUR 27 500 in the EU-15). As a direct consequence, the wage adjusted labour productivity ratio in the EU-15's postal and courier activities was significantly below average, at just 115.7 % compared to 147.6 % for non-financial services as a whole. Luxembourg and Sweden emerged as the only two countries ⁽¹⁷⁾ with higher wage adjusted labour productivity ratios in postal and courier activities than their national averages for non-financial services.

⁽¹⁶⁾ Cyprus and Slovenia, not available.

⁽¹⁷⁾ Denmark and Germany, 2000; the Czech Republic, Estonia, Greece, Ireland, Cyprus, the Netherlands, Poland and Slovenia, not available.

Although no official data is available to assess the breakdown between USP and competing postal operators (CPO) and other postal agents (OPA), a study carried out for the European Commission ⁽¹⁸⁾ estimated that 71 % of persons employed in postal services in 2000 worked for USPs and 29 % for CPOs and OPAs. According to the same study, it appears that employment levels have grown in recent years, as decreasing trends recorded in USPs were more than compensated for by an expansion in the number of persons employed in CPOs and OPAs.

⁽¹⁸⁾ *Employment Trends in the EU Postal Sector*, Final Report, PLS Rambøll, October 2002, available at http://europa.eu.int/comm/internal_market/post/studies_en.htm.

23.2 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, other than for the provision of radio and television programmes (which are covered in Chapter 24).

The telecommunication services sector has undergone dramatic changes in the last decade, mainly caused by the deregulation of the telecommunications market and its opening up to competition, accompanied in several countries by the privatisation of formerly State-owned telecommunication operators. Historically, the process started in 1987 with the European Commission issuing a Green Paper which was the first step in a 10-year process that culminated in the liberalisation of all telecommunications services and networks by 1 January 1998. Technology developments also greatly affected the sector with the general switch from analogue to digital equipment, the rapid expansion of data communication and the development of mobile telephony.

One of the main policy elements pursued by the European Union in the field of telecommunications is the development of bandwidth, outlined in the eEurope 2005 Action Plan, with the target to ensure

'widespread broadband availability and use in the EU by 2005, by stimulating the deployment of a secure broadband infrastructure and creating a positive environment for private investment in this field'. Broadband is available over existing infrastructure, in particular over the telephone copper network using ADSL technology, and over cable TV networks using cable modems. In addition, broadband access can be delivered over new infrastructure, such as third-generation mobile systems, satellite communication systems or through electric power line networks.

Broadband access is indeed seen as essential for the development and delivery of services and applications such as distance education (using e-learning), access to government services (e-government), healthcare (e-health),

entertainment, videoconferencing or e-commerce. Broadband provides important new options in terms of the quality of services delivered, which also become more practical and sometimes often only feasible through high-speed access.

In 2003, the Commission Communication 'Electronic communications: the road to the knowledge economy' ⁽¹⁹⁾ reiterated the eEurope 2005 broadband target and called for all Member States to put comprehensive national broadband strategies in place by the end of 2003, all public administrations to have broadband connections by the end of 2005, and half of all Internet connections to be broadband by 2005.

⁽¹⁹⁾ Communication COM(2003) 65 final of 11/02/2003, available at http://europa.eu.int/information_society/europe/2005/doc/all_about/actes_sector_en.pdf.

Table 23.10
Telecommunications (NACE Group 64.2)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (31.1)	Hungary (293)	United Kingdom (258.2)
2	Italy (18.8)	Lithuania (218)	Germany (197.0)
3	France (18.4)	Slovakia (215)	France (172.6)
4	Spain (11.9)	Latvia (202)	Italy (111.8)
5	Belgium (4.1)	Luxembourg (177)	Spain (78.5)

(1) The Czech Republic, Denmark, Germany, Estonia, Greece, Ireland, the Netherlands and Poland, not available.

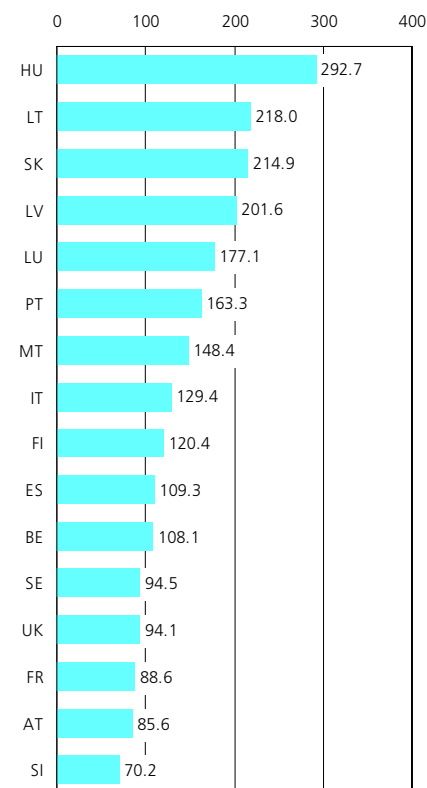
(2) The Czech Republic, Denmark, Germany, Estonia, Greece, Ireland, Cyprus, the Netherlands and Poland, not available.

(3) The Czech Republic, Denmark, Estonia, Greece, Ireland, Poland and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 23.4

Telecommunications (NACE Group 64.2)
Value added specialisation ratio relative to non-financial services, 2001 (EU-25=100) (1)



(1) The Czech Republic, Denmark, Germany, Estonia, Greece, Ireland, Cyprus, the Netherlands and Poland, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

STRUCTURAL PROFILE

Telecommunication services generated in 2001 some EUR 138.8 billion of value added in the EU-25, of which EUR 12.1 billion originated from the 10 new Member States. Employment was estimated around 1.2 million persons employed in the EU-25 in 2001, of which 1.0 million were in the EU-15. The paid employment rate in the EU-15 in this sector was 99.0 % in 2001. As such, telecommunications services contributed to as much as 5.7 % of non-financial services value added in the EU-25 in 2001, but only 1.8 % of the total number of persons employed.

The United Kingdom reported the largest output in telecommunications within the EU-25, as more than one fifth (22.4 %) of value added in this sector originated from that country in 2001, representing EUR 31.1 billion. Germany (EUR 18.9 billion, 2000), Italy (EUR 18.8 billion) and France (EUR 18.4 billion) reported output in telecommunications at a comparable level, while Spain (EUR 11.9 billion) was the only other country with value added above EUR 10.0 billion.

Table 23.11

Number of fixed and mobile telephone lines (millions)

	Fixed			Mobile		
	1990	2000	2002 (1)	1990	2000	2002 (2)
BE	3.9	5.3	5.1	0.0	5.2	8.1
CZ	:	3.9	3.7	0.0	4.3	8.6
DK	2.9	3.8	3.7	0.1	3.4	4.5
DE	32.0	50.2	53.7	0.3	48.2	59.1
EE	:	0.5	0.5	0.0	0.6	0.9
EL	3.9	5.7	5.4	0.0	5.9	8.0
ES	12.6	17.5	17.5	0.1	24.3	29.7
FR	28.1	34.0	34.1	0.3	29.7	38.6
IE	1.0	1.6	1.9	0.0	2.4	2.8
IT	22.4	27.2	27.3	0.3	43.8	53.3
CY	:	0.4	0.4	0.0	0.2	0.4
LV	:	0.7	0.7	:	0.4	0.9
LT	:	1.2	0.9	:	0.5	1.6
LU	0.2	0.3	0.2	0.0	0.3	0.4
HU	:	3.8	3.7	0.0	3.1	6.9
MT	:	0.2	0.2	0.0	0.1	0.2
NL	6.9	9.9	10.0	0.1	10.8	12.4
AT	3.2	3.8	3.8	0.1	6.3	6.6
PL	:	10.9	11.9	0.0	6.7	13.9
PT	2.4	4.3	4.4	0.0	6.7	8.5
SI	:	0.8	0.8	0.0	1.1	1.5
SK	:	1.7	1.4	0.0	1.1	2.9
FI	2.7	2.8	2.7	0.3	3.7	4.5
SE	5.9	5.8	5.6	0.5	6.4	7.9
UK	25.4	31.3	30.8	1.1	40.0	49.9

(1) Spain, Ireland, Italy, Malta, the Netherlands and Austria, 2001.

(2) Greece, Spain, Ireland, Italy, Malta, the Netherlands and Austria, 2001.

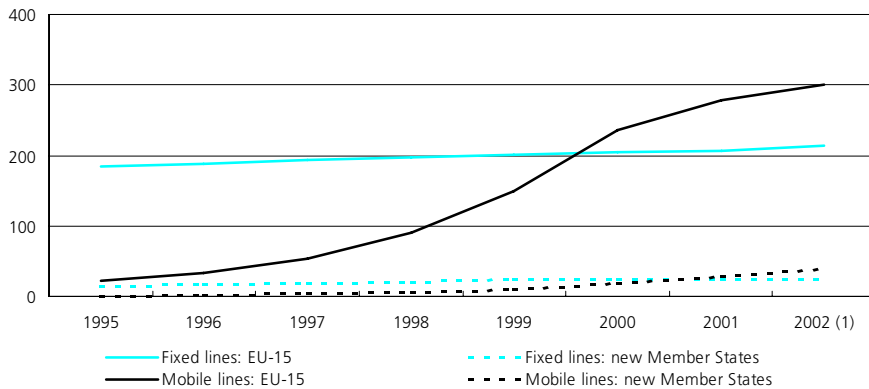
Source: Eurostat, Communications (theme4/coins/telecom).

In relative terms, however, the highest specialisation ratios in telecommunications⁽²⁰⁾ were recorded in four of the 10 new Member States, led by Hungary, where this activity's share in national non-financial services value added was close to three times (292.7 %) the corresponding EU-25 average. Lithuania (218.0 %), Slovakia (214.9 %) and Latvia (201.6 %) also reported shares that were more than twice the EU-25 level, while Luxembourg (177.1 %) and Portugal (163.3 %) were relatively the most specialised among EU-15 countries.

⁽²⁰⁾ Denmark and Germany, 2000; the Czech Republic, Estonia, Greece, Ireland, Cyprus, the Netherlands and Poland, not available.

Turning to telecommunications infrastructure, the EU-25 numbered some 230.4 million fixed telephone lines in 2002, to which could be added 332.2 million mobile phone subscriptions (see Table 23.11). Looking at the evolution of fixed telephony, the number of lines generally increased between 1990 and 2002, with average growth of 2.5 % per annum in the EU-15. Growth was fairly stable over the period, although Portugal (5.2 %) and Ireland (5.5 %) recorded significantly faster expansions among EU-15 countries. In contrast, the Nordic countries, where connectivity rates were already at high levels by 1980, recorded the slowest expansion. It is interesting to note that a majority of EU-25 countries reported that their number of fixed lines declined between 2000 and 2002, which may be both a sign of market saturation and a result of the substitution of fixed line telephony by mobile subscriptions.

Figure 23.5
Evolution of the number of telephone lines (millions)



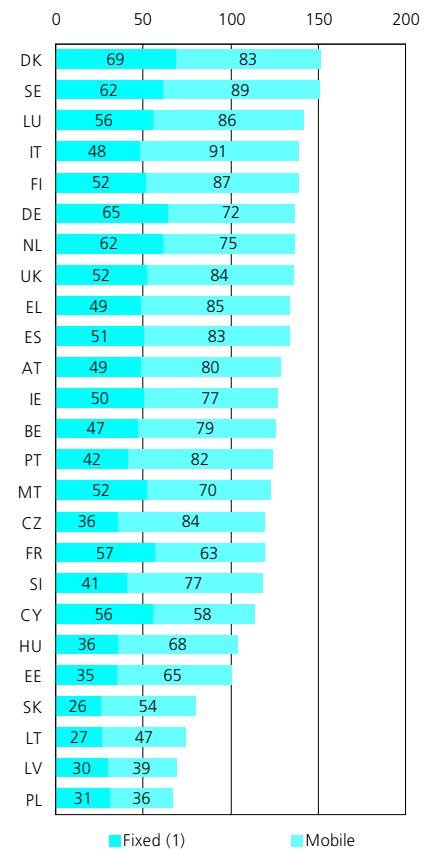
(1) Data for the EU-15 and for Malta, Source: ITU. Source: Eurostat, Communications (theme4/coins/telecom).

In the 10 new Member States, growth in the number of telephone lines was generally stronger than in the EU-15 Member States, reaching 7.5 % per annum on average over the period 1995 to 2002, compared to 2.6 % in the EU-15 over the same period (see Figure 23.5). The more rapid pace of expansion was not high enough for connectivity rates to reach those generally recorded in the EU-15 Member States. In 2002, there were on average 52 fixed lines per 100 inhabitants in the EU-25, compared to an average of 32 lines per 100 inhabitants in the 10 new Member States. In 2002, Lithuania (27 lines per 100 inhabitants) and Slovakia (26) recorded connectivity rates for fixed lines that were practically half the average for the EU-25 (see Figure 23.6); six other new Member States had connectivity rates within the range of 30 to 41 lines per 100 inhabitants. Only Malta (52 lines per 100 inhabitants) and Cyprus (56) recorded rates that were in line with the EU-25 average. Among EU-15 countries, Portugal (42 lines per 100 inhabitants) and Belgium (47) displayed the lowest connectivity rates for fixed lines. At the other end of the scale, Denmark (69 lines per 100 inhabitants) and Germany (65) boasted the highest rates, followed by Sweden and the Netherlands (both 62).

In 2002, the number of mobile phone subscriptions exceeded the number of fixed lines in every EU-25 Member State for the first time. There were almost 332 million subscriber lines to cellular mobile networks in the EU-25 in 2002 (see again Table 23.11 on the previous page), which corresponded to an average of 74 for every 100 inhabitants. Note that the number of mobile subscriptions needs to be interpreted with some care, as it is generally agreed that it overstates the true use of mobile telephony. Indeed, it is relatively common for consumers to switch between various operators (notably in the case of pre-paid offers), and not actually close the previous account. In addition, a share of the population may have more than one subscription, for example, one subscription for work and another for private use, although this element also affects fixed telephony figures.

As with fixed line telephony, the 10 new Member States have recently seen much faster growth in mobile telephony than the EU-15 countries. Over the period 1995 to 2002, the number of mobile phone subscriptions expanded on average by 47.7 % per annum in the EU-25, but by 83.5 % in the 10 new Member States, against 45.7 % in the EU-15 Member States. Once again this higher growth rate was not enough, in most cases, to allow connectivity rates to reach those recorded in the EU-15, although some countries, notably the Czech Republic (84 subscriptions per 100 inhabitants) and Slovenia (77) reported rates that were in line, or above, the EU-25 average. Five of the 10 new Member States nevertheless reported the lowest connectivity rates, all below 60 %, with Latvia (39 %) and Poland (36 %) reporting the lowest penetration of mobile phone subscriptions. Among EU-15 Member States, France recorded the lowest penetration of mobile phone subscriptions with 63 subscriptions per 100 inhabitants, which was below the rates recorded in Slovenia (77 %), Hungary (68 %) and Estonia (65 %).

Figure 23.6
Number of telephone lines per 100 inhabitants, 2002



(1) Greece, Spain, France, Ireland, Italy, Malta, the Netherlands and Austria, Source: ITU. Source: Eurostat, Communications (theme4/coins/telecom).

Most telephone calls were made to national correspondents, and exceeded 500 seconds per day per line in a majority of countries in 2002 (see Table 23.12). Slovakia nevertheless reported the lowest telephone consumption with just 110 seconds per line per day, while Latvia (354 seconds) and Portugal (358 seconds) were the only other countries where people called, on average, less than 6 minutes per day (or 360 seconds). This compared to an average of over 1 000 seconds (or more than 16 minutes) in Sweden (1 008) and Germany (1 028) and 1 878 seconds in Italy (31 minutes). It must be noted that Internet access has become an important factor in national calls, as a large number of users connect to their service provider through a modem.

Turning to international calls, including both intra- and extra-EU-15 calls, these exceeded, on average, 20 seconds per day per line in the majority of countries. Smaller countries naturally reported a longer average duration of international calls, with the highest figures recorded in Luxembourg and Ireland (both 169 seconds per day per line). Cyprus (92 seconds per day per line), Belgium (57 seconds), Sweden (56 seconds) and Slovenia (51 seconds) also recorded a significantly higher duration for international calls. Among the larger Member States, it is interesting to note the particularly low levels of international calls recorded in France (15 seconds per day per line), the lowest ratio among the EU-15 Member States. International traffic was nevertheless lower in most of the 10 new Member States, five of which recorded the shortest average daily duration of international calls, with values between 15 seconds per line per day in Hungary down to 9 seconds in Poland.

Table 23.12
Average duration of outgoing telephone calls, 2002 (seconds per line per day)

	National calls (1)	International calls (2)
BE	694	57
CZ	545	14
DK	866	29
DE	1 028	29
EE	421	27
EL	:	21
ES	712	24
FR	458	15
IE	:	169
IT	1 878	30
CY	713	92
LV	354	15
LT	651	14
LU	658	169
HU	548	15
MT	:	:
NL	598	43
AT	:	49
PL	450	9
PT	358	20
SI	:	51
SK	110	20
FI	877	32
SE	1 008	56
UK	675	41

(1) Belgium, Italy, Cyprus and the United Kingdom, 2001; Spain, 2000; Lithuania and Luxembourg, 1999; the Netherlands, 1998.

(2) Belgium, the Czech Republic, Italy, Cyprus, the Netherlands, Slovenia, Finland and the United Kingdom, 2001; Spain, Ireland and Austria, 2000; Greece, France and Luxembourg, 1999.

Source: Eurostat, Communications (theme4/coins/telecom).

LABOUR AND PRODUCTIVITY

The productivity of the telecommunication services sector was particularly high, as apparent labour productivity was at least double that of non-financial services in all Member States. In 2001, average labour productivity in the EU-15's telecommunications sector stood at EUR 123 800 per person employed, practically three times the corresponding average for non-financial services (EUR 40 600). In Luxembourg, labour productivity in telecommunications was the highest ⁽²¹⁾ at EUR 762 800 per person employed in 2001, which represented fourteen times the national non-financial services average. Large productivity differences were also reported in Portugal (EUR 139 900, seven times the average) and Hungary (EUR 72 200, six times the average).

Average personnel costs faced by telecommunications enterprises were generally higher than the average for non-financial services enterprises, at EUR 45 200 per employee in the EU-25 (EUR 50 300 in the EU-15), compared with EUR 25 400 ⁽²²⁾ for non-financial services (EUR 27 500 in the EU-15). Despite high average personnel costs, wage adjusted labour productivity ratios in the Member States ⁽²³⁾ were 1.3 to 3.1 times (respectively in the United Kingdom and in Italy) higher than non-financial services averages, and 6.7 times higher in Luxembourg. Wage adjusted labour productivity in the telecommunications sector was equal to 246.4 % in the EU-15, which was 1.7 times the corresponding ratio for the whole of non-financial services (147.6 %).

⁽²¹⁾ Denmark and Germany, 2000; the Czech Republic, Estonia, Greece, Ireland, Cyprus, the Netherlands, Poland and Slovenia, not available.

⁽²²⁾ Cyprus and Slovenia, not available.

⁽²³⁾ Denmark and Germany, 2000; the Czech Republic, Estonia, Greece, Ireland, Cyprus, the Netherlands, Poland and Slovenia, not available.

23.3 SOFTWARE AND COMPUTING SERVICES

NACE Division 72 covers software and computing services, which includes consultancy activities for hardware or software, data processing activities, database activities and the maintenance and repair of office and information technology machinery. The actual manufacture of computers (NACE Class 30.02) and their retail trade (NACE Class 52.48) are not covered by this subchapter.

This sector is at the forefront of the information society, providing software and services that allow businesses and consumers to take advantage of technological progress. With the increase in the use of the Internet and growth in e-commerce applications, there have been fundamental changes in software developments, as well as the way in which computing services are offered to customers. The software and computing services sector was one of the fastest growing areas of the EU economy during the 1990s until stock market valuations for many companies crashed in 2001 and activity slowed and in some cases declined.

EU developments in the field of software and computer services include the February 2002 proposal by the Commission for a directive on the protection by patents of computer-implemented inventions. Its goal was to harmonise the way in which national patent laws deal with inventions using software, as the differences between European countries could form a significant barrier to trade in patented products. In addition, the eEurope 2005 Action Plan makes several references to the importance of free and open source software (F/OSS), notably as a stimulation of competition in the software market.

Table 23.13

World's top software and IT services enterprises/groups, 2002

	Software and IT services revenue (EUR million)	Corporate revenue (EUR million)	Number of employees (thousands)
IBM	52 278	85 857	315 889
Microsoft	29 997	29 997	50 621
EDS	22 739	22 739	137 000
Lockheed Martin	13 491	28 107	125 000
Accenture	12 240	12 240	75 000
Computer Sciences	12 083	12 083	67 000
Hewlett-Packard	10 772	47 828	141 000
Oracle	10 230	10 230	42 006
Hitachi	8 680	72 192	339 572
SAP	8 130	8 220	29 374

Source: Software Magazine's Annual Software 500, Wiesner Publishing, Framingham, Mass., 2003.

STRUCTURAL PROFILE

The sector of computer and related activities (NACE Division 72) generated an estimated EUR 131.2 billion of value added in 2001, equivalent to 5.4 % of the wealth created in the non-financial services sector in the EU-25. Of this amount, only EUR 3.2 billion, or 2.4 %, originated from the 10 new Member States while the corresponding contribution of these countries to non-financial services value added as a whole was almost double at 4.6 %.

There were 2.3 million persons employed in computer activities in the EU-25 ⁽²⁴⁾ in 2001. In the EU-15 Member States there were 2.2 million persons employed in this sector, some 3.8 % of the non-financial services total.

⁽²⁴⁾ Poland and Slovenia, number of employees; Cyprus, not available.

The United Kingdom dominated the EU-25 computer services sector as it was responsible for almost one third (31.4 %) of the value added generated, with EUR 41.3 billion in 2001. This was far ahead of Germany (EUR 20.6 billion, 2000), France (EUR 18.6 billion) and Italy (EUR 14.1 billion), which were the only other countries generating more than EUR 10.0 billion of value added in these activities. It is interesting to note the relatively low importance of computer services in Spain, where value added was equal to only EUR 6.2 billion in 2001, less than in the Netherlands (EUR 8.2 billion) and on a par with Sweden (EUR 6.0 billion).

Table 23.14

Computer and related activities (NACE Division 72) Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to non-financial services (EU-25=100) (2)	Largest number of persons employed (thousands) (3)
1	United Kingdom (41.3)	Ireland (199)	United Kingdom (576.7)
2	France (18.6)	Sweden (161)	Italy (340.4)
3	Italy (14.1)	United Kingdom (132)	France (335.5)
4	Netherlands (8.1)	Finland (114)	Germany (307.4)
5	Spain (6.2)	Denmark (103)	Spain (165.5)

(1) Germany, Greece and Cyprus, not available.

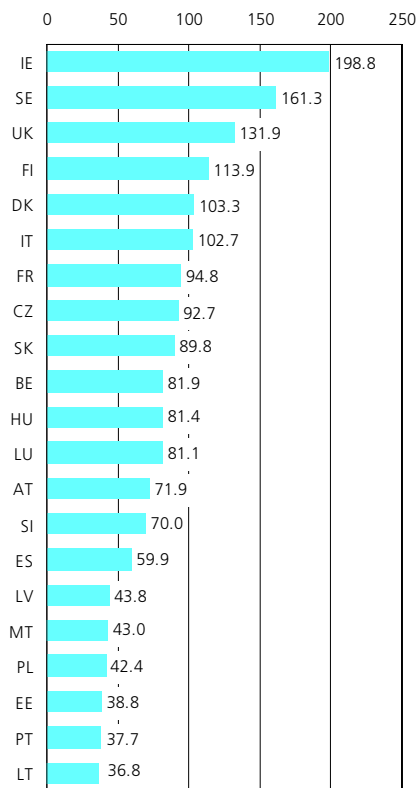
(2) Germany, Greece, Cyprus and the Netherlands, not available.

(3) Greece, Cyprus, Poland and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 23.7

**Computer and related activities
(NACE Division 72)
Value added specialisation ratio relative to
non-financial services, 2001 (EU-25=100) (1)**



(1) Germany, Greece, Cyprus and the Netherlands, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

The United Kingdom also emerged as relatively specialised in computer services, as this activity's share in the national value added of non-financial services was equal to 131.9 % of the EU-25 average. The United Kingdom was nevertheless surpassed by Ireland (198.8 %) and Sweden (161.3 %), where this sector played an even greater role in the non-financial services economy ⁽²⁵⁾. In contrast, half of the 10 new Member States reported specialisation ratios for computer services that were below 50.0 %, with the lowest ratio recorded in Lithuania (36.8 %). Among the EU-15 Member States the least specialised countries were Portugal (37.7 %) and Spain (59.9 %).

⁽²⁵⁾ Germany and the Netherlands, 2000; Greece and Cyprus, not available.

Annualised short-term statistics shows that computer services benefited from a particularly favourable evolution in recent years, as witnessed by the rapid development of the turnover index until 2001, but that a marked slowdown was recorded thereafter. Double-digit annual growth was recorded in the EU-15 between 1998 and 2001, averaging 14.0 % per annum. At a national level, only Italy saw a fall of the turnover index in 2001 ⁽²⁶⁾, by 2.4 %, while Sweden reported a modest 3.5 %, Slovakia (8.3 %), and the Netherlands 9.9 % - all other countries posted an increase of the turnover index above 10.0 % in 2001, while growth reached 24.0 % in Estonia and 46.6 % in Lithuania. Nevertheless, 2002 saw a marked change in this activity, with computer services experiencing no change in turnover in the EU-15. A rebound followed in 2003, with an increase in the turnover index of 3.5 %. That year, only Portugal (24.4 %), Latvia (13.6 %) and the United Kingdom (11.4 %) posted double-digit growth, while Italy (-0.2 %), Denmark, France (-2.7 % both), the Netherlands (-3.0 %) and Belgium (-8.9 %) continued with a negative development ⁽²⁷⁾.

Employment in computer services increased by 7.8 % in the EU-25 in 2001 (7.2 % in the EU-15), according to STS data. This was the highest growth reported in non-financial services ⁽²⁸⁾ that year at the NACE division level, ahead of business services (4.2 %), highlighting the important role played by this activity in job creation in the EU economy. Only Italy (-1.2 %) and to a lesser extent Latvia (-0.4 %) reported job reductions, while most other Member States boasted double-digit growth rates ⁽²⁹⁾. However, employment clearly suffered from the slow-down in activity experienced thereafter, with lower net employment growth in the EU-15 in 2002 (0.5 %) and a decline by 1.8 % in 2003, the first negative development since the start of the time series in 1996. Nevertheless, most of the 10 new Member States continued to report vigorous net job creation in this activity in 2003, led by Estonia (18.4 %), Lithuania (17.6 %), Hungary (13.1 %), Latvia (11.2 %) and Slovenia (10.3 %).

⁽²⁶⁾ Denmark, Germany, Greece, Spain, Ireland, Cyprus, Luxembourg, Hungary, Malta, Austria and Slovenia, not available.

⁽²⁷⁾ Germany, Greece, Ireland, Cyprus, Luxembourg, Hungary, Malta, Austria and Slovenia, not available.

⁽²⁸⁾ NACE Divisions 70, 71 and 73, not available.

⁽²⁹⁾ The Czech Republic, Germany, Greece, Spain, Cyprus, Luxembourg and Malta, not available.

Turning to the size-class distribution of value added, computer services dissociated themselves from post and telecommunications enterprises with a structure more in line with other non-financial services, although still somewhat weighted in favour of medium-sized and large enterprises. In the EU-25, large enterprises accounted for the highest share of value added, accounting for 41.3 % of the total in 2001 compared with 36.9 % within the whole of non-financial services. Similarly, medium-sized enterprises represented 20.2 % of output compared with an average of 16.4 % for non-financial services.

At a national level, interesting patterns could be observed when comparing the contribution of the various size-classes to value added in computer services in relation to the corresponding ratio for non-financial services as a whole. It appears that the structure of the computer services sector was weighted in favour of large enterprises in Finland and France, in favour of medium-sized enterprises in Belgium, Portugal and Hungary, and in favour of small enterprises in Lithuania and Slovakia and micro-enterprises in the United Kingdom.

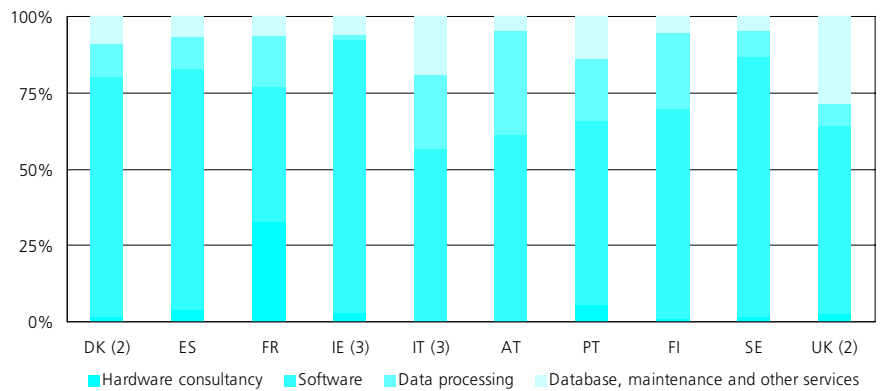
Additional information on software and computing services is provided by a pilot survey carried out in a limited number of Member States ⁽³⁰⁾. As a part of this project, participating countries launched two surveys on this sector in 2001 and 2002, respectively for the reference years 2000 and 2001, concentrating on turnover data, broken down by client and product.

⁽³⁰⁾ EU-15 Member States except Belgium, Germany, Greece and the Netherlands.

The results of these surveys show that software consultancy and supply (NACE Group 72.2) was the most important activity within computer services in all surveyed countries for both reference years. France nevertheless displayed a high level of turnover in the activity of hardware consultancy, which accounted for 32.6 % of total turnover. Similarly, data processing showed above average importance in Austria, Finland, Italy and Portugal.

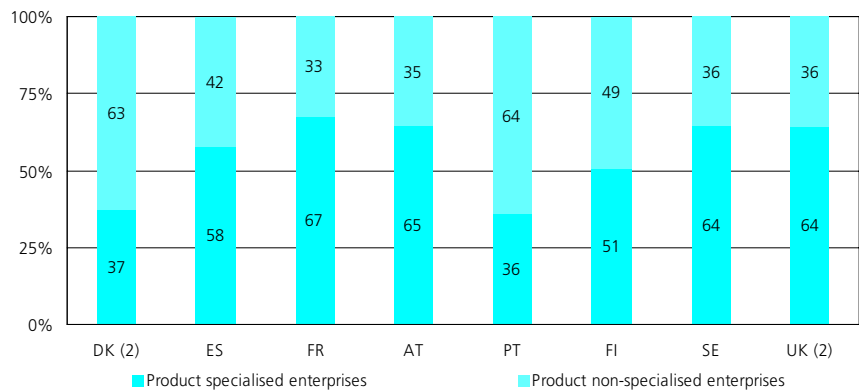
Product specialisation among software enterprises was also measured by the survey. For this purpose, enterprises were defined as product-specialised if their most important product accounted for at least three quarters of their total net turnover. Looking at software consultancy and supply, the majority of turnover originated from product-specialised enterprises in most of the countries, meaning that enterprises selling principally one software product accounted for the largest share of turnover. Only in Denmark and Portugal did turnover from non-product-specialised enterprises surpass that of product specialised enterprises.

Figure 23.8 Breakdown of turnover in computing services by NACE Group, 2001 (1)



(1) Member States that are not presented in the figure, not available.
 (2) Provisional.
 (3) 2000.
 Source: Eurostat, Business services (theme4/sbs/bus_serv/ref_new).

Figure 23.9 Breakdown of turnover in software service enterprises by specialisation, 2001 (1)



(1) Member States that are not presented in the figure, not available.
 (2) Provisional.
 Source: Eurostat, Business services (theme4/sbs/bus_serv/ref_new).

LABOUR AND PRODUCTIVITY

The LFS results indicate that computer services was a mainstay of male employment, as men represented almost three quarters (74.4 %) of those employed in the EU-15 in 2002, while they accounted for only 56.3 % of the services workforce. As a comparison it can be noted that this was an even higher proportion of men than the average for manufacturing activities (71.7 %). Among Member States ⁽³¹⁾ the proportion of men in the computer services sector was more than the services average (NACE Sections G to K) in every country, and the proportion of men in this sector was equal to or below two thirds of the total workforce in only two Member States: the Czech Republic (66.6 %) and Cyprus (65.3 %).

Looking at the working time status of those employed in computer services reveals no significant differences compared to non-financial services averages, unlike working duration that was generally longer in computer services. Indeed, as many as 92.6 % of those employed in this activity in the EU-15 in 2002 worked on a full-time basis, some 12.5 percentage points above the corresponding share for services (80.1 %). Only Latvia and the Netherlands reported less than 90 % of the computer services' workforce in full-time work ⁽³²⁾.

Information on the productivity of the workforce in computer services is available from SBS data. It shows that each person employed in this sector in the EU-15 in 2001 generated on average EUR 58 800 of value added, some 40 % higher than the non-financial services average of EUR 40 600. Labour productivity was higher in computer services than the non-financial services average in all reporting countries ⁽³³⁾, although to a different extent from one country to the other. The difference was limited in Finland (3.8 % above the average), Luxembourg (5.9 %) and Sweden (11.3 %), while the productivity gap was significantly wider in Ireland (175.5 % above the average), the Czech Republic (91.0 %) or Hungary (84.5 %).

⁽³¹⁾ Estonia, Lithuania, Luxembourg and Poland, not available.

⁽³²⁾ Lithuania, Austria and Poland, not available.

⁽³³⁾ Germany and the Netherlands, 2000; Greece, Cyprus, Poland and Slovenia, not available.

Computer services enterprises faced average personnel costs that were almost twice as high as the average for non-financial services, which may be a reflection of the large proportion of those employed with a higher level of education. Personnel costs averaged EUR 47 500 per employee in the EU-25 in 2001, which was 86.9 % higher than the non-financial services average of EUR 25 400 per employee ⁽³⁴⁾. Furthermore, average personnel costs were at least 50 % higher than national averages for non-financial services in all Member States ⁽³⁵⁾, except Italy (33.3 % higher) and Finland (44.1 % higher).

⁽³⁴⁾ Cyprus and Slovenia, not available.

⁽³⁵⁾ Germany and Slovenia, 2000; Greece and Cyprus, not available.

Combining productivity with personnel costs, and taking into account the proportion of self-employed persons and family workers in the workforce, the resulting wage adjusted labour productivity ratios were relatively low compared to non-financial service averages. The wage adjusted labour productivity ratio was equal to 119.0 % in the EU-15 in 2001, which was approximately 20 % less than the corresponding ratio for non-financial services as a whole (147.6 %). Only two countries, namely Ireland and Lithuania, reported higher wage adjusted labour productivity ratios in computer services, while ratios were in line with national averages for non-financial services in the Czech Republic and Hungary. In the majority of the other Member States ⁽³⁶⁾, the productivity gap according to this measure was between 20 % and 30 %.

⁽³⁶⁾ Germany and the Netherlands, 2000; Greece, Cyprus, Poland and Slovenia, not available.

Table 23.15
Computer and related activities (NACE Division 72)
Labour force characteristics, 2002

	Share of men		Share of full-time		Share of employees	
	Value (%)	Index (services=100)	Value (%)	Index (services=100)	Value (%)	Index (services=100)
EU-25	:	:	:	:	:	:
EU-15	74.4	132.0	92.6	115.6	86.2	106.7
BE	80.8	136.4	92.2	112.7	89.3	115.2
CZ	66.6	125.5	95.3	101.1	73.0	96.9
DK	75.2	126.1	96.8	122.2	87.5	99.8
DE	76.0	148.2	90.2	120.2	85.2	100.5
EE	:	:	100.0	105.6	100.0	109.3
EL	70.8	115.3	99.5	103.3	86.2	149.0
ES	71.9	124.6	96.9	106.5	90.1	121.1
FR	71.6	126.0	93.3	110.0	93.5	105.4
IE	67.3	127.2	95.8	120.8	89.2	105.9
IT	70.7	114.2	95.3	105.5	76.3	126.9
CY	65.3	123.5	97.2	104.5	81.9	108.4
LV	76.2	164.0	88.5	95.3	88.9	97.1
LT	:	:	:	:	:	:
LU	:	:	100.0	113.1	96.9	107.8
HU	73.2	136.1	99.4	103.6	72.3	89.6
MT	79.8	114.9	100.0	113.3	90.5	111.9
NL	83.5	142.5	86.5	149.2	86.4	98.4
AT	70.9	143.2	:	:	80.8	93.1
PL	:	:	:	:	:	:
PT	71.7	128.5	99.0	106.8	82.6	116.9
SI	71.5	135.5	96.8	102.2	81.6	94.0
SK	77.2	148.8	98.8	100.9	86.2	100.3
FI	75.9	142.8	93.5	112.3	90.6	103.8
SE	73.5	124.1	94.2	118.9	86.9	101.7
UK	75.2	134.1	92.0	128.2	86.4	98.5

Source: Eurostat, Labour Force Survey.

Table 23.16

Post and telecommunications (NACE Division 64)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	12 508	3 787	7 529	58 275	468	:	28 576	64 964	5 942	50 714	427	609	595	1 456
Value added at factor cost (EUR million) (1)	5 831	1 955	3 648	30 789	221	:	13 862	29 597	2 287	24 427	369	385	296	898
Purchases of goods and services (EUR million) (1)	6 938	1 923	4 418	29 612	245	:	15 257	35 581	3 636	26 690	58	245	309	541
Gross investment in tangible goods (EUR million) (1)	1 708	1 402	2 130	15 412	97	:	5 861	7 424	920	6 534	74	165	180	:
Number of persons employed (thousands)	83	70	59	496	8	:	189	475	26	285	4	14	18	4
App. labour productivity (EUR thous./pers. emp.) (1)	70.2	27.8	61.9	62.9	26.1	:	73.3	62.4	89.4	85.6	100.4	27.0	16.8	228.6
Average personnel costs (EUR thous./employee) (1)	44.9	9.0	35.8	35.9	8.0	:	29.2	41.2	71.2	34.5	28.4	6.8	5.8	53.1
Wage adjusted labour productivity (%) (1)	156.4	307.7	172.9	174.9	326.0	:	250.9	151.4	125.6	248.3	353.1	399.3	292.1	430.5
Gross operating rate (%) (1)	17.6	34.9	20.8	24.6	32.8	:	29.8	15.5	8.5	29.0	62.2	47.3	32.8	47.4
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	3 714	218	23 852	9 109	:	7 386	960	1 151	6 892	11 930	94 307	1 327	2 322	:
Value added at factor cost (EUR million)	1 796	160	10 111	3 952	:	3 260	257	560	2 729	5 842	43 791	725	1 327	:
Purchases of goods and services (EUR million)	1 952	53	14 765	5 177	:	4 477	525	585	4 363	6 491	51 918	627	1 025	:
Gross investment in tangible goods (EUR million) (2)	783	40	4 908	1 359	:	1 659	202	219	909	2 008	13 052	321	1 858	:
Number of persons employed (thousands)	65	3	147	58	:	39	:	33	45	91	557	46	99	:
App. labour productivity (EUR thous./pers. emp.)	27.5	50.6	68.7	68.6	:	84.4	:	16.9	60.4	64.4	78.6	15.9	13.4	:
Average personnel costs (EUR thous./employee)	11.2	16.2	34.6	39.1	:	32.4	18.2	6.4	33.1	35.2	44.5	3.7	5.1	:
Wage adjusted labour productivity (%)	245.6	313.1	198.7	175.3	:	260.5	:	263.6	182.4	182.6	176.8	426.0	261.2	:
Gross operating rate (%)	28.8	50.3	22.1	18.8	:	27.2	5.6	30.2	17.9	22.3	20.7	41.9	35.9	:

(1) Germany, 2000.

(2) The Netherlands, 1999.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 23.17

Post and courier activities (NACE Group 64.1)
Main indicators, 2001

	BE	CZ	DK (1)	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million) (2)	2 856	:	1 728	18 041	:	:	3 622	15 346	:	8 100	34	47	28	469
Value added at factor cost (EUR million) (2)	1 729	:	1 251	11 915	:	:	1 957	11 237	:	5 580	28	32	31	250
Purchases of goods and services (EUR million) (2)	1 121	185	491	7 172	:	:	1 609	3 286	:	2 230	6	16	17	217
Gross investment in tangible goods (EUR million) (2)	90	:	52	943	:	:	230	448	:	351	2	2	2	:
Number of persons employed (thousands)	49	:	37	308	:	:	111	302	:	174	1	7	9	3
App. labour productivity (EUR thous./pers. emp.) (2)	35.5	:	33.5	37.4	:	:	17.7	37.2	:	32.1	27.2	4.3	3.4	81.2
Average personnel costs (EUR thous./employee) (2)	34.0	:	27.9	29.4	:	:	15.9	35.0	:	29.3	16.7	2.9	3.2	48.2
Wage adjusted labour productivity (%) (2)	104.3	:	120.1	127.1	:	:	111.3	106.2	:	109.8	163.6	147.3	107.8	168.5
Gross operating rate (%) (2)	4.5	:	13.3	15.2	:	:	7.7	4.4	:	6.9	33.9	22.1	8.2	21.8
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	464	22	:	2 048	:	668	164	190	1 174	2 709	20 975	82	152	:
Value added at factor cost (EUR million)	312	20	:	1 224	:	515	100	108	679	2 110	12 656	41	97	:
Purchases of goods and services (EUR million)	147	1	:	815	:	181	47	81	509	737	8 463	42	56	:
Gross investment in tangible goods (EUR million)	41	0	142	98	:	58	17	6	28	105	631	4	57	:
Number of persons employed (thousands)	45	1	85	34	:	19	:	19	24	58	299	16	36	:
App. labour productivity (EUR thous./pers. emp.)	7.0	20.7	:	35.7	:	27.1	:	5.6	28.0	36.1	42.3	2.7	2.7	:
Average personnel costs (EUR thous./employee)	6.4	13.9	:	32.6	:	25.0	14.9	4.3	25.0	26.3	35.8	2.4	2.3	:
Wage adjusted labour productivity (%)	109.4	148.8	:	109.4	:	108.3	:	132.2	112.1	137.1	118.4	112.6	115.3	:
Gross operating rate (%)	6.3	31.9	:	5.6	:	5.9	1.0	13.9	6.4	21.3	10.5	5.9	9.0	:

(1) 2000.

(2) Germany, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 23.18

Telecommunications (NACE Group 64.2)
Main indicators, 2001

	BE	CZ	DK (1)	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million) (2)	9 652		4 652	36 652			24 954	49 618		42 614	393	563	566	987
Value added at factor cost (EUR million) (2)	4 102		2 155	18 874			11 905	18 360		18 847	341	353	265	648
Purchases of goods and services (EUR million) (2)	5 817	1 738	2 683	22 441			13 649	32 294		24 460	52	229	292	324
Gross investment in tangible goods (EUR million) (2)	1 617		678	14 469			5 631	6 976		6 183	72	162	179	
Number of persons employed (thousands)	34		22	197			78	173		112	3	7	9	1
App. labour productivity (EUR thous./pers. emp.) (2)	119.6		97.1	110.1			151.7	106.4		168.6	129.3	51.9	30.7	762.8
Average personnel costs (EUR thous./employee) (2)	60.0		39.2	47.7			47.3	52.0		42.5	33.0	11.0	8.4	71.0
Wage adjusted labour productivity (%) (2)	199.4		247.5	230.8			320.7	204.7		396.7	392.1	472.7	363.7	1 074.5
Gross operating rate (%) (2)	21.4		27.6	29.2			33.0	18.9		33.2	64.7	49.4	34.0	59.6
	HU	MT	NL (1)	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	3 250	196		7 061		6 718	795	961	5 719	9 221	73 333	1 246	2 171	
Value added at factor cost (EUR million)	1 484	140		2 729		2 746	157	452	2 050	3 733	31 135	684	1 230	
Purchases of goods and services (EUR million)	1 805	52		4 362		4 296	478	504	3 855	5 754	43 455	585	969	
Gross investment in tangible goods (EUR million)	742	40		1 261		1 601	186	213	882	1 903	12 421	316	1 801	
Number of persons employed (thousands)	21	2	62	23		20		14	21	32	258	30	63	
App. labour productivity (EUR thous./pers. emp.)	72.2	63.8		117.1		139.9		32.4	97.8	115.3	120.6	22.7	19.5	
Average personnel costs (EUR thous./employee)	21.6	17.1		48.7		39.6	23.0	9.4	42.5	51.4	54.5	4.4	6.8	
Wage adjusted labour productivity (%)	333.6	372.4		240.3		353.4		346.2	230.2	224.4	221.3	511.6	288.0	
Gross operating rate (%)	32.0	52.3		22.7		29.4	6.5	33.4	20.3	22.6	23.6	44.3	37.7	

(1) 2000.

(2) Germany, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 23.19

Computer and related activities (NACE Division 72)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Turnover (EUR million)	7 794	1 965	5 899	44 397	108		13 172	39 539	7 348	32 186		131	133	674
Value added at factor cost (EUR million) (1)	2 937	684	2 697	20 621	40		6 166	18 574	2 598	14 148		73	42	280
Purchases of goods and services (EUR million) (1)	4 813	1 260	3 311	20 374	69		7 258	21 237	4 769	18 618		55	90	391
Gross investment in tangible goods (EUR million) (1)	577	80	319	3 479	4		478	1 327	136	1 634		13	6	
Number of persons employed (thousands)	49	43	46	307	3		165	336	23	340		5	4	5
App. labour productivity (EUR thous./pers. emp.) (1)	59.4	15.9	58.6	73.0	14.3		37.3	55.4	114.4	41.6		16.0	10.4	58.4
Average personnel costs (EUR thous./employee) (1)	58.4	14.1	56.5	54.5	11.1		32.4	53.1	51.3	35.0		7.8	5.1	51.5
Wage adjusted labour productivity (%) (1)	101.7	113.0	103.8	133.9	129.4		114.9	104.3	223.0	118.7		205.0	202.8	113.3
Gross operating rate (%) (1)	7.2	12.7	5.9	16.4	10.3		9.6	2.3	21.7	18.1		28.5	18.2	6.6
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Turnover (EUR million)	1 298	65	16 610	5 210	3 292	1 354	464	443	3 883	14 032	74 511	129	399	
Value added at factor cost (EUR million)	390	38	8 118	2 167	1 623	600	148	179	1 834	6 026	41 263	43	158	
Purchases of goods and services (EUR million)	912	26	8 484	3 062	1 343	829	296	263	2 202	8 212	32 688	90	245	
Gross investment in tangible goods (EUR million)	89	2	359	268	96	121	13	17	176	526	3 382	11	22	
Number of persons employed (thousands)	17	1	138	39		17		12	38	121	577	10	20	
App. labour productivity (EUR thous./pers. emp.)	22.8	31.9	58.7	55.9		34.7		15.4	48.9	49.7	71.5	4.2	7.9	
Average personnel costs (EUR thous./employee)	13.6	16.5	47.7	48.7	17.5	28.5	21.7	9.6	46.6	54.6	55.2	4.0	4.7	
Wage adjusted labour productivity (%)	166.9	193.2	123.0	114.9		121.5		159.7	105.0	90.9	129.7	105.2	169.1	
Gross operating rate (%)	12.2	36.8	13.0	12.2	30.6	11.5	7.1	15.4	3.3	1.6	17.7	9.7	19.3	

(1) Germany, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Media



Three different concepts intervene in the definition of 'media': the medium itself, the form of transmission and its content. The medium is a carrier allowing the dissemination of information through material objects or devices, for example TV or radio sets, printed paper or plastic discs. The information carried by the media may be transmitted in the form of text, sound and/or images. The content, in other words, the information itself, may be assimilated to a service, such as, for example, news reporting, entertainment or art.

Enterprises involved in media activities are classified within NACE on the basis of one or many of these concepts. Unsurprisingly given the pace of developments in this area, NACE is somewhat outdated as regards media activities, as it relies on the assumption that medium and contents are merged in some cases and separate in others, a criterion that determines whether they are classified as manufacturing or services activities. For example, publishing of sound recordings or book editing are seen as manufacturing activities, while visual media (for example, television or film-making) are seen as services activities. In the former case the medium (the CD or the printed book) and the information (the music or the text) were considered as intrinsically joined, while in the latter case the distinction between the medium and the content was seen as clear-cut ⁽¹⁾.

⁽¹⁾ From a statistical point of view, the consequence is that media activities assimilated to manufacturing activities have been historically well covered by broad-based official data (SBS, STS, Prodcorn, external trade), while media activities classified as services, notably TV and cinema activities, face significant gaps in coverage, which are only partly compensated by the development of specific 'sectoral' databases, such as AUVIS. In the absence of comprehensive SBS data for NACE Division 92, this overview chapter concentrates on publishing, printing and reproduction activities (NACE Division 22), which covers the publishing, printing and reproduction of books, newspapers, magazines and sound recordings, while some of the more service-oriented activities are covered in the following subchapters.

This traditional pattern has been put into question as a result of technological developments. For example, sound recordings are increasingly dematerialised, as they tend to be replaced by electronic files that can be stored, copied and listened to on a variety of devices, from PCs to portable telephones or dedicated devices (such as MP3 players) or, for that matter, also recorded onto CDs, vinyl or tapes. Conversely, the development of home video devices (VCR or DVD) allows final consumers to record TV and cinema content and store it for viewing at a later date.

EU policy in the field of media, and in particular the audio-visual sector, is founded on Article 151 of the Treaty establishing the European Community, and has been developed along two main lines: on the one hand, the respect of public interest objectives, such as cultural and linguistic diversity, the free circulation of services, the protection of copyright, the protection of minors or competition rules; on the other hand, the sector has benefited from direct support, in particular in the field of distribution, innovation and competitiveness.

This chapter looks at several activities linked to the media sector. For the purpose of this publication, media is defined in NACE terms as the activities of publishing, printing and reproduction of recorded media (NACE Division 22), motion picture and video activities (NACE Group 92.1), and radio and television activities (NACE Group 92.2). The latter two are not covered by regular SBS data and hence the availability of official data is weak. In addition, freelance authors are included in NACE Class 92.31 and are not considered from the statistical point of view as part of the publishing industry. News agencies (NACE Group 92.4), that are important content providers, are also excluded from the chapter definition in terms of NACE.

NACE

- 22: publishing, printing and reproduction of recorded media;
- 22.1: publishing
- 22.11: publishing of books;
- 22.12: publishing of newspapers;
- 22.13: publishing of journals and periodicals;
- 22.14: publishing of sound recordings;
- 22.15: other publishing;
- 22.2: printing and service activities related to printing;
- 22.21: printing of newspapers;
- 22.22: printing n.e.c.;
- 22.23: bookbinding and finishing;
- 22.24: composition and plate-making;
- 22.25: other activities related to printing;
- 22.3: reproduction of recorded media;
- 22.31: reproduction of sound recording;
- 22.32: reproduction of video recording;
- 22.33: reproduction of computer media;
- 92.1: motion picture and video activities;
- 92.2: radio and television activities.

Table 24.1

Publishing, printing, reproduction of recorded media (NACE Division 22)
Structural profile, 2001

Rank	Largest value added (EUR billion) (1)	Highest value added specialisation relative to manufacturing (EU-25=100) (1)	Largest number of persons employed (thousands) (2)	Main EU-25 trading partners: origin of imports, 2002 (EUR billion)	Main EU-25 trading partners: destination of exports, 2002 (EUR billion)
1	United Kingdom (24.9)	Ireland (177)	Germany (401.1)	United States (1.4)	Switzerland (1.2)
2	Germany (20.2)	United Kingdom (176)	United Kingdom (383.0)	China (0.5)	United States (1.2)
3	France (11.1)	Netherlands (164)	France (216.9)	Switzerland (0.4)	Norway (0.4)
4	Italy (8.3)	Malta (129)	Italy (173.7)	Hong Kong (0.2)	Japan (0.3)
5	Spain (5.7)	Latvia (125)	Spain (147.1)	Singapore (0.1)	Russian Federation (0.3)

(1) Luxembourg, not available.

(2) Luxembourg and Slovenia, not available.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Notable regulatory measures in the audio-visual field include the *Television without frontiers* directive ⁽²⁾ aiming at creating the conditions necessary for the free movement of television broadcasts within the Community, by providing that Member States cannot restrict reception or retransmission of broadcast from other Member States. Furthermore, financial support to the industry is provided within the framework of the MEDIA Plus programme (2001–05), equipped with a budget of EUR 400 million, that co-finances training initiatives for audio-visual industry professionals, the development of production projects (feature films, television drama, documentaries, animation and new media), as well as the distribution and promotion of European audiovisual works. Beneficiary countries include Member States, EEA countries and candidate countries ⁽³⁾.

STRUCTURAL PROFILE

There were 2.3 million persons employed in media enterprises in the EU-15 in 2001 ⁽⁴⁾ (NACE Divisions 22 and 92). The total turnover of the sector reached EUR 337.8 billion, of which almost two thirds was accounted for by publishing activities (EUR 119.5 billion) and printing activities (EUR 100.8 billion). This was two to three times more than the turnover of radio and TV activities (EUR 60.9 billion) and film and video activities (EUR 43.1 billion). The smallest subsector was that of reproduction activities, with EUR 13.5 billion of turnover.

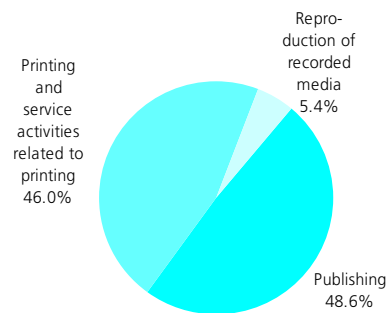
⁽²⁾ Directive 89/552/EEC, adopted on 3 October 1989 by the Council and amended on 30 June 1997 by the European Parliament and the Council Directive 97/36/EC.

⁽³⁾ As of 1 January 2004 the participating countries were all EEA member States except for Luxembourg, plus Bulgaria; see http://europa.eu.int/comm/avpolicy/media/index_en.html.

⁽⁴⁾ NACE Division 92, 2000.

Figure 24.1

Publishing, printing, reproduction of recorded media (NACE Division 22)
Share of value added at factor cost, EU-25, 2001



Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Available national data (see Table 24.3) indicate some country media specialisation patterns on the basis of turnover figures, comparing the weight of each subsector with the corresponding EU average. Within the media sector, publishing was a relatively important source of turnover in the Nordic countries (Denmark, Sweden and Finland) and Lithuania; printing in Belgium, Portugal and Slovenia; reproduction activities in Ireland and Austria; film and video in France, Italy and Luxembourg; radio and TV activities in Spain, Luxembourg and the United Kingdom.

An analysis of publishing, printing and reproduction activities (NACE Division 22) shows that this sector was one of the largest manufacturing activities (at NACE division level) in 2001. It generated value added that was equal to an estimated EUR 94.7 billion in the EU-25, of which EUR 4.0 billion originated from the 10 new Member States. As such, publishing, printing and reproduction activities contributed 6.2% of EU-25 manufacturing value added.

Table 24.2

Main indicators for the media sector, EU-15, 2001

	Turnover (EUR billion)	Persons employed (thousands)
Publishing (NACE Group 22.1)	119.5	722.0
Printing (NACE Group 22.2)	100.8	931.4
Reproduction of media (NACE Group 22.3)	13.5	41.8
Film and video (NACE Group 92.1) (1)	43.1	222.0
Radio and TV (NACE Group 92.2) (1)	60.9	333.0

(1) 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms) and Audiovisual services (theme4/auvis/quest/gedata).

In terms of employment, publishing, printing and reproduction activities numbered some 1.9 million persons employed in the EU-25 in 2001 ⁽⁵⁾, of which 0.2 million worked in the 10 new Member States. This activity accounted for 5.6% of the manufacturing workforce in the EU-25 ⁽⁶⁾, a share that was below its contribution to value added, suggesting higher apparent labour productivity.

⁽⁵⁾ Slovenia, number of employees.

⁽⁶⁾ Slovenia, number of employees.

Table 24.3

Turnover in the media sector, 2001 (EUR million)

	Publishing (NACE Group 22.1)	Printing (NACE Group 22.2)	Reproduction of media (NACE Group 22.3)	Film and video (NACE Group 92.1) (1)	Radio and TV (NACE Group 92.2) (1)
EU-25	124 185	105 255	13 650	:	:
EU-15	119 528	100 775	13 500	43 100	60 900
BE	2 626	3 865	59	722	902
CZ	852	:	:	:	:
DK	2 739	1 802	117	467	860
DE	28 247	21 275	1 239	10 000	8 614
EE	90	:	:	9	12
EL	:	:	:	:	:
ES	7 051	7 681	328	3 172	5 223
FR	19 823	14 365	502	8 861	9 803
IE	555	866	8 466	:	:
IT	11 737	13 223	368	7 936	6 635
CY	48	89	0	:	:
LV	111	96	3	10	43
LT	135	79	3	9	29
LU	:	140	:	145	655
HU	675	608	18	192	175
MT	:	95	:	:	:
NL	7 168	5 937	538	:	:
AT	1 877	2 126	399	:	:
PL	2 251	2 248	58	:	:
PT	1 074	1 392	19	333	509
SI	271	330	1	48	28
SK	205	225	9	:	:
FI	2 482	1 579	24	261	742
SE	3 977	2 994	32	871	1 364
UK	29 313	23 118	1 637	7 580	20 457

(1) 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms) and Audiovisual services (theme4/auvis/quest/gedata).

In absolute terms, the United Kingdom emerged as the country where publishing, printing and reproduction activities played a prominent role within the manufacturing economy. With a workforce of 383 000 persons (20.2 % of the EU-25 total) generating EUR 24.9 billion of value added (26.3 % of the EU-25 total), these activities represented approximately one tenth of manufacturing activity in the United Kingdom. In relative terms, high specialisation ratios were also reported by Ireland and the Netherlands, in the former case almost entirely due to the particularly large size of reproduction activities (based on 2000 data). The least specialised countries⁽⁷⁾, in contrast, were the Czech Republic, Slovakia and Hungary, where the contribution of publishing, printing and reproduction activities to national manufacturing was less than half the EU-25 average.

⁽⁷⁾ Luxembourg, not available.

Looking at the structure of the publishing, printing and reproduction activities among the Member States⁽⁸⁾, it was to a large extent equally split between publishing and printing activities, while reproduction activities accounted for only a small percentage of the total (with the notable exception of Ireland (2000)). The breakdown of value added in 2001 between publishing, printing and reproduction activities was 48.6 %, 46.0 % and 5.4 % within the EU-25. The balance was nevertheless slightly more in favour of publishing activities in Lithuania, Poland and Finland, while printing prevailed significantly in Malta, Cyprus, Belgium and Portugal. Ireland stood out from all other Member States with a totally different structure, as four fifths of the value added generated in publishing, printing and reproduction activities was accounted for by reproduction activities (80.0 %, 2000), almost exclusively the reproduction of computer media (NACE Class 22.33).

⁽⁸⁾ Ireland and Malta, 2000; the Czech Republic, Estonia, Greece and Luxembourg, incomplete or not available.

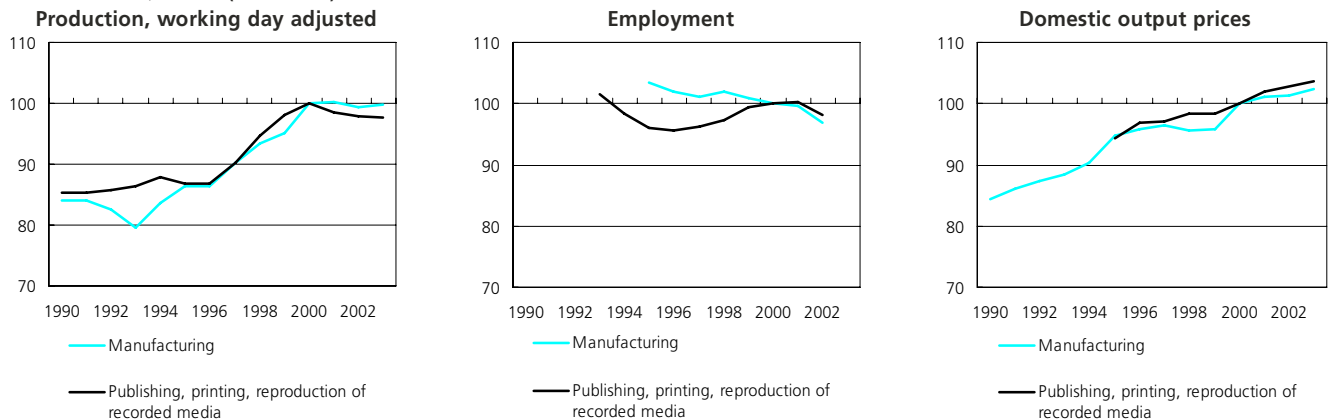
The distribution of publishing, printing and reproduction enterprises across size-classes highlights the greater importance of smaller enterprises compared with the average for manufacturing activities. Indeed, micro enterprises (with 1 to 9 persons employed) and small enterprises (with 10 to 49 persons employed) generated respectively 13.9 % and 22.7 % of the sector's value added in the EU-25 in 2001, which compared with respectively 7.3 % and 15.8 % for the whole of manufacturing (NACE Section D).

The evolution of production and employment showed contrasting trends for printing, publishing and reproduction. On the one hand, production growth was relatively slow, with an average growth of 2.6 % per annum between 1996 and 2001 in the EU-25, some 0.4 percentage points below the manufacturing average. On the other hand, printing, publishing and reproduction activities were a source of job creation, compared with the generally negative trends reported for manufacturing as a whole. In the five years to 2001, the number of persons employed in these activities increased, on average, by 1.0 % per annum in the EU-25, while manufacturing employment decreased, on average, by 0.5 % per annum over the same period. Among the EU-15 Member States, only Sweden and Portugal registered a decrease in production between 1996 and 2001, by 0.9 % and 1.5 % per annum respectively. Note also that growth was slightly slower in the EU-15 than in the EU-25 for both production and employment, mainly due to large increases recorded in Poland, where production more than doubled between 1995 and 2003. At a more detailed level there was a remarkably high growth rate recorded in reproduction activities in the EU-25, where the average growth in production reached 9.5 % per annum between 1996 and 2001.

Figure 24.2

Publishing, printing, reproduction of recorded media (NACE Division 22)

Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Table 24.4

Publishing, printing, reproduction of recorded media (NACE Division 22)

Value added at factor cost and persons employed, by enterprise size-class, 2001 (% of total)

	Micro enterprises		Small enterprises		Medium-sized enterprises		Large enterprises	
	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed	Share of value added	Share of persons employed
EU-25	13.9	:	22.7	:	23.7	:	39.7	:
EU-15	13.9	20.4	22.8	25.9	23.3	23.4	40.1	30.3

Source: Eurostat, Structural Business Statistics (theme4/sbs/sizclass).

LABOUR AND PRODUCTIVITY

The characteristics of the labour force in publishing, printing and reproduction underline the presence of activities with a large service content. Looking at the gender balance, for example, although this sector had a predominantly male workforce, this was to a lesser extent than in most other manufacturing activities. According to the LFS, about 6 out of 10 persons employed in this sector in the EU-25 in 2001 were men ⁽⁹⁾ (61.6 %), a proportion that was closer to the services average (56.3 %) than to the manufacturing one (70.0 %). The pattern was even more clear-cut as regards work duration patterns, where 17.5 % of the sector's workforce worked part-time in 2001 in the EU-15, more than double the manufacturing average (7.6 %) and only 2.4 points below the services average (19.9 %).

⁽⁹⁾ Estonia, Latvia and Poland, not available.

Table 24.5

Publishing, printing, reproduction of recorded media (NACE Division 22)

Labour force characteristics, 2002

	Share of men		Share of full-time		Share of employees	
	Value (%)	Index (manufacturing=100)	Value (%)	Index (manufacturing=100)	Value (%)	Index (manufacturing=100)
EU-25	:	:	:	:	:	:
EU-15	62.0	86.6	82.5	89.2	89.5	97.4
BE	68.4	92.0	87.1	95.7	89.3	94.2
CZ	53.0	86.0	92.8	95.2	84.8	91.6
DK	56.9	83.2	77.7	83.8	90.7	94.0
DE	55.7	77.5	72.3	80.6	91.7	96.2
EE	:	:	:	:	:	:
EL	65.0	91.7	96.4	98.4	82.0	111.8
ES	65.5	88.2	93.1	96.1	89.1	100.8
FR	60.1	85.0	89.4	94.7	92.3	97.3
IE	61.0	88.2	89.9	95.8	87.8	95.5
IT	67.2	96.6	93.4	98.7	72.2	87.2
CY	46.7	74.2	88.6	94.9	82.6	103.2
LV	:	:	:	:	:	:
LT	48.7	95.4	92.4	97.4	100.0	103.8
LU	71.1	87.7	90.5	94.8	98.4	100.2
HU	51.3	86.0	95.0	97.3	94.0	100.7
MT	87.4	124.8	100.0	103.5	93.6	100.5
NL	65.8	85.4	55.8	74.3	93.8	97.5
AT	59.7	80.3	:	:	91.6	96.2
PL	:	:	:	:	:	:
PT	71.2	126.9	96.2	99.2	91.0	104.3
SI	60.4	100.0	93.6	96.9	78.1	83.3
SK	63.1	106.5	100.0	101.3	90.0	93.6
FI	53.7	76.4	85.4	89.5	92.4	98.8
SE	58.8	79.5	78.6	85.7	88.1	93.7
UK	66.3	88.7	86.6	94.0	92.7	97.4

Source: Eurostat, Labour Force Survey.

Apparent labour productivity of the workforce in publishing, printing and reproduction was EUR 53 500 per person employed in the EU-15 in 2001, EUR 2 300 above the manufacturing average. However, this apparent productivity advantage was compensated by high average personnel costs, that were EUR 1 300 per employee above the manufacturing average, at EUR 37 000 per employee in the EU-15

(EUR 34 300 per employee in the EU-25). As a result, wage adjusted labour productivity was practically on a par with the manufacturing average, equal to 144.5 %. When comparing wage adjusted labour productivity in publishing, printing and reproduction activities with the national average for manufacturing activities, productivity by this measure was lower in publishing, printing and reproduction

activities in as many as fifteen countries ⁽¹⁰⁾, and was at least 10 % lower in eleven of them. In contrast, wage adjusted labour productivity in the publishing, printing and reproduction sector was significantly higher than national manufacturing averages in Ireland (2000 data), Malta, Poland and Lithuania.

⁽¹⁰⁾ Ireland, Cyprus, 2000; Greece, Luxembourg and Slovenia, not available.

Table 24.6

Publishing, printing, reproduction of recorded media (NACE Division 22) Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Publishing, printing, reproduction of recorded media	53.5	144.5	37.0
Publishing	60.6	145.4	41.7
Printing and service activities related to printing	44.9	135.0	33.2
Reproduction of recorded media	120.5	335.6	35.9

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

24.1: PRODUCTION, REPRODUCTION AND DISTRIBUTION OF FILM, VIDEO AND TELEVISION

The film and video industry is covered by NACE Group 92.1. It includes services of 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. Activities relating to the reproduction of video recordings (NACE Class 22.32) are also covered within this subchapter, while some information on the demand for the output of these activities is provided as regards the retail trade and renting of videos.

The television sector 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 Group 92.2 and form part of this subchapter, while the transmission of signals via hertzian relays, satellite or cable networks is covered by Group 64.2 (telecommunication services – see Subchapter 23.2). Radio activities, also covered by Group 92.2, are addressed in Subchapter 24.2.

All activities related to media using an image as the transmission format are covered in this subchapter ⁽¹¹⁾. Three main sectors of activity are addressed, each very different from another, although closely inter-related: cinema, television and video. The development of audiovisual media over recent decades has been marked by significant deregulation, which coupled to the fast pace of technological progress, notably the digitalisation of information, and the adoption of ICT, has spurred an explosion of supply.

⁽¹¹⁾ Data from Eurostat's AUVIS database are used to supplement SBS data where appropriate. A comprehensive statistical view of the activities covered in this subchapter is available in the publication Cinema, TV and radio in the EU, Eurostat, 2003.

STRUCTURAL PROFILE

The total turnover of the activities covered in this subchapter was estimated at approximately EUR 195.3 billion in the EU-15 in 2000 (see Table 24.7). TV broadcasting accounted for the largest share, with turnover of EUR 53.9 billion, almost equally split between public and commercial TV. Cinema and video activities recorded an estimated turnover of EUR 43.1 billion, most of which from production activities (EUR 25.5 billion). This was twice as high as the turnover in film and video distribution (EUR 12.4 billion), and five times more than projection activities (EUR 5.2 billion). The smallest activity within the visual media subsector was the reproduction of video recordings, with turnover of just EUR 1.2 billion in the EU-15 in 2000.

Table 24.7

Evolution of turnover in visual media activities, EU-15 (EUR million) (1)

	1997	1998	1999	2000	2001
Reproduction of video recording	:	:	:	1 205	1 164
Motion picture and video	28 000	36 000	35 200	43 100	:
Production	16 200	22 900	20 100	25 500	:
Distribution	7 400	8 400	10 200	12 400	:
Projection	4 400	4 700	4 900	5 200	:
TV broadcasting	42 626	44 768	48 925	53 925	:
Commercial TV	21 752	22 970	25 879	29 964	:
Public TV	20 874	21 798	23 046	23 960	:

(1) Eurostat estimates.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms) and Audiovisual services (theme4/auvis/quest/gedata).

Employment in cinema and video activities (NACE Group 92.1) was estimated at 222 000 persons in the EU-15 in 2000, a large majority of which (146 000 persons) were working in production (NACE Class 92.11). Contrary to turnover values, projection activities (NACE Class 92.13) had a higher share in employment terms than film and video distribution activities (NACE Class 92.12), as they employed almost three times more persons (57 000 against 19 000). Reproduction of video recordings activities (NACE Class 22.32) employed a further 7 600 persons in the EU-15 in 2001. Note that a total of 333 000 persons worked in radio and television enterprises in the EU-15 in 2001, although no breakdown was available for each individual activity.

Films

On aggregate, there were an estimated 726 long-length feature films produced in the EU-25 in 2002 (see Table 24.8) ⁽¹²⁾. Of those, 625 originated from the EU-15 Member States (taking into account co-productions by different Member States), up from 594 in 2000 and 443 in 1995. The largest producing country in the EU was France, where 200 long-length feature films were made in 2002, just four less than a year before. Spain (137 productions) and Italy (130 productions) followed as the next most important EU film producers. Among the 10 new Member States ⁽¹³⁾, Hungary and

Poland emerged as the most important film-making countries, with more than 30 productions each. Note that there is no real equivalent of the 'studio' structure of the American film industry in Europe. The majority of European productions are made by small enterprises, most of which produce only one film per year. There are, nevertheless, some important film producers in the EU, like Cinecittà (Italy), Pinewood Studios (the United Kingdom), Bavaria Film Studios (Germany), Studio Babelsberg (Germany) and Studios de Boulogne (France).

⁽¹²⁾ Malta, not available.

⁽¹³⁾ Malta, not available.

Table 24.8

Main indicators of the cinema industry, 2001

	Full-length cinema films produced (units) (1)	New films released (units) (2)	of which, from US origin (%) (3)	Cinema sites (units) (4)	Screens (units) (5)	Seats (thousands) (6)	Admissions (millions) (7)	Box office receipts (EUR million) (8)	of which, from US films (%) (9)	Average ticket price (EUR) (10)
EU-25	726	:	:	12 759	27 681	6 594	998.1	5 359.0	64.6	5.42
EU-15	625	298	46	10 552	24 822	5 859	934.0	5 167.5	64.2	5.60
BE	16	444	41	123	465	107	22.8	130.9	72.2	5.60
CZ	16	116	63	660	749	195	10.7	16.7	53.0	1.90
DK	19	172	53	165	361	55	12.9	86.7	56.0	7.30
DE	84	338	43	1 815	4 792	884	163.9	960.1	81.9	5.50
EE	3	105	75	10	81	5	1.3	4.8	76.2	3.70
EL	20	220	62	350	391	:	13.2	73.6	:	5.60
ES	137	516	43	1 254	3 770	1 308	140.7	625.9	62.2	4.20
FR	200	506	32	2 182	5 236	1 071	185.1	1 013.9	46.6	5.50
IE	7	:	:	70	320	58	17.3	83.0	:	5.20
IT	130	414	43	2 243	3 198	:	112.0	636.0	57.8	5.30
CY	4	120	81	:	44	11	0.9	5.5	88.4	6.40
LV	3	141	71	34	36	25	1.1	3.2	89.3	2.80
LT	0	196	87	74	84	23	2.4	4.2	85.9	1.80
LU	10	289	48	11	25	5	1.4	8.5	80.6	6.00
HU	33	164	57	427	622	134	15.5	38.9	79.5	2.50
MT	:	:	:	:	45	10	1.0	4.9	:	4.70
NL	29	248	43	173	558	98	24.0	149.5	60.1	6.20
AT	26	239	54	206	587	100	19.2	119.5	:	6.30
PL	30	204	53	648	855	227	25.9	99.5	78.4	3.60
PT	:	208	62	238	455	102	19.3	76.1	56.7	3.90
SI	7	146	78	78	92	22	2.5	9.1	:	4.10
SK	5	160	59	276	290	96	2.8	4.7	:	1.60
FI	11	165	57	219	339	58	7.7	46.3	66.9	7.10
SE	21	203	55	811	1 155	194	18.3	147.0	63.7	8.10
UK	78	352	37	692	3 164	733	176.0	1 276.3	77.1	6.70

(1) EU-25, excluding Malta; 2002 data except the Czech Republic, Estonia, Cyprus, Latvia and Lithuania.

(2) Belgium, Luxembourg and Slovenia, 2000.

(3) Belgium, Luxembourg, Slovenia and the United Kingdom, 2000.

(4) Slovenia, 2000; EU-25, excluding Cyprus and Malta.

(5) Belgium and Greece, 2000.

(6) EU-15, 1999; Belgium, Poland and Slovakia, 2000.

(7) 2002 data except Estonia, Greece, Cyprus, Latvia, Lithuania, Hungary, Malta, Portugal, Slovenia and Slovakia.

(8) Germany, Spain, Italy and the United Kingdom, 2002; the Czech Republic and Slovenia, 2000.

(9) Latvia, Lithuania and Poland, 2000; EU-25 excluding Malta, Slovenia and Slovakia.

(10) The Czech Republic and Slovenia, 2000.

Source: Eurostat, Audiovisual services (theme4/avis/quest).

Looking at the distribution side, some 298 new films were released in the EU-15 in 2001 ⁽¹⁴⁾. Almost half of these films were American productions (46 %), although the proportion varied from less than 40 % in France or the United Kingdom up to more than 60 % in Portugal and Greece ⁽¹⁵⁾. Note, in addition, that American films accounted for more than two thirds of the new films released in a majority of the 10 new Member States, notably in the Baltic States, Slovenia and Cyprus. More details on the importance of American films, in terms of their share of box office receipts, is given later in this subchapter.

The EU-15 film distribution market is fragmented with over 5 000 enterprises in 2001, of which the top nine largest exhibitors controlled 17 % of the screens. Many exhibitors operated in just one country with just one cinema site. In comparison, the nine largest exhibitors in the United States operated approximately 54 % of the total number of screens in 2001.

Cinema exhibition has been marked over the past decade by a trend towards larger cinemas, resulting from a decrease in the number of cinema theatres, combined with an increase in the number of screens per site. In parallel with the development of multi-screen theatres, the average cinema hall has become smaller, resulting in the number of seats per screen decreasing over the past decade. Data from the 10 new Member States show that the same trends are only just starting, particularly in central and eastern Europe.

There were 12 759 cinema theatres in the EU-25 in 2001 ⁽¹⁶⁾ numbering a total of 27 681 cinema halls (or screens), which corresponds to an average of slightly more than two screens per cinema. In the 10 new Member States, cinemas were in general smaller, in terms of their average number of screens, with 1.3 screens per theatre against 2.4 in the EU-15. Estonia nevertheless reported the highest average number of screens in the EU-25 ⁽¹⁷⁾, as its 10 cinemas totalled as many as 81 screens. The United Kingdom and Ireland also had relatively large cinemas compared with the other Member States, with an average of more than four screens per cinema. That was more than double the average size of cinemas in Italy and Sweden (1.4 screens). Greece, Latvia and Slovakia reported a low presence of multi-screen cinemas, which resulted in an average of just over one screen per site.

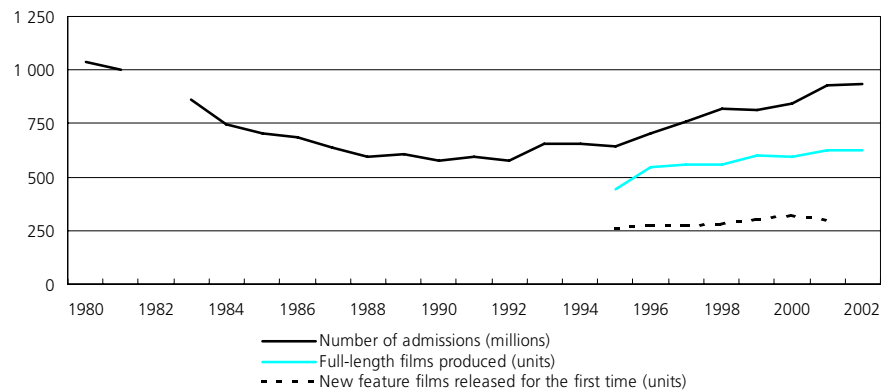
⁽¹⁴⁾ Belgium and Luxembourg, 2000; Ireland, not available.

⁽¹⁵⁾ Belgium, Luxembourg and the United Kingdom, 2000; Ireland, not available.

⁽¹⁶⁾ Slovenia, 2000; Cyprus and Malta, not available.

⁽¹⁷⁾ Cyprus and Malta, not available.

Figure 24.3
Evolution of film demand and supply, EU-15



Source: Eurostat, Audiovisual services (theme4/avis/quest).

Cinema auditoria in the EU-25 had 238 seats on average in 2001, and were generally larger in the 10 new Member States than in the EU-15. The largest cinema halls ⁽¹⁸⁾ were found in Latvia, with almost 700 seats per screen, and in Spain and Slovakia where they numbered on average more than 300 seats. In contrast, the average size of a cinema hall was half the size recorded in those countries in the Nordic countries, as well as in Estonia where the average size of a cinema hall was smallest, with an average of just 62 seats per screen.

Close to one billion cinema tickets were sold in the EU-25 in 2002, of which 93.6 % were sold in the EU-15. This was not far from twice the number of admissions recorded in 1990 (576.7 million), although it was still below the level of 1980 (1.0 billion) or 1970 (1.6 billion) and a far cry from the historical peaks of the 1950s (4.1 billion). On average, Europeans went to the cinema slightly more than twice (2.2 times) in 2002, and paid an average of EUR 5.40 for each ticket. As a comparison, US inhabitants went on average 5.7 times to the cinema in 2001 and spent an average of EUR 6.30 per ticket. Cinema going was a far less frequent activity in the 10 new Member States, with less than one visit per year per inhabitant (0.9), against an average of 2.5 visits in the EU-15. The country where people went most often to the cinema was Ireland, with an average of 4.5 admissions per inhabitant in 2002. Other cinema-going countries included Spain, Luxembourg and France, all with more than 3 cinema visits per inhabitant, while on average Slovaks or Latvians went once every two years to the cinema (2001).

⁽¹⁸⁾ Greece and Italy, not available.

Box-office receipts reached EUR 5.4 billion in the EU-25 in 2001 ⁽¹⁹⁾, of which EUR 5.2 billion originated from admissions in the EU-15. Box-office revenues were on a rising trend in the EU over the past decade, supported by an increasing number of admissions. The average return on a cinema seat in terms of receipts was EUR 757 per year (or EUR 2.10 per day) in the EU-25 in 2001 ⁽²⁰⁾. Luxembourg (EUR 1 700), Denmark (EUR 1 576) and the Netherlands (EUR 1 526) boasted the highest returns, while in the Czech Republic and Slovakia the average receipts per seat were below EUR 100 or less. The new Member States generally reported among the lowest seat returns, with the notable exception of Estonia where the average receipts per seat reached EUR 960 per year. Among the EU-15 Member States, Sweden (EUR 758), Portugal (EUR 746) and Spain (EUR 471) reported the lowest returns per seat.

⁽¹⁹⁾ The Czech Republic and Slovenia, 2000.

⁽²⁰⁾ Belgium, the Czech Republic, Malta, Poland and Slovenia, 2000; Greece and Italy, 1999.

American productions dominated the European film marketplace, as almost two thirds of the box-office receipts in the EU-25 were from American films. Only in France was the market share of American films below 50 % (21). All 10 of the most popular films in the EU-15 on the basis of admissions over the period 1996–2002 were of American origin and three of the top EU productions were made in association with American partners – see Table 24.9.

Video

The video market (video tapes and DVD) represented an important source of revenue for film producers, often accounting for more than half of a film's overall revenue, sometimes compensating film producers for mediocre results in theatres. On average, 37 % of turnover originated from cinema exhibition in 2001 in the EU-15, against 41 % from VHS sales and rentals and 22 % from DVD sales and rentals (22). The rapid development of video sales in the 1990s and of video rentals in the second half of the decade led to turnover in the video sales and rentals market increasing from EUR 3.6 billion in 1990 to EUR 4.6 billion in 1995 and a peak of EUR 6.0 billion in 2000. The trend nevertheless reversed in 2001, with a contraction to EUR 5.7 billion. Total video turnover was split approximately two thirds for sales and one third for rentals. There was a clear shift from rentals to sales during the first half of the 1990s, as their respective shares of turnover reversed in just five years between 1990 and 1995 (see Figure 24.4), mainly because of a sharp decline of turnover from rentals. The rebound of the rental market in the second half of the 1990s, marked by a continued growth of turnover between 1995 and 2001, was insufficient to compensate for the loss accumulated in the first half of the decade and turnover from rentals was in 2001 still below its level of 1990. The development of the video retail network mirrored this evolution, as 40 % of the 40 000 rental outlets still present in the EU-15 in 1990 disappeared by 1996 leaving only 24 100 in activity. Their number has since stabilised, with 24 400 outlets in 2001, and even started to grow, an upturn probably linked to the emergence of the DVD format – see Table 24.10.

(21) Latvia, Lithuania and Poland, 2000; Spain, Ireland, Malta, Austria, Slovenia and Slovakia, not available.

(22) See *Cinema, TV and radio in the EU*, Eurostat, 2003.

Table 24.9

Top ten movies, cumulative admissions, EU-15, 1996-2002

Title	Country of origin	Year	Admissions (millions)
All origins			
Titanic	US	1997	103.6
Harry Potter and the Sorcerer's Stone	US	2001	58.9
The Lord of the Rings: The Fellowship ...	US / NZ	2001	57.7
Star Wars: Episode I	US	1999	44.9
Independence Day	US	1996	42.7
Harry Potter and the Chamber of Secrets	US	2002	42.3
The Sixth Sense	US	1999	37.1
Men in Black	US	1997	33.5
Spider-Man	US	2002	32.2
Tarzan	US	1999	31.2
Productions within the EU-15			
Bridget Jones's Diary	UK / US	2001	30.0
Notting Hill	UK	1999	29.7
James Bond: The World Is Not Enough	UK / US	1999	26.9
Bean - The Ultimate Disaster Movie	UK / US	1997	26.1
The Full Monty	UK	1997	25.7
Astérix et Obélix contre César	FR / DE / IT	1999	22.0
Le cinquième élément	FR	1997	21.5
James Bond: Tomorrow Never Dies	UK / US	1997	21.4
Astérix & Obélix : Mission Cléopâtre	FR / DE	2002	21.1
La vita è bella	IT	1997	19.9

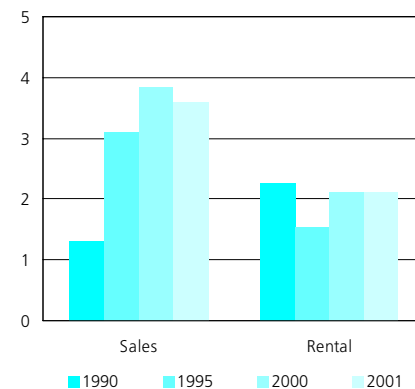
Source: EAO, Focus 2003.

Enterprises active in the reproduction of video recordings are covered by NACE Class 22.32. The small size of the reproduction of video recordings sector can be demonstrated by the fact that it accounted in 2001 for only 0.5 % of the value added generated in publishing, printing and reproduction activities in the EU-15. The Netherlands (23) clearly stood out as the most specialised in the reproduction of video recordings looking at the relative contribution of this sector to manufacturing value added.

(23) Ireland and Slovakia, 1999; the Czech Republic, Denmark, Germany, Estonia, Greece, Luxembourg and Malta, not available.

Figure 24.4

Receipts from pre-recorded video cassettes or discs, EU-15 (EUR billion)



Source: Eurostat, Audiovisual services (theme4/auvis/quest).

Table 24.10

Evolution of the sales and rentals of DVD (EUR million)

	1998	1999	2000	2001
EU-25	:	:	:	:
EU-15	48.5	396.8	1 391.7	3 141.1
BE	1.8	19.7	68.2	131.2
CZ	:	1.4	4.0	8.6
DK	2.0	5.4	19.2	43.2
DE	11.5	44.0	183.0	447.3
EE	:	:	:	:
EL	0.4	2.3	6.3	7.6
ES	3.9	26.6	69.5	142.3
FR	15.5	129.5	379.7	795.1
IE	0.1	1.6	7.1	15.5
IT	3.5	27.1	73.4	131.7
CY	:	:	:	:
LV	:	:	:	0.2
LT	:	:	:	:
LU	:	:	:	:
HU	0.2	1.4	2.8	9.0
MT	:	:	:	:
NL	1.7	17.3	61.3	143.4
AT	0.4	3.3	10.7	34.1
PL	1.1	4.5	9.1	23.8
PT	0.4	1.6	4.1	12.8
SI	:	:	:	:
SK	:	:	:	:
FI	0.8	3.9	11.7	29.0
SE	0.9	7.5	28.3	64.6
UK	5.1	107.0	469.3	1 143.3

Source: Eurostat, Audiovisual services (theme4/auvis/quest).

Television

Turning to the TV sector, its turnover of EUR 53.9 billion (2000) was almost roughly split between public TV (EUR 24.0 billion) and commercial TV (EUR 30.0 billion). Television broadcasters can count on three main types of revenues: public funding through annual television licence fees and/or subsidies (for public operators); revenues from advertising and sponsorship (for public and commercial operators); and direct receipts from viewers (in the case of pay-TV operators). Advertising and sponsorship was the primary source of financing in 2000 as it accounted for 50.6 % of broadcasters' turnover in the EU-15 ⁽²⁴⁾. Public funding was the second most important source of income (30.1 %) ahead of subscription fees (19.4 %). In general, public funding remained relatively unchanged during the 1990s, while income from advertising and subscriptions increased at a faster pace. Note that Portugal, Spain and Luxembourg do not levy a TV licence fee and the Netherlands stopped levying one in 2000.

⁽²⁴⁾ See Cinema, TV and radio in the EU, Eurostat, 2003.

Table 24.11
Leading television enterprises/groups by turnover, 2001

		(EUR billion)
TV broadcasters (1)		
BBC	UK	3.88
RAI	IT	2.82
B-Sky-B	UK	2.81
ProSiebenSat.1	DE	2.22
RTL Television	DE/LU	2.00
TV production groups		
Endemol Entertainment	NL	0.91
RTL Group (Content Division)	DE	0.90
Mediatrade	IT	0.65
Bavaria Film	DE	0.28
Expand	FR	0.27
TV fiction production		
Arbol Producciones	ES	0.12
Thames Television	UK	0.11
Expand	FR	0.09
Endemol UK	UK	0.09
Grundy UFA TV Produktions	DE	0.08
Animation production		
Hit Entertainment	UK	0.09
TV - Toonland	DE	0.08
RTV Family Entertainment	DE	0.07
Carrere Group	FR	0.04
BKN International	DE	0.03

(1) 2000.

Source: EAO in Cinema, TV and radio in the EU, Eurostat, 2003.

24.2: PUBLISHING AND REPRODUCTION OF SOUND RECORDINGS

The music recording industry includes activities that range from the selection, management and production of artists, to the manufacturing, marketing and distribution of recorded media in the form of compact discs, vinyl and cassettes. Two classes of the NACE classification cover this industry, Class 22.14 for the publishing side and Class 22.31 for the reproduction side. This subchapter also covers the radio sector, which is part of NACE Group 92.2 (the other part being TV activities).

The music recording sector is dominated by a small number of multinational distribution companies, known as the 'majors', (Universal, Sony Music, EMI, Warner and BMG), all of which are part of larger entertainment conglomerates. Each major owns, in part or in full, various 'labels', enterprises that sign and groom artists, guide the album production process and market the final product. Global market-share figures for 2002 were as follows: Universal 25.9%, Sony 14.1%, EMI 12.0%, Warner 11.9% and BMG 11.1%, while independent labels accounted for the remaining 25.0%.

The sound recordings sector has witnessed important merger or joint-ventures activity in recent years. In 2000, while the Warner Music and EMI merger was refused by the European Commission on antitrust grounds, Vivendi Universal was created with the sale by Seagram of Universal Music to Vivendi. More recently, Time Warner announced in November 2003 the sale of its Warner Music division to a private investor, Mr E. Bronfman, who was the former owner of Universal Music, while Sony and Bertelsmann announced plans to merge their music divisions.

STRUCTURAL PROFILE

There were close to 10 000 enterprises active in the sector of publishing and reproduction of sound recordings (NACE Classes 22.14 and 22.31) in the EU-25 in 2001⁽²⁵⁾ that employed just under 40 000 persons⁽²⁶⁾. They generated some EUR 2.3 billion of value added⁽²⁷⁾, which represented 0.2 % of the manufacturing total. The United Kingdom (EUR 0.7 billion) and France (EUR 0.5 billion) dominated this sector, as more than half of the EU-25's value added originated from these two countries. The Netherlands also played an important role in this sector with value added of EUR 0.2 billion. These three countries⁽²⁸⁾ also appeared as the most specialised, as the relative weight of the music industry in their respective manufacturing economies was 1.5 to 2.5 times higher than the EU average.

Looking at the breakdown of the structure of this activity between publishing and reproduction, the reproduction of sound recordings accounted for 52.4 % of sectoral value added in the EU-25⁽²⁹⁾, against 47.6 % for publishing (although considerable differences existed at national level). Indeed, publishing accounted for more than 90 % of the value added in Luxembourg (100.0%), Sweden (97.2%) and Slovenia (96.4%), and more than 80% in France (86.1%), Hungary and Finland (both 81.5%). In contrast, reproduction activities generated at least two thirds of the sector's value added in Poland (84.8 %), Germany (81.8 %) and Spain (69.9 %).

⁽²⁵⁾ The Czech Republic and Malta, not available.

⁽²⁶⁾ Poland and Slovenia, number of employees; Latvia, 1999; the Czech Republic, Estonia and Malta, not available.

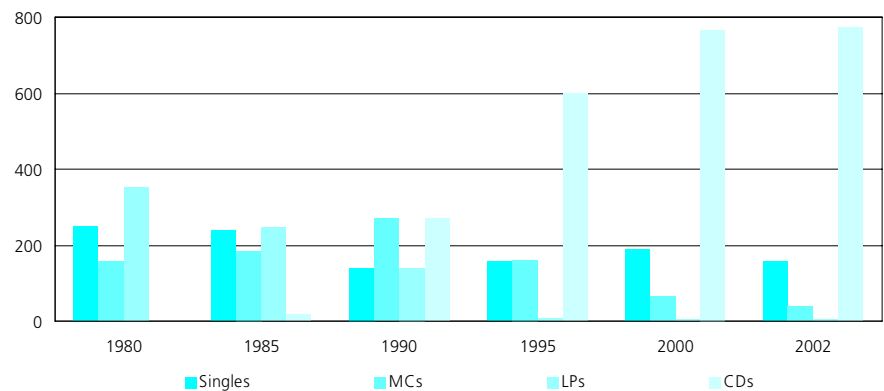
⁽²⁷⁾ Latvia, 1999; the Czech Republic, Estonia and Malta, not available.

⁽²⁸⁾ Latvia, 1999; the Czech Republic, Denmark, Estonia, Greece, Ireland, Austria and Malta, not available.

⁽²⁹⁾ The Czech Republic, Estonia, Latvia and Malta, not available.

Figure 24.5

Evolution of the number of music recordings sold, EU-15 (millions) (1)



(1) Eurostat estimates.

Source: Eurostat, Audiovisual services (theme4/auvis/quest).

Music industry sales

An analysis of sales in unit terms reveals that growth in the music industry in the past decade has been principally fuelled by sales of (long-play) CDs and to a lesser extent by singles. The sales of CDs steadily increased from 270 million units in 1990 to 772 million units in the EU-15 in 2002 (see Figure 24.5). The only year during which the number of CDs sold declined was 2001 (by 0.4 %), however, the market recovered in 2002 with an increase of 1.3 %. Similarly, singles sales increased strongly between 1990 (141 million sold) and 1999 (207 million sold) before falling to 159 million in 2002.

In total⁽³⁰⁾, more than 1.0 billion sound recordings were sold in the EU-25 in 2002 (see Table 24.12). The United Kingdom was the largest market in the EU-25 with 278 million recordings sold in 2002. It was also the country with the highest average sales, 4.6 recordings per person, ahead of Sweden (3.5 per person), France (3.0) and Germany (2.9). Six of the 10 new Member States closed the ranking with less than 0.7 recordings bought per person⁽³¹⁾, among which were Slovakia and Latvia with less than 0.3 per person. The share of music cassettes in total sales was significantly higher in most of the 10 new Member States compared with the EU-15 average.

⁽³⁰⁾ Cyprus, Poland, 2001; Luxembourg and Malta, not available.

⁽³¹⁾ Malta, not available; Poland (0.8), Estonia (1.0), Cyprus (1.3) excluded.

Table 24.12

Sound recording sales, 2002 (millions)

	Total (1)	Singles (2)	MCs (3)	LPs (4)	CDs (1)
BE	24.1	6.2	0.0	0.0	17.8
CZ	4.8	0.0	1.2	0.1	3.6
DK	12.4	0.6	0.0	0.0	11.8
DE	240.2	39.2	21.8	1.0	178.2
EE	1.4	0.0	0.5	:	0.9
EL	8.3	1.1	0.2	0.0	7.0
ES	66.3	2.2	2.4	0.0	61.7
FR	176.4	40.5	5.0	0.5	130.4
IE	10.2	2.0	0.2	0.0	8.0
IT	52.4	3.6	4.0	0.1	44.7
CY	0.9	:	0.1	:	0.8
LV	0.7	:	0.3	:	0.4
LT	1.2	0.0	0.4	0.0	0.8
LU	:	:	:	:	:
HU	5.1	0.3	1.8	0.0	3.0
MT	:	:	:	:	:
NL	31.8	3.6	0.1	0.2	27.9
AT	16.9	2.1	0.2	0.1	14.5
PL	32.5	0.2	4.2	:	21.3
PT	15.0	0.3	2.2	0.0	12.5
SI	1.4	:	0.3	:	1.1
SK	1.3	0.0	0.3	:	1.0
FI	10.5	0.6	0.1	0.0	9.8
SE	30.8	4.0	0.3	0.1	26.4
UK	278.2	52.5	1.9	2.2	221.6

(1) Cyprus and Poland, 2001.

(2) Estonia, 2001.

(3) Cyprus, 2001.

(4) The Czech Republic, Latvia and Portugal, 2001.

Source: Eurostat, Audiovisual services (theme4/auvis/quest).

Radio

Turning to radio activities, the process of deregulation initiated at the start of the 1980s resulted in rapid growth for the number of radio stations in the EU up until 1994, when 7 600 existed. From 1995 onwards there was a period of consolidation, as the number of radio stations declined to 5 400 by 2000, of which 5 050 were private and 350 publicly owned (see Table 24.13). It should be noted that the vast majority of radio stations have only regional or local coverage. Italy was the Member State with the highest number of radio stations (1 718) in 2001, nearly all of them being private. Note that in the Netherlands about 91 % of radio stations were public.

Total turnover of public radio stations in the EU-15 amounted to EUR 5.5 billion in 2000, half of which originated from Germany. Private broadcasters reported turnover of EUR 4.1 billion.

The average daily listening time of adults in European countries in 2001 ⁽³²⁾ varied from 315 minutes in Poland to 77 minutes in Hungary (2000). It should be noted that contrary to television, radio is considered as an accompanying media, in the sense that listening often takes place at the same time as other activities, for example, driving a car or working. Indeed, radio-listening patterns generally show a peak in the morning between 7 a.m. and 9 a.m., although a second peak is also observed in the late afternoon in some countries.

⁽³²⁾ Germany, Spain, Italy, Lithuania, Poland, Portugal, Finland and Sweden, 2001; Denmark, Hungary and the Netherlands, 2000; France and the United Kingdom, 1999.

Table 24.13
Main indicators for radio activities, 2001

	Number of radio stations (units) (1)			Turnover (EUR million)		Average daily listening time (minutes) (6)
	Total	Public (2)	Private (3)	Public stations (4)	Private stations (5)	
EU-25	:	:	:	:	:	:
EU-15	5 400	350	5 050	5 452	4 122	162
BE	:	:	:	:	:	:
CZ	:	:	:	:	:	:
DK	567	13	554	:	:	192
DE	253	69	184	2 680	56	203
EE	30	5	25	89	:	:
EL	266	25	241	:	:	:
ES	1 193	:	:	145	312	94
FR	1 129	54	1 075	574	390	161
IE	:	4	23	:	:	:
IT	1 718	4	1 714	117	107	178
CY	:	:	:	:	:	:
LV	:	:	:	6	3	:
LT	17	3	14	:	:	175
LU	24	1	23	:	:	:
HU	139	27	112	48	19	77
MT	:	:	:	:	:	:
NL	363	330	33	107	:	176
AT	:	:	:	:	:	:
PL	:	5	:	62	:	315
PT	376	10	366	63	29	200
SI	70	3	67	:	:	:
SK	30	6	24	20	:	:
FI	101	34	67	:	11	209
SE	86	3	83	222	:	174
UK	346	47	299	717	:	177

(1) EU-15, Germany, Greece, the Netherlands, Sweden and the United Kingdom, 2000; Spain, 1999.

(2) EU-15, Germany, Greece, Ireland, the Netherlands and the United Kingdom, 2000.

(3) EU-15, Germany, Greece, the Netherlands, Sweden and the United Kingdom, 2000; Ireland, 1999.

(4) Germany, France and the Netherlands, 2000; the United Kingdom, 1999.

(5) Germany and France, 2000; Italy, 1999.

(6) Denmark, Hungary and the Netherlands, 2000; EU-15, France and the United Kingdom, 1999.

Source: Eurostat, Audiovisual services (theme4/avis/quest).

Table 24.14

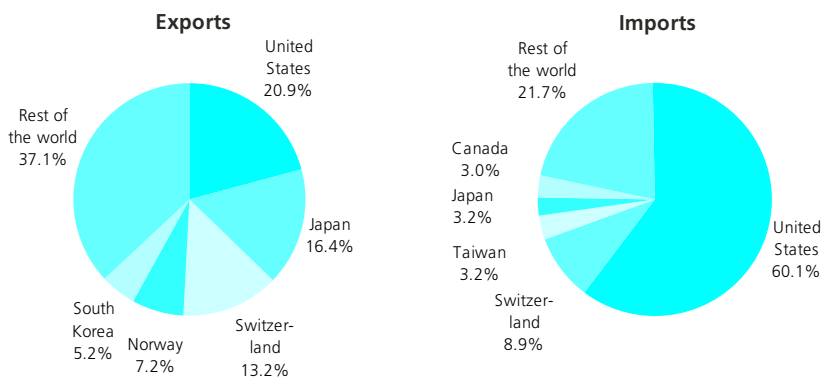
Publishing of sound recordings; reproduction of sound recording (NACE Classes 22.14 and 22.31)
Labour productivity and personnel costs, EU-15, 2001

	Apparent labour productivity (EUR thousand per person employed)	Wage adjusted labour productivity (%)	Average personnel costs (EUR thousand per employee)
Publishing of sound recordings; reproduction of sound recording	60.5	162.0	37.3
Publishing of sound recordings	65.4	159.5	41.0
Reproduction of sound recording	56.7	162.9	34.8

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Figure 24.6

Sound recordings (CPA Class 22.14)
Share in extra-EU trade, 2002



Source: Eurostat, Comext.

24.3: PUBLISHING AND PRINTING

Publishing can be defined as the act of producing and issuing informative material. Printing involves placing the published material on paper or other materials. These activities are covered by NACE Group 22.1 (publishing) and NACE Group 22.2 (printing). Note that the publishing of sound recordings (NACE Class 22.14) was treated in the previous subchapter, although the statistics presented in this subchapter are based on an aggregate of NACE Groups 22.1 and 22.2 and hence also include the publishing of sound recordings.

Information technologies (IT) have revolutionised the publishing and printing sector in the past couple of decades. On the production side, much of the preparation and setting of a document is now executed on computers, using desktop publishing (DTP) solutions, which has led to more cost-efficient production and has resulted in smaller and more flexible print-runs. In addition, IT has created a number of electronic alternatives to traditional printing. Newspapers, magazines, books or reference material are increasingly consulted online or on some other type of electronic medium, for example CD-ROMs.

STRUCTURAL PROFILE

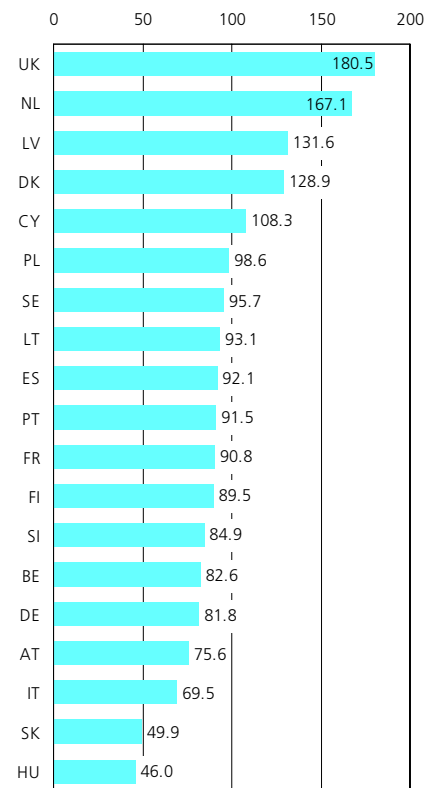
The total value added generated in the publishing and printing sector (NACE Groups 22.1 and 22.2) reached EUR 89.6 billion in the EU-25 in 2001. This represented 5.8 % of total manufacturing value added. The contribution of this sector to manufacturing employment was somewhat lower, as it employed 1.8 million persons in 2001⁽³³⁾, approximately 5.4 % of the manufacturing total.

⁽³³⁾ Malta, 2000; Slovenia, number of employees; Estonia, not available.

Two countries alone accounted for almost half of the wealth created in publishing and printing activities in the EU in 2001, namely the United Kingdom (EUR 24.1 billion of value added) and Germany (EUR 19.7 billion). The United Kingdom was also the most specialised country in this sector, when looking at its relative contribution to manufacturing value added in comparison with the other Member States⁽³⁴⁾. Publishing and printing enterprises generated as much as 10.5 % of manufacturing value added in the United Kingdom in 2001, almost twice the corresponding ratio for the EU-25. In a similar fashion, three other countries reported relatively high specialisation ratios for publishing and printing: the Netherlands (9.7 %), Latvia (7.7 %) and Denmark (7.5 %). In contrast, the least specialised countries included Slovakia (2.9 %), Hungary (2.7 %) and Ireland (2.2 %, 2000). Publishing was slightly larger than printing in the EU-25, as it accounted for 51.4 % of sectoral value added in 2001. Nevertheless, a few countries showed a clear predominance of printing activities, notably Malta (79.1 %; 2000), Cyprus (70.1 %), Belgium (65.3 %) and Portugal (64.5 %).

⁽³⁴⁾ Ireland and Malta, 2000; the Czech Republic, Estonia, Greece and Luxembourg, not available.

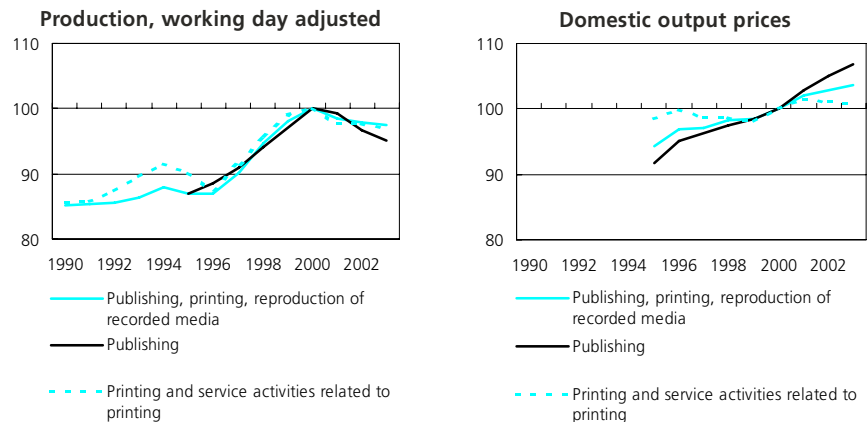
Figure 24.7
Publishing; printing and service activities related to printing (NACE Groups 22.1 and 22.2)
Value added specialisation ratio relative to total manufacturing, 2001 (EU-25=100) (1)



(1) The Czech Republic, Estonia, Greece, Ireland, Luxembourg and Malta, not available.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Publishing and printing activities were characterised by a relatively high importance for SMEs (less than 250 persons employed) compared with other manufacturing activities, although not as high as the non-financial services average. Micro enterprises (with less than 10 persons employed) accounted for 14.4 % of the value added generated in the publishing and printing sector in the EU-25 in 2001, almost twice their weight for the whole of manufacturing (7.3 %), but not far from half their weight in the non-financial services total (26.5 %). Small enterprises (employing between 10 and 49 persons) accounted for a further 23.4 % of sectoral value added, compared with 15.8 % within manufacturing and 20.2 % for non-financial services.

Figure 24.8
Publishing; printing and service activities related to printing (NACE Groups 22.1 and 22.2)
Main indicators, EU-25 (2000=100)



Source: Eurostat, European Business Trends - Monthly and Quarterly Short Term Statistics (theme4/ebt).

Between 1996 and 2000, both publishing and printing generally experienced growth similar to that for manufacturing as a whole. Output of publishing went up on average by 3.1 % per annum in the EU-25 and that for printing by 3.4 % per annum, compared with a manufacturing average of 3.7 %. However, output fell for three consecutive years between 2000 and 2002, averaging -1.7 % per annum for publishing and -1.1 % for printing, while manufacturing output was relatively more stable, recording slight growth in 2001 and 2003 and a comparable contraction in 2002.

LABOUR AND PRODUCTIVITY

Labour productivity in publishing and printing activities was generally below both the manufacturing and non-financial services average, mainly due to low productivity levels reported in printing activities. The wage adjusted labour productivity ratio in the EU-15 was equal to 139.6 % in 2001, which was almost four percentage points below the manufacturing average (143.5 %) and 8.0 percentage points below the non-financial services average (147.6 %). Publishing, however, reported a wage adjusted labour productivity ratio as much as 10 percentage points above the corresponding level in printing activities, at 145.4 % against 135.0 %. Lithuania and Poland were the only Member States⁽³⁵⁾ where the wage adjusted labour productivity ratio for both of these subsectors was higher than the manufacturing average.

⁽³⁵⁾ Ireland, Cyprus and Malta, 2000; the Czech Republic, Estonia, Greece, and Slovenia, not available.

EXTERNAL TRADE

The EU-25 was a net exporter of published and printed goods in 2002, with a trade surplus equal to EUR 2.9 billion for printed matter and recorded media (CPA Groups 22.1 and 22.2 (hence including Class 22.14)) and a cover ratio of 188.6 %. Germany was by far the biggest contributor, as its trade surplus was the highest among the Member States, reaching EUR 2.3 billion (intra- and extra-EU combined) of which EUR 941.1 million was with non-Community countries. Italy, the United Kingdom, Spain and Ireland all recorded a trade surplus (intra- and extra-EU combined) in excess of EUR 500 million, while the Netherlands was just below this level, with a trade surplus of EUR 471.6 million. The largest deficits were registered in Portugal (EUR 224.8 million) and Austria (EUR 223.3 million). Among the 10 new Member States, only four reported a positive trade balance for these products, namely Slovakia (EUR 48.8 million), Malta (EUR 42.0 million), the Czech Republic (EUR 39.0 million) and Slovenia (EUR 15.7 million).

The United States and Switzerland were by far the most important markets for EU-25 exporters of printed matter and recorded media in 2002, each supplying close to one fifth of the total. Furthermore, the United States was also the most frequent origin of EU-25 imports of printed matter and recorded media, supplying 40.8 % of the total in 2002. China surpassed Switzerland as the second most frequent origin of imports in 2002.

24.4: OTHER REPRODUCTION

This subchapter completes the coverage of NACE Division 22 and addresses the activity of the reproduction of computer media (NACE Class 22.33). This class includes the reproduction from master copies of software and data on discs and tapes.

STRUCTURAL PROFILE

Reproduction of computer media in the EU-15 is carried out mainly in one country: Ireland. In 2001, this sector generated EUR 3.4 billion of value added in the EU-15, while Ireland reported EUR 2.0 billion of value added in 1999. Only three other countries ⁽³⁶⁾ reported significant value added creation in this activity: the United Kingdom, with EUR 135.5 million in 2001 and France and Spain with similar values (EUR 23.3 million and EUR 19.5 million respectively). Among the new Member States ⁽³⁷⁾, only Hungary and Poland recorded value added in this sector that exceeded EUR 1 million.

⁽³⁶⁾ Ireland, 1999; Germany, Greece and Austria, not available.

⁽³⁷⁾ Latvia and Slovakia, 2000; The Czech Republic, not available.

Employment figures for this sector confirm the dominance of Ireland. The sector numbered some 13 342 persons employed in the EU-15 in 2001. Approximately one third of them were working in Ireland (5 591, 1999), and almost one fifth in the United Kingdom (2 364 persons). France (922 persons employed) and Spain (594 persons employed) reported the next largest labour forces in this sector ⁽³⁸⁾.

⁽³⁸⁾ Ireland, 1999; Latvia and Slovakia, 2000; the Czech Republic, Germany, Greece, Austria, Poland and Slovenia, not available.

Table 24.15

Publishing, printing, reproduction of recorded media (NACE Division 22)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	6 430	1 503	4 692	50 233	174	1 105	14 901	33 470	9 387	25 107	138	214	214	:
Value added at factor cost (EUR million)	2 150	352	1 971	20 158	59	422	5 691	11 105	3 695	8 332	59	126	75	:
Purchases of goods and services (EUR million)	4 401	1 156	0	30 096	118	:	9 861	23 737	5 408	17 259	80	125	136	:
Gross investment in tangible goods (EUR million)	331	137	257	2 255	6	:	764	1 057	239	1 321	11	23	14	:
Number of persons employed (thousands)	38	39	50	401	5	15	147	217	19	174	2	9	10	:
App. labour productivity (EUR thous./pers. emp.)	56.6	9.1	39.6	50.3	11.0	28.1	38.7	51.2	195.8	48.0	26.5	13.6	7.3	:
Average personnel costs (EUR thous./employee) (1)	44.1	7.9	31.4	38.3	8.0	:	27.2	42.5	34.8	33.9	18.0	5.1	4.4	:
Wage adjusted labour productivity (%) (1)	128.5	115.3	126.1	131.1	136.9	:	142.2	120.3	563.4	141.3	155.6	268.5	165.9	:
Gross operating rate (%) (2)	10.8	6.5	9.8	10.6	9.8	:	13.7	6.0	31.6	14.5	13.8	38.8	14.7	:
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	1 060	115	13 462	4 199	4 608	2 479	564	397	3 996	6 986	52 996	220	507	:
Value added at factor cost (EUR million)	315	60	5 458	1 760	2 632	960	200	115	1 632	2 336	24 863	56	196	:
Purchases of goods and services (EUR million)	989	52	8 152	2 621	1 503	1 545	369	329	2 534	4 799	28 888	178	391	:
Gross investment in tangible goods (EUR million)	69	4	486	306	274	320	44	23	227	307	2 591	17	61	:
Number of persons employed (thousands)	25	2	97	27	90	38	:	11	31	56	383	13	32	:
App. labour productivity (EUR thous./pers. emp.)	12.8	27.6	56.3	65.0	29.3	25.2	:	10.4	52.1	41.8	64.9	4.4	6.0	:
Average personnel costs (EUR thous./employee)	7.5	13.3	39.2	43.5	10.3	17.7	18.5	6.4	36.8	38.0	39.1	2.7	2.7	:
Wage adjusted labour productivity (%)	170.5	207.2	143.8	149.5	284.5	141.9	:	164.2	141.4	110.1	165.9	160.3	219.8	:
Gross operating rate (%)	10.1	29.7	15.7	14.1	42.1	12.8	5.1	10.4	12.2	5.6	20.3	10.6	21.2	:

(1) Ireland and Cyprus, 2000.

(2) Ireland, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 24.16

Publishing (NACE Group 22.1)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million)	2 560	825	2 762	27 901	91	:	7 019	19 140	555	11 554	49	113	133	:
Value added at factor cost (EUR million) (2)	740	181	1 116	10 140	32	:	2 595	5 855	330	3 515	18	63	50	:
Purchases of goods and services (EUR million)	1 894	669	0	17 801	59	:	4 884	14 422	261	8 405	32	59	81	:
Gross investment in tangible goods (EUR million) (3)	57	33	101	740	2	:	186	356	113	221	3	5	6	:
Number of persons employed (thousands)	11	16	33	191	3	:	52	90	5	45	1	5	7	:
App. labour productivity (EUR thous./pers. emp.) (2)	68.0	11.4	33.8	53.2	10.5	:	50.1	65.3	77.3	77.3	25.2	12.0	7.4	:
Average personnel costs (EUR thous./employee) (4)	50.6	8.0	27.1	40.3	8.7	:	34.0	52.2	39.7	51.9	21.0	5.4	4.9	:
Wage adjusted labour productivity (%) (4)	134.5	147.9	124.6	132.0	120.1	:	147.4	125.1	194.6	149.1	156.8	220.4	152.7	:
Gross operating rate (%) (2)	9.3	5.7	8.7	9.4	6.8	:	13.7	6.1	28.4	13.7	4.8	31.7	13.8	:
	HU	MT (1)	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	542	21	7 081	1 758	2 295	1 075	248	172	2 384	4 027	28 869	112	221	:
Value added at factor cost (EUR million)	160	11	2 894	621	1 592	338	102	59	944	1 221	13 119	25	76	:
Purchases of goods and services (EUR million)	513	9	4 264	1 252	458	760	163	151	1 599	2 849	16 057	90	194	:
Gross investment in tangible goods (EUR million)	17	1	135	75	136	36	10	10	124	102	930	3	20	:
Number of persons employed (thousands)	8	1	45	8	37	11	:	5	18	30	173	5	16	:
App. labour productivity (EUR thous./pers. emp.)	20.2	18.5	64.1	73.2	43.4	29.7	:	12.4	53.3	40.9	76.0	4.5	4.7	:
Average personnel costs (EUR thous./employee)	10.8	10.1	41.6	49.5	13.7	25.6	27.0	7.0	38.7	39.8	42.7	2.8	3.0	:
Wage adjusted labour productivity (%)	186.5	182.7	154.0	148.0	317.4	116.0	:	177.0	137.9	102.8	178.0	160.8	155.9	:
Gross operating rate (%)	11.1	26.9	17.9	11.5	52.3	5.7	4.3	12.9	10.8	3.7	20.7	9.6	14.7	:

(1) 2000.

(2) Ireland, 2000.

(3) The Czech Republic, 1999.

(4) The Czech Republic, Ireland and Cyprus, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 24.17

Printing and service activities related to printing (NACE Group 22.2)

Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU
Production (EUR million) (1)	3 815	457	1 815	21 118	:	:	7 573	13 848	774	13 175	89	98	79	140
Value added at factor cost (EUR million) (2)	1 392	:	812	9 521	:	:	2 998	5 111	407	4 706	41	62	24	64
Purchases of goods and services (EUR million) (1)	2 467	333	0	11 554	:	:	4 741	8 952	534	8 584	48	63	54	75
Gross investment in tangible goods (EUR million)	271	55	154	1 468	:	:	551	675	68	1 083	9	18	8	:
Number of persons employed (thousands)	27	21	16	202	:	:	92	124	9	126	2	4	3	1
App. labour productivity (EUR thous./pers. emp.) (2)	52.1	:	51.2	47.0	:	:	32.6	41.3	46.4	37.3	27.1	15.8	7.0	54.5
Average personnel costs (EUR thous./employee) (3)	41.4	5.5	40.1	36.6	:	:	23.4	35.6	28.8	27.3	16.6	4.6	3.6	39.1
Wage adjusted labour productivity (%) (4)	126.0	:	127.6	128.6	:	:	139.4	115.9	160.9	136.9	155.7	341.5	195.1	139.5
Gross operating rate (%) (5)	11.8	11.8	11.6	11.8	:	:	13.8	5.9	18.3	15.2	18.6	47.5	15.6	14.0
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	503	97	5 847	2 062	2 254	1 386	316	220	1 592	2 925	22 484	105	279	:
Value added at factor cost (EUR million)	150	49	2 384	956	1 006	616	98	55	678	1 106	10 974	31	118	:
Purchases of goods and services (EUR million)	463	47	3 529	1 157	1 022	772	205	169	920	1 925	11 954	86	190	:
Gross investment in tangible goods (EUR million)	50	4	340	165	135	283	34	13	100	203	1 605	14	41	:
Number of persons employed (thousands)	16	1	49	17	52	27	:	6	13	26	198	7	16	:
App. labour productivity (EUR thous./pers. emp.)	9.2	35.8	49.0	55.7	19.3	23.2	:	9.0	50.4	43.3	55.3	4.3	7.6	:
Average personnel costs (EUR thous./employee)	5.9	16.5	37.3	40.6	7.6	14.4	13.6	5.8	34.4	36.0	35.9	2.7	2.5	:
Wage adjusted labour productivity (%)	156.8	216.7	131.4	137.2	254.1	161.5	:	154.3	146.4	120.3	154.2	159.8	297.1	:
Gross operating rate (%)	9.1	30.0	12.8	13.3	31.9	18.2	5.7	8.6	14.3	8.3	19.6	11.4	26.8	:

(1) The Czech Republic, 1999.

(2) Ireland, 2000.

(3) Ireland and Cyprus, 2000; the Czech Republic, 1999.

(4) Ireland and Cyprus, 2000.

(5) Ireland, 2000; the Czech Republic, 1999.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 24.18

Reproduction of sound recording (NACE Class 22.31)

Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE (1)	IT	CY	LV (1)	LT	LU
Production (EUR million)	48	:	:	705	:	:	209	225	77	128	0	1	2	0
Value added at factor cost (EUR million)	17	:	:	323	:	:	58	73	18	37	0	0	1	0
Purchases of goods and services (EUR million)	34	:	:	408	:	:	157	163	58	93	0	1	1	0
Gross investment in tangible goods (EUR million)	3	:	:	32	:	:	24	22	5	3	0	0	0	:
Number of persons employed (thousands)	0	:	:	5	:	:	2	2	1	1	0	0	0	0
App. labour productivity (EUR thous./pers. emp.)	45.8	:	:	65.5	:	:	30.4	48.0	32.8	46.7	:	4.9	9.3	:
Average personnel costs (EUR thous./employee)	34.0	:	:	34.6	:	:	24.8	35.3	24.6	37.9	:	1.8	0.8	:
Wage adjusted labour productivity (%)	134.5	:	:	189.2	:	:	122.6	136.0	133.1	123.3	:	269.4	1 105.6	:
Gross operating rate (%)	12.6	:	:	21.6	:	:	10.5	9.2	5.8	12.1	:	52.3	36.8	:
	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	RO	TR
Production (EUR million)	5	:	395	:	50	2	0	3	9	5	1 053	:	7	:
Value added at factor cost (EUR million)	1	:	121	:	32	1	0	0	5	2	483	:	2	:
Purchases of goods and services (EUR million)	4	:	278	:	17	1	0	5	8	3	570	:	7	:
Gross investment in tangible goods (EUR million) (2)	0	:	9	:	2	1	0	0	0	1	32	:	0	:
Number of persons employed (thousands)	0	:	2	:	:	:	0	0	0	0	8	:	0	:
App. labour productivity (EUR thous./pers. emp.)	7.4	:	56.8	:	:	13.9	:	4.2	70.2	22.2	62.6	:	3.9	:
Average personnel costs (EUR thous./employee)	6.4	:	35.9	:	12.1	8.6	8.4	6.8	35.1	36.1	36.9	:	2.0	:
Wage adjusted labour productivity (%)	116.1	:	158.3	:	:	162.0	:	60.9	200.3	61.6	169.6	:	192.9	:
Gross operating rate (%)	2.8	:	16.1	:	48.1	18.9	8.3	-4.6	24.7	14.0	22.9	:	11.9	:

(1) 1999.

(2) The Netherlands, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 24.19

Reproduction of video recording (NACE Class 22.32)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE (1)	IT	CY	LV	LT	LU
Production (EUR million)	4	:	:	:	:	:	70	136	0	229	0	2	0	:
Value added at factor cost (EUR million)	1	:	:	:	:	:	21	42	0	65	0	1	0	:
Purchases of goods and services (EUR million)	3	:	:	:	:	:	68	99	0	164	0	2	0	:
Gross investment in tangible goods (EUR million)	0	:	:	3	:	:	4	4	0	11	0	0	0	:
Number of persons employed (thousands)	0	:	:	:	:	:	1	1	0	1	0	0	0	:
App. labour productivity (EUR thous./pers. emp.)	32.1	:	:	:	:	:	29.1	40.4	:	63.4	:	35.5	0.5	:
Average personnel costs (EUR thous./employee)	23.5	:	:	:	:	:	24.8	37.6	:	37.1	:	3.0	1.6	:
Wage adjusted labour productivity (%)	136.3	:	:	:	:	:	117.1	107.4	:	170.6	:	195.8	29.5	:
Gross operating rate (%)	14.5	:	:	:	:	:	6.6	3.0	:	15.2	:	20.2	-11.5	:
	HU	MT	NL	AT	PL	PT	SI	SK (1)	FI	SE	UK	BG	RO	TR
Production (EUR million)	5	:	130	0	5	16	0	0	9	17	347	:	0	:
Value added at factor cost (EUR million)	2	:	54	0	2	5	0	0	4	3	151	:	0	:
Purchases of goods and services (EUR million)	3	:	74	0	2	12	0	0	6	14	196	:	0	:
Gross investment in tangible goods (EUR million)	1	:	1	0	0	1	0	0	2	1	18	:	0	:
Number of persons employed (thousands)	0	:	1	0	:	0	:	:	0	0	2	:	0	:
App. labour productivity (EUR thous./pers. emp.)	17.7	:	76.7	:	:	35.7	:	:	55.7	17.1	81.5	:	1.4	:
Average personnel costs (EUR thous./employee)	10.4	:	40.1	:	8.0	19.6	27.4	:	33.8	32.8	45.9	:	2.5	:
Wage adjusted labour productivity (%)	170.1	:	191.3	:	:	182.0	:	:	165.0	52.1	177.5	:	55.4	:
Gross operating rate (%)	17.4	:	19.9	:	25.5	12.2	0.9	:	17.6	-6.7	21.1	:	-50.0	:

(1) 1999.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).

Table 24.20

Reproduction of computer media (NACE Class 22.33)
Main indicators, 2001

	BE	CZ	DK	DE	EE	EL	ES	FR	IE (1)	IT	CY	LV (2)	LT	LU
Production (EUR million)	4	:	5	:	0	:	30	122	6 330	21	0	0	0	0
Value added at factor cost (EUR million)	1	:	2	:	0	:	20	23	2 002	8	0	0	0	0
Purchases of goods and services (EUR million)	3	:	0	:	0	:	12	101	4 499	13	0	0	0	0
Gross investment in tangible goods (EUR million) (3)	0	:	0	12	0	:	1	0	45	2	0	0	0	:
Number of persons employed (thousands)	0	:	0	:	0	:	1	1	6	0	0	0	0	0
App. labour productivity (EUR thous./pers. emp.)	39.8	:	30.8	:	:	:	32.8	25.2	358.0	20.0	:	:	6.0	:
Average personnel costs (EUR thous./employee)	30.6	:	30.2	:	:	:	25.2	27.2	37.9	17.5	:	:	1.7	:
Wage adjusted labour productivity (%)	130.2	:	101.9	:	:	:	130.2	92.8	943.5	114.3	:	:	344.9	:
Gross operating rate (%)	11.3	:	12.5	:	:	:	15.2	-1.3	27.6	14.5	:	:	27.0	:
	HU	MT	NL	AT	PL	PT	SI	SK (2)	FI	SE	UK	BG	RO	TR
Production (EUR million)	5	0	10	:	4	0	1	1	2	12	243	:	0	:
Value added at factor cost (EUR million)	1	0	4	:	1	0	0	0	1	4	136	:	0	:
Purchases of goods and services (EUR million)	6	0	8	:	3	0	0	3	1	8	111	:	0	:
Gross investment in tangible goods (EUR million) (3)	0	0	1	:	0	0	0	0	1	7	:	:	0	:
Number of persons employed (thousands)	0	0	0	:	:	0	:	0	0	2	:	:	0	:
App. labour productivity (EUR thous./pers. emp.)	9.1	:	19.1	:	:	5.2	:	2.0	76.1	21.0	57.3	:	4.1	:
Average personnel costs (EUR thous./employee)	5.8	:	10.7	:	6.0	7.8	8.6	4.4	42.5	47.4	37.1	:	1.5	:
Wage adjusted labour productivity (%)	157.2	:	178.3	:	:	67.1	:	45.8	179.2	44.3	154.5	:	270.2	:
Gross operating rate (%)	6.9	:	15.6	:	15.9	-12.6	2.2	-2.1	19.2	-9.9	21.5	:	33.3	:

(1) 1999.

(2) 2000.

(3) The Netherlands, 2000.

Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr).