

# European business

Facts and figures

Part 6:

Business services

**Data 1998-2002**



EUROPEAN  
COMMISSION



THEME 4  
Industry, trade  
and services

4

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

**New freephone number:**

**00 800 6 7 8 9 10 11**

A great deal of additional information on the European Union is available on the Internet.  
It can be accessed through the Europa server (<http://europa.eu.int>).

Luxembourg: Office for Official Publications of the European Communities, 2004

ISBN 92-894-5433-4

ISSN 1681-2050

© European Communities, 2004

**European business,  
Facts & figures**

This publication has been produced by unit D3 of Eurostat, responsible for business statistics.

The opinions expressed are those of the individual authors alone and do not necessarily reflect the position of the European Commission.

**Director of Directorate D**  
Michel Glaude

**Head of Unit D3**  
Inger Öhman

**Co-ordinator:**  
Jean Lienhardt  
Eurostat D3  
Statistical Office of the  
European Communities,  
Joseph Bech building,  
Rue Alphonse Weicker, 5  
L-2721 Luxembourg  
ESTAT-SBS-QUESTIONS@cec.eu.int

**Production:**  
data processing, statistical  
analysis, economic analysis,  
design and desktop publishing  
Informa sàrl  
Giovanni Albertone, Simon  
Allen, Annekatriin Fink,  
Séverine Gautron, Andrew  
Redpath, Markus Voget,  
Daniel Waterschoot  
informa@informa.lu

A great deal of additional  
information on the  
European Union is available  
on the Internet. It can be  
accessed through the  
Europa server at  
<http://europa.eu.int>

**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**

<b>1. Energy</b>	<b>35</b>
1.1 Crude oil and natural gas	39
1.2 Electricity generation and distribution	42
1.3 Other energy activities	44
<b>2. Non-energy mining and quarrying</b>	<b>51</b>
<b>3. Food, beverages and tobacco</b>	<b>57</b>
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
<b>4. Textiles, clothing, leather and footwear</b>	<b>83</b>
4.1 Textiles	87
4.2 Clothing, including knitted articles	89
4.3 Leather and footwear	92
<b>5. Wood and paper</b>	<b>99</b>
5.1 Wood and wood products	102
5.2 Pulp, paper and paper products	105
<b>6. Chemicals, rubber and plastics</b>	<b>111</b>
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

<b>7.</b>	<b>Non-metallic mineral products</b>	<b>133</b>
7.1	Glass	137
7.2	Ceramic goods and clay products	139
7.3	Cement, concrete, stone and other non-metallic mineral products	141
<b>8.</b>	<b>Metals</b>	<b>145</b>
8.1	Manufacture and first processing of ferrous metals	148
8.2	Basic precious and non-ferrous metals	150
8.3	Casting	152
<b>9.</b>	<b>Metal products</b>	<b>155</b>
9.1	Structural metal products	159
9.2	Boilers, metal containers and steam generators	161
9.3	Miscellaneous metal products	163
<b>10.</b>	<b>Machinery and equipment</b>	<b>171</b>
10.1	Power machinery	175
10.2	Industrial processing machinery	177
10.3	Agricultural machines and tractors	181
10.4	Domestic appliances	184
<b>11.</b>	<b>Electrical machinery and optical equipment</b>	<b>189</b>
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
<b>12.</b>	<b>Transport equipment</b>	<b>211</b>
12.1	Motor vehicles	215
12.2	Motor vehicle parts and accessories	217
12.3	Aerospace equipment	219
12.4	Miscellaneous transport equipment	221
<b>13.</b>	<b>Furniture, other manufacturing industries and recycling</b>	<b>229</b>
13.1	Furniture	229
13.2	Musical instruments, sports goods, toys and games, jewellery	232
13.3	Recycling and waste treatment	233
<b>14.</b>	<b>Water supply and sewerage</b>	<b>239</b>
<b>15.</b>	<b>Construction and real estate</b>	<b>245</b>
15.1	Site preparation and general construction	251
15.2	Installation and completion	254
15.3	Real estate services	255
<b>16.</b>	<b>Motor trades</b>	<b>261</b>
16.1	Sale and repair of motor vehicles	264
16.2	Retail sale of automotive fuel	266
<b>17.</b>	<b>Wholesale trade</b>	<b>271</b>
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

<b>18. Retail trade</b>	<b>287</b>
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
<b>19. Tourism</b>	<b>305</b>
19.1 Travel agencies	310
19.2 Accommodation services	312
19.3 Restaurants, bars and catering	317
<b>20. Transport services</b>	<b>321</b>
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
<b>21. Financial services</b>	<b>345</b>
21.1 Financial intermediation	346
21.2 Insurance and pension funds	351
21.3 Financial auxiliaries	355
<b>22. Business services</b>	<b>363</b>
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
<b>23. Information and communication services</b>	<b>387</b>
23.1 Postal and courier services	391
23.2 Telecommunication services	394
23.3 Software and computing services	398
<b>24. Media</b>	<b>405</b>
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 <sup>(1)</sup>.

#### 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.

<sup>(1)</sup> 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<sup>(2)</sup>. 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<sup>(3)</sup> 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).

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

<sup>(3)</sup> 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)
<b>The Czech Republic</b>	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			
<b>Denmark</b>	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	
<b>Germany</b>	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
<b>Estonia</b>	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
<b>Greece</b>	No data available		Covers only enterprises with a turnover of 15 million GRD or more	
<b>Spain</b>	1995 to 1998: enterprises with 1 employee or more	No major deviations	1995 to 1998: enterprises with 1 employee or more	
<b>France</b>	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
<b>Ireland</b>	Enterprises with 3 persons employed or more 1995: Subsection DN includes Subsection DF	No data available	No major deviations	
<b>Italy</b>	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		
<b>Cyprus</b>	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)
<b>The Czech Republic</b>	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			
<b>Germany</b>	1995 onwards: enterprises with 20 persons employed or more		No major deviations	
<b>Estonia</b>	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
<b>Spain</b>	1995 onwards: enterprises with 1 employee or more	No major deviations		
<b>France</b>	1995: enterprises with 20 employees or more		No major deviations	
<b>Ireland</b>	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
<b>Cyprus</b>	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			
<b>Hungary</b>	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	
<b>The Netherlands</b>	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+
<b>Portugal</b>	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	
<b>Slovenia</b>	1995 to 1998: employment size classes are defined in terms of employees, and exclude enterprises with 0 employees			
<b>Slovakia</b>	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			
<b>Sweden</b>	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		
<b>The United Kingdom</b>	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 <sup>(4)</sup>, 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.

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

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 <sup>6</sup> kW)
Kg	Kilogram(s)
kgoe	Kilogram of oil equivalent
Km	Kilometre
Km <sup>2</sup>	Square kilometre
MW	Megawatt (10 <sup>3</sup> 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 <sup>9</sup> kW)
TWh	Terawatt per hour (10 <sup>9</sup> 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 <sup>(1)</sup> 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.

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 <sup>(2)</sup> that resulted out of the accession of the 10 new Member States in May 2004.

---

<sup>(2)</sup> 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.

---

<sup>(1)</sup> COM(2002) 714 final.

**THE EFFECTS OF ENLARGEMENT**

Rapid economic integration between the EU-15 and most of the 10 new Member States <sup>(3)</sup> 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.

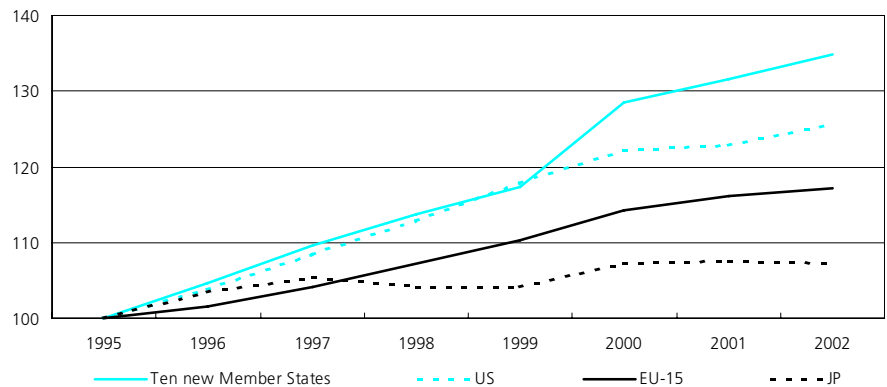
During the 1990s the new Member States faced two challenges: privatisation of existing production structures (which had formerly been publicly owned) and providing economic stimuli to encourage the creation of new enterprises. Privatisation programmes were initiated alongside investment liberalisation, 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 <sup>(4)</sup>. 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.

<sup>(3)</sup> Excluding Cyprus and Malta, and to a lesser degree Slovenia.

<sup>(4)</sup> 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).

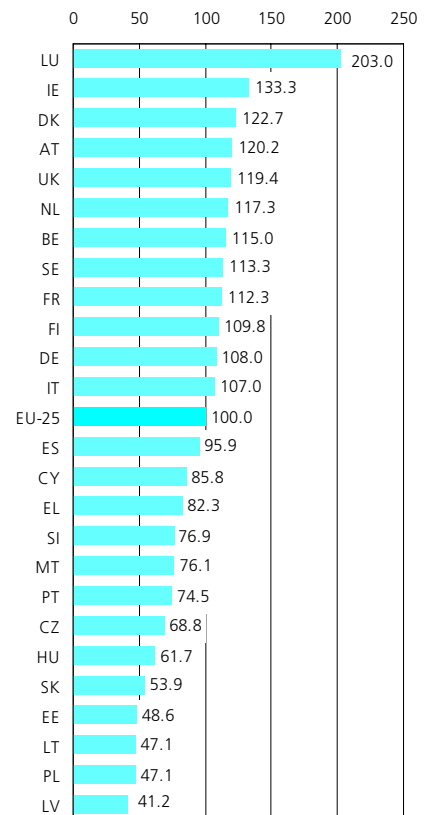
**GDP AND POPULATION**

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)**



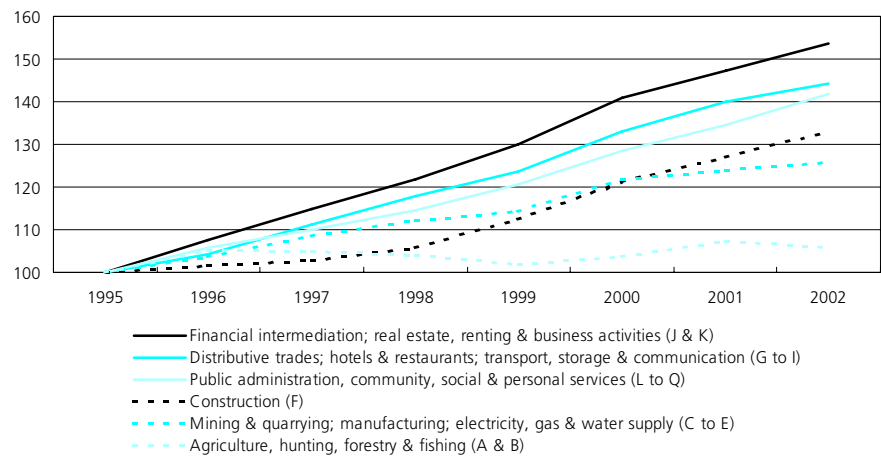
(1) At current market prices using PPS; estimates. Source: Eurostat, National Accounts - ESA95 - aggregates (theme2/aggs).

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**

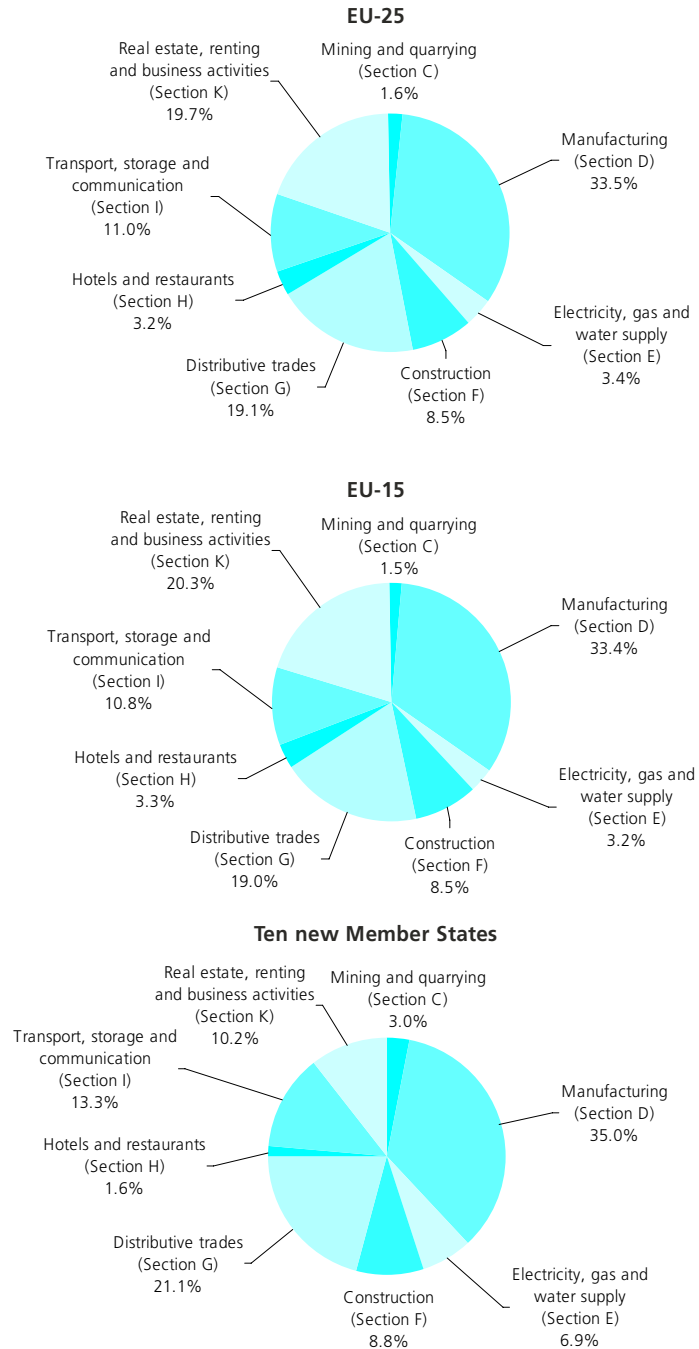
Value added in the EU-25's non-financial business economy (as defined by NACE Sections C to I and K) totalled EUR 4 585 billion in 2001. This figure could be broken down into EUR 4 341 billion among the EU-15 Member States (or 94.7 % of the EU-25 total) and EUR 244 billion among the 10 new Member States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

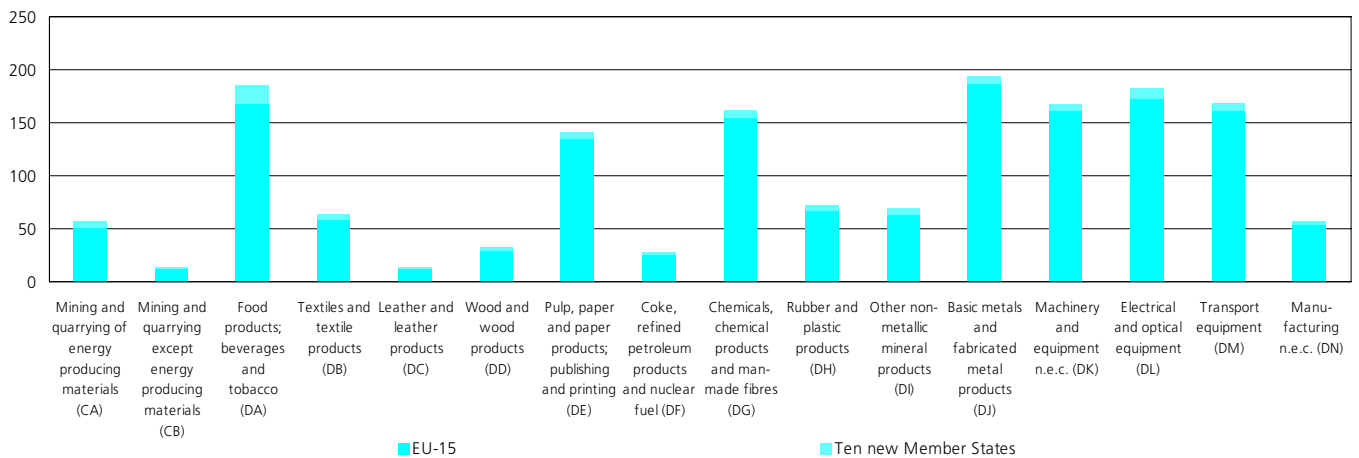
Although it did not generate the highest amount of value added in the EU-25 in 2001, the food products, beverages and tobacco sector was the largest single mining and manufacturing NACE subsection in 11 of the 25 Member States in 2001. There were six Member States where the basic metals and fabricated 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
<b>EU-25</b>	Basic metals and fabricated metal products	Food products; beverages and tobacco	Electrical and optical equipment
<b>BE</b>	Chemicals, chemical products and man-made fibres	Basic metals and fabricated metal products	Food products; beverages and tobacco
<b>CZ</b>	Basic metals and fabricated metal products	Transport equipment	Electrical and optical equipment
<b>DK (2)</b>	Food products; beverages and tobacco	Machinery and equipment n.e.c.	Electrical and optical equipment
<b>DE</b>	Transport equipment	Machinery and equipment n.e.c.	Electrical and optical equipment
<b>EE (2)</b>	Food products; beverages and tobacco	Textiles and textile products	Wood and wood products
<b>EL</b>	Food products; beverages and tobacco	Basic metals and fabricated metal products	Coke, refined petroleum products and nuclear fuel
<b>ES</b>	Food products; beverages and tobacco	Basic metals and fabricated metal products	Chemicals, chemical products and man-made fibres
<b>FR</b>	Food products; beverages and tobacco	Electrical and optical equipment	Transport equipment
<b>IE (3)</b>	Chemicals, chemical products and man-made fibres	Electrical and optical equipment	Food products; beverages and tobacco
<b>IT</b>	Basic metals and fabricated metal products	Machinery and equipment n.e.c.	Electrical and optical equipment
<b>CY</b>	Food products; beverages and tobacco	Other non-metallic mineral products	Pulp, paper and paper products; publishing and printing
<b>LV (4)</b>	Food products; beverages and tobacco	Wood and wood products	Textiles and textile products
<b>LT (2)</b>	Food products; beverages and tobacco	Textiles and textile products	Electrical and optical equipment
<b>LU</b>	Basic metals and fabricated metal products	Rubber and plastic products	Other non-metallic mineral products
<b>HU (2)</b>	Food products; beverages and tobacco	Electrical and optical equipment	Transport equipment
<b>MT (5)</b>	Electrical and optical equipment	Food products; beverages and tobacco	Textiles and textile products
<b>NL</b>	Food products; beverages and tobacco	Pulp, paper and paper products; publishing and printing	Chemicals, chemical products and man-made fibres
<b>AT (2)</b>	Basic metals and fabricated metal products	Electrical and optical equipment	Machinery and equipment n.e.c.
<b>PL (6)</b>	Electrical and optical equipment	Transport equipment	Machinery and equipment n.e.c.
<b>PT (7)</b>	Textiles and textile products	Food products; beverages and tobacco	Other non-metallic mineral products
<b>SI (2)</b>	Basic metals and fabricated metal products	Electrical and optical equipment	Chemicals, chemical products and man-made fibres
<b>SK (2)</b>	Basic metals and fabricated metal products	Transport equipment	Electrical and optical equipment
<b>FI</b>	Electrical and optical equipment	Pulp, paper and paper products; publishing and printing	Machinery and equipment n.e.c.
<b>SE</b>	Pulp, paper and paper products; publishing and printing	Transport equipment	Basic metals and fabricated metal products
<b>UK</b>	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.

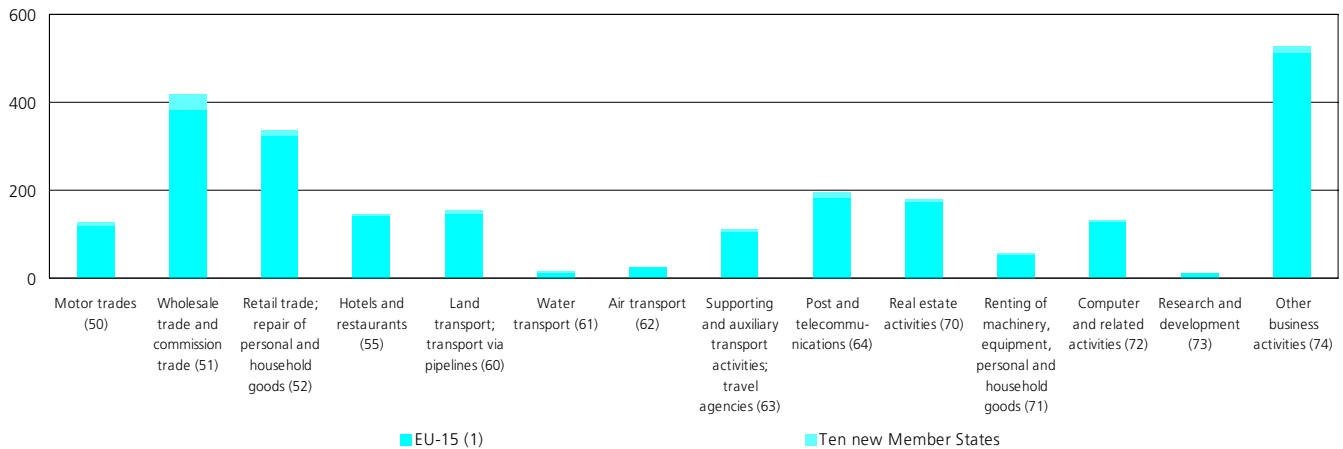
**Table 2**  
**Relative specialisation ratios for value added in the manufacturing sector, 2001 (1)**

<b>BE</b> Other textiles Other first processing of iron and steel non-ECSC ferro-alloys TV and radio receivers, sound or video recording	<b>CZ</b> Railway, tramway locomotives, rolling stock Glass and glass products Textile weaving	<b>DK</b> Processing and preserving of fish and fish products Electric motors, generators and transformers Optical instruments and photographic equipment
<b>DE</b> Electricity distribution and control apparatus Machine-tools Motor vehicles	<b>EE</b> Sawmilling and planing of wood Processing and preserving of fish and fish products Veneer sheets and boards	<b>ES</b> Ceramic tiles and flags Cutting, shaping and finishing of stone Cement, lime and plaster
<b>FR</b> Steam generators, except central heating hot water boilers Industrial process control equipment Soaps, detergents, cleaning products and toiletries	<b>IT</b> Tanning and dressing of leather Footwear Ceramic tiles and flags	<b>CY</b> Cement, lime and plaster Builders' carpentry and joinery Jewellery and related articles
<b>LV</b> Sawmilling and planing of wood Veneer sheets and boards Processing and preserving of fish and fish products	<b>LT</b> Knitted and crocheted articles Processing and preserving of fish and fish products Sawmilling and planing of wood	<b>LU</b> Other textiles Basic iron and steel and of ferro-alloys (ECSC) Rubber products
<b>HU</b> Lighting equipment and electric lamps TV and radio receivers, sound or video recording Vegetable and animal oils and fats	<b>MT</b> Games and toys Electronic valves and tubes and other electronic components Building and repairing of ships and boats	<b>NL</b> Building and repairing of ships and boats Vegetable and animal oils and fats Prepared animal feeds
<b>AT</b> Sports goods Sawmilling and planing of wood Basic iron and steel and of ferro-alloys (ECSC)	<b>PL</b> Veneer sheets and boards Processing and preserving of fruit and vegetables Building and repairing of ships and boats	<b>PT</b> Footwear Knitted and crocheted fabrics Other products of wood; cork, straw and plaiting materials
<b>SI</b> Made-up textile articles Domestic appliances n.e.c. Tanning and dressing of leather	<b>SK</b> Other first processing of iron and steel non-ECSC ferro-alloys Man-made fibres Railway, tramway locomotives, rolling stock	<b>FI</b> TV and radio transmitters and telephone apparatus Pulp, paper and paperboard Sawmilling and planing of wood
<b>SE</b> Pulp, paper and paperboard Sawmilling and planing of wood Tubes	<b>UK</b> 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
<b>EU-25 (2)</b>	Other business activities	Wholesale trade	Retail trade
<b>BE</b>	Other business activities	Wholesale trade	Retail trade
<b>CZ</b>	Wholesale trade	Other business activities	Post and telecommunications
<b>DK</b>	Wholesale trade	Other business activities	Real estate activities
<b>DE (3)</b>	Other business activities	Wholesale trade	Retail trade
<b>EE (4)</b>	Wholesale trade	Auxiliary transport activities	Retail trade
<b>EL</b>	:	:	:
<b>ES</b>	Wholesale trade	Other business activities	Retail trade
<b>FR</b>	Other business activities	Retail trade	Wholesale trade
<b>IE (5)</b>	Other business activities	Retail trade	Wholesale trade
<b>IT</b>	Other business activities	Wholesale trade	Retail trade
<b>CY (6)</b>	Hotels and restaurants	Wholesale trade	Retail trade
<b>LV</b>	Wholesale trade	Post and telecommunications	Retail trade
<b>LT</b>	Wholesale trade	Land transport	Post and telecommunications
<b>LU</b>	Other business activities	Wholesale trade	Post and telecommunications
<b>HU</b>	Post and telecommunications	Wholesale trade	Land transport
<b>MT (2) (7)</b>	Hotels and restaurants	Wholesale trade	Air transport
<b>NL (8)</b>	Other business activities	Wholesale trade	Retail trade
<b>AT</b>	Wholesale trade	Other business activities	Retail trade
<b>PL (9)</b>	Wholesale trade	Other business activities	Land transport
<b>PT</b>	Wholesale trade	Retail trade	Other business activities
<b>SI (10)</b>	Wholesale trade	Other business activities	Retail trade
<b>SK (4)</b>	Wholesale trade	Post and telecommunications	Other business activities
<b>FI</b>	Wholesale trade	Other business activities	Retail trade
<b>SE</b>	Other business activities	Wholesale trade	Real estate activities
<b>UK</b>	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)**

<b>BE</b> Wholesale of machinery, equipment and supplies Labour recruitment and provision of personnel Wholesale of household goods	<b>CZ</b> Other wholesale Retail sale of automotive fuel Wholesale of non-agricultural intermediate products	<b>DK</b> Wholesale of machinery, equipment and supplies Wholesale of agricultural raw materials, live animals Real estate activities
<b>EE</b> Supporting and auxiliary transport activities; travel agencies Retail sale of automotive fuel Wholesale of non-agricultural intermediate products	<b>ES</b> Retail sale of food, beverages, tobacco in specialized stores Hotels; camping sites, other short-stay accommodation Restaurants; bars; canteens and catering	<b>FR</b> Labour recruitment and provision of personnel Retail sale of pharmaceuticals, cosmetics & toiletries Wholesale of agricultural raw materials, live animals
<b>IE</b> Wholesale of food, beverages and tobacco Computer and related activities Hotels; camping sites, other short-stay accommodation	<b>IT</b> Wholesale on a fee or contract basis Maintenance and repair of motor vehicles Industrial cleaning	<b>CY (2)</b> Hotels; camping sites, other short-stay accommodation Restaurants; bars; canteens and catering Air transport
<b>LV</b> Wholesale of non-agricultural intermediate products Retail sale of automotive fuel Retail sale not in stores	<b>LT</b> Retail sale of automotive fuel Transport via railways Sale of motor vehicle parts and accessories	<b>LU</b> Air transport Inland water transport Transport via railways
<b>HU</b> Other wholesale Telecommunications Retail sale of automotive fuel	<b>MT</b> Air transport Hotels; camping sites, other short-stay accommodation Supporting and auxiliary transport activities; travel agencies	<b>NL</b> Inland water transport Wholesale of agricultural raw materials, live animals Wholesale of machinery, equipment and supplies
<b>AT</b> Hotels; camping sites, other short-stay accommodation Wholesale of agricultural raw materials, live animals Wholesale of machinery, equipment and supplies	<b>PL</b> Other wholesale Retail sale of automotive fuel Wholesale of food, beverages and tobacco	<b>PT</b> Air transport Wholesale of household goods Wholesale of food, beverages and tobacco
<b>SI</b> Wholesale on a fee or contract basis Other wholesale Retail sale of automotive fuel	<b>SK</b> Wholesale on a fee or contract basis Other wholesale Telecommunications	<b>FI</b> Wholesale of machinery, equipment and supplies Other land transport Air transport
<b>SE</b> Real estate activities Retail sale of automotive fuel Computer and related activities	<b>UK</b> 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)
<b>NON-FINANCIAL BUSINESS ECONOMY (Sections C to I and K)</b>	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 <sup>(6)</sup>.

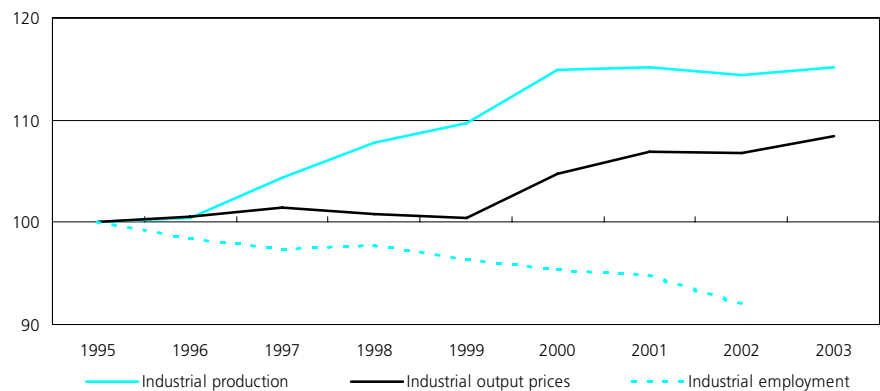
<sup>(6)</sup> The Czech Republic, Greece, Cyprus, Hungary, Malta, Austria and Slovakia, not available.

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
<b>TOTAL INDUSTRY (C-E)</b>	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
<b>Manufacturing (D)</b>	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
<b>Electricity, gas and water supply (E)</b>	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
<b>TOTAL INDUSTRY (C-E)</b>	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
<b>Manufacturing (D)</b>	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
<b>Electricity, gas and water supply (E)</b>	:	-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).

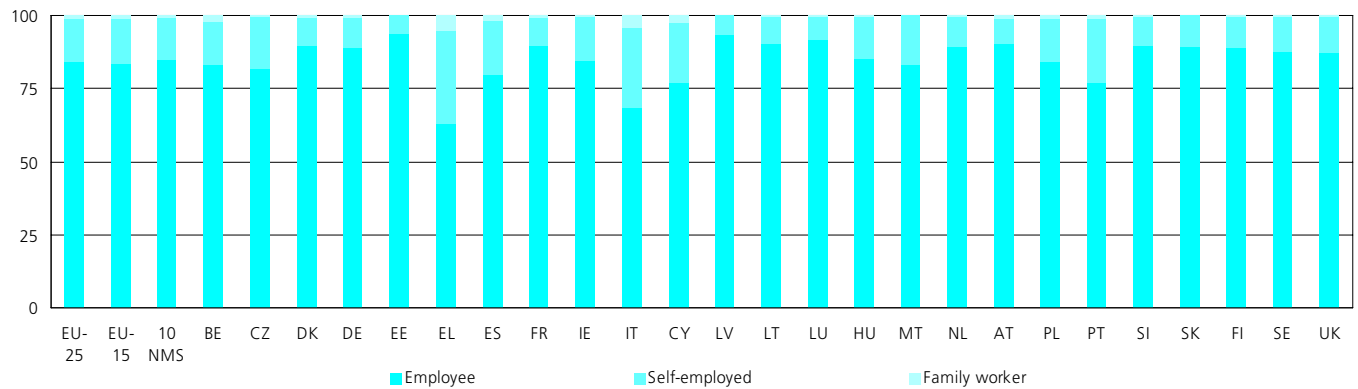
Lengthy time-series for annualised short-term statistics only exist for a limited number of service sectors, mainly within the area of distributive trades. These show that turnover in the EU-25 rose, on average, by 2.9 % per annum in the wholesale trade sector and by 3.4 % per annum in the hotels and 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

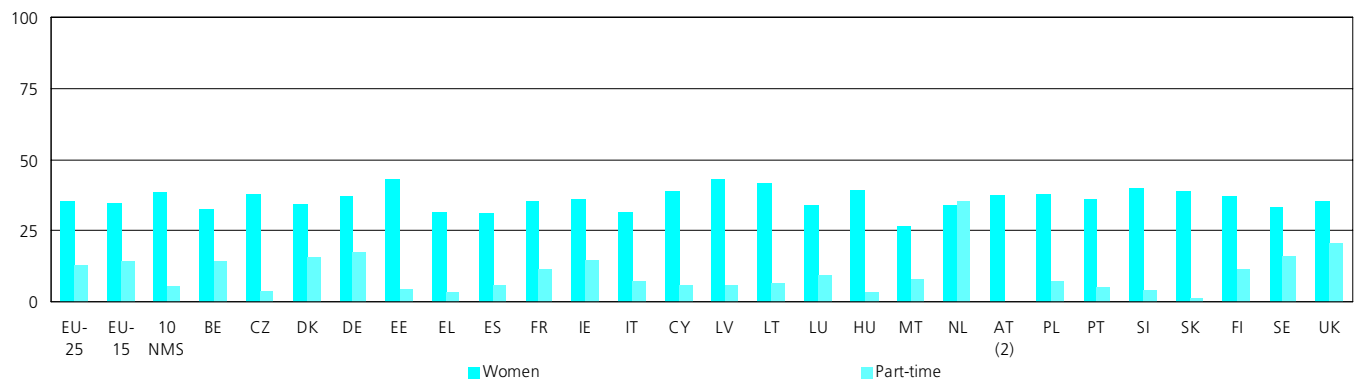
Labour force characteristics in the business economy (NACE Sections C to K) by employment status, 2002 (share of persons aged 15 or more) (%) (1)



(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 <sup>(7)</sup> 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.

<sup>(7)</sup> 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)			
<b>Non-financial business economy (C to I and K)</b>																	
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			
<b>Mining and quarrying; manufacturing; electricity, gas and water supply (C to E)</b>																	
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			
<b>Construction (F)</b>																	
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			
<b>Non-financial services (G to I and K)</b>																	
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			
<b>Non-financial business economy (C to I and K)</b>																	
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			
<b>Mining and quarrying; manufacturing; electricity, gas and water supply (C to E)</b>																	
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			
<b>Construction (F)</b>																	
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			
<b>Non-financial services (G to I and K)</b>																	
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.

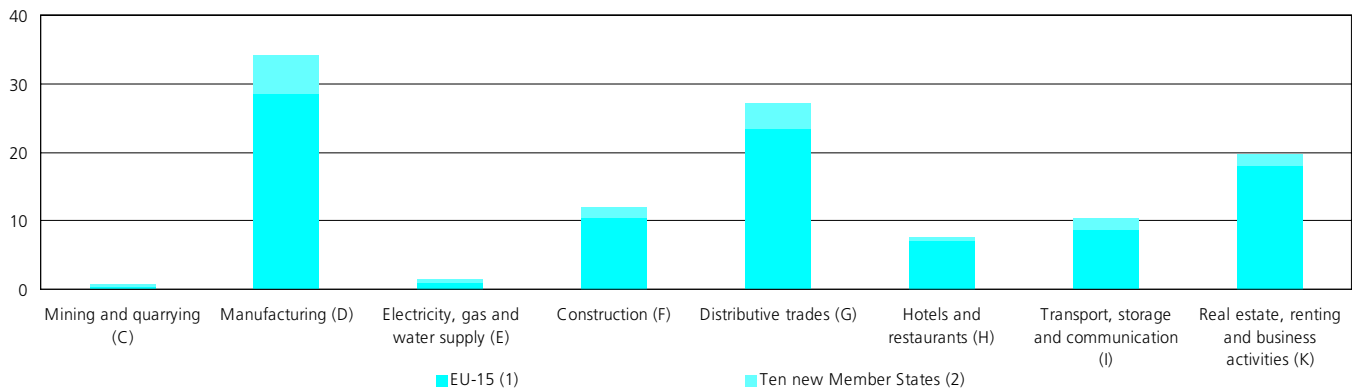
(5) NACE Section K, not available.

(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).

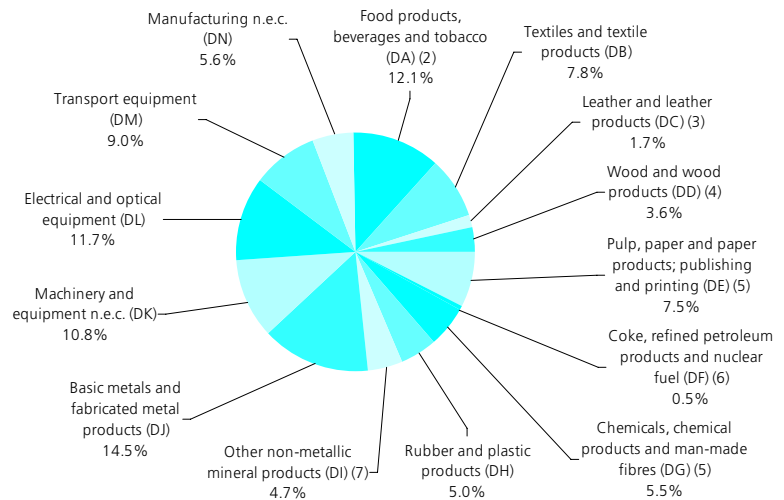
Figure 10 shows in more detail the breakdown of employment between the EU-15 and the 10 new Member States. The two NACE sections where the 10 new Member States had by far their highest share of total EU-25 employment were the activities of mining and quarrying (NACE Section C) and electricity, gas and 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 (%)
<b>EU-25 (1)</b>	903 314	~	942 138	~	-38 824	95.9
<b>BE</b>	228 609	8.3	210 321	7.8	18 287	108.7
<b>CZ</b>	40 682	1.5	43 005	1.6	-2 323	94.6
<b>DK</b>	60 802	2.2	53 215	2.0	7 587	114.3
<b>DE</b>	651 259	23.5	518 488	19.3	132 771	125.6
<b>EE</b>	3 638	0.1	5 079	0.2	-1 441	71.6
<b>EL</b>	10 946	0.4	33 065	1.2	-22 118	33.1
<b>ES</b>	132 918	4.8	174 603	6.5	-41 685	76.1
<b>FR</b>	350 803	12.7	348 205	12.9	2 598	100.7
<b>IE</b>	93 337	3.4	55 429	2.1	37 909	168.4
<b>IT</b>	269 064	9.7	261 226	9.7	7 838	103.0
<b>CY</b>	449	0.0	3 903	0.1	-3 454	11.5
<b>LV</b>	2 417	0.1	4 279	0.2	-1 862	56.5
<b>LT</b>	5 537	0.2	7 958	0.3	-2 422	69.6
<b>LU</b>	10 814	0.4	13 907	0.5	-3 093	77.8
<b>HU</b>	36 503	1.3	39 927	1.5	-3 424	91.4
<b>MT</b>	2 144	0.1	2 799	0.1	-654	76.6
<b>NL</b>	258 099	9.3	231 879	8.6	26 220	111.3
<b>AT</b>	83 199	3.0	82 804	3.1	395	100.5
<b>PL</b>	43 499	1.6	58 480	2.2	-14 981	74.4
<b>PT</b>	28 098	1.0	42 414	1.6	-14 316	66.2
<b>SI</b>	10 962	0.4	11 574	0.4	-612	94.7
<b>SK</b>	15 234	0.6	17 517	0.7	-2 283	87.0
<b>FI</b>	47 742	1.7	36 187	1.3	11 556	131.9
<b>SE</b>	86 090	3.1	70 731	2.6	15 358	121.7
<b>UK</b>	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).

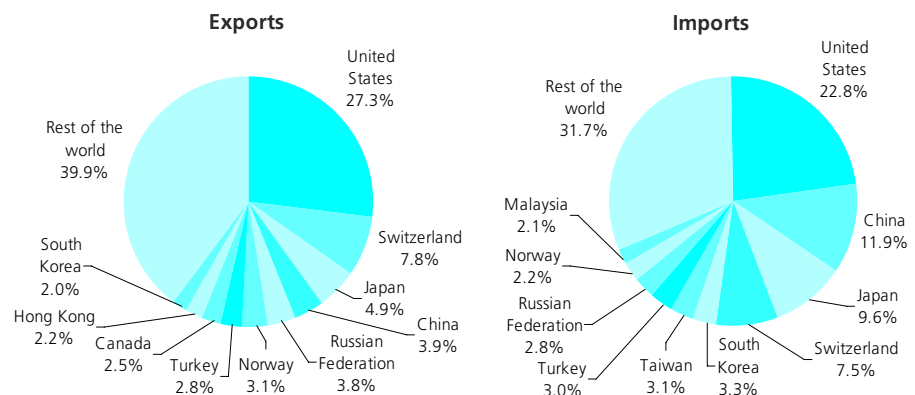
Figure 12 provides information concerning the most important destinations and origin of EU-25 exports and imports of manufactured goods (CPA Section D) in 2002. These figures cover extra-EU trade with non-Community countries and do not take account of trade flows between the Member States. EU-25 exports 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 <sup>(8)</sup> 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).

<sup>(8)</sup> 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
<b>EU (2)</b>	:	8.4	8.5	8.3
<b>BE</b>	:	:	7.0	:
<b>DK</b>	10.1	10.9	10.0	9.3
<b>ES</b>	9.7	9.6	9.7	9.1
<b>IT</b>	11.4	7.6	7.8	7.7
<b>LU</b>	13.2	13.4	12.4	12.2
<b>NL</b>	:	9.6	9.4	9.6
<b>PT (3)</b>	9.5	8.0	7.6	7.5
<b>FI</b>	8.5	7.6	7.3	7.2
<b>SE</b>	:	6.3	7.0	6.6
<b>UK</b>	9.1	9.6	8.9	:
<b>NO</b>	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
<b>EU (2)</b>	:	7.2	7.0	7.3
<b>BE</b>	:	6.7	8.7	:
<b>DK</b>	8.1	8.3	8.1	9.7
<b>ES</b>	7.7	8.0	6.9	7.2
<b>IT</b>	9.3	6.5	7.1	7.0
<b>LU</b>	8.7	9.0	9.4	9.2
<b>NL</b>	:	7.7	8.1	10.2
<b>PT</b>	7.0	6.5	6.3	:
<b>FI</b>	6.7	8.0	6.8	7.3
<b>SE</b>	7.1	5.9	5.1	5.5
<b>UK</b>	9.7	10.5	10.4	10.6
<b>NO</b>	:	:	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
<b>EU (2)</b>	:	:	:	85.2	73.6
<b>BE</b>	:	:	:	:	:
<b>DK</b>	80.6	63.8	53.5	79.7	61.9
<b>ES</b>	82.8	69.3	61.6	80.6	70.1
<b>IT</b>	83.3	71.3	62.3	88.4	76.6
<b>LU</b>	89.4	77.2	66.2	89.3	77.2
<b>NL</b>	:	:	:	84.6	71.0
<b>PT</b>	94.1	71.6	:	95.9	:
<b>FI</b>	83.0	68.4	59.2	84.2	70.6
<b>SE</b>	:	:	:	98.7	89.3
<b>UK</b>	91.8	77.8	:	93.4	:
<b>NO</b>	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 <sup>(9)</sup> 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 %) <sup>(10)</sup>. The supply of and the demand for web-based services generally increased with the average size of an enterprise (see Table 15).

<sup>(10)</sup> 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.

<sup>(9)</sup> 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
<b>Proportion of enterprises using computers at the start of 2002</b>																
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
<b>Proportion of PC-equipped enterprises that used the Internet during 2001</b>																
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
<b>Enterprises using the Internet during 2001: proportion using the following Internet services</b>																
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	:
<b>Enterprises using the Internet during 2001: proportion with a web-site or homepage</b>																
	67	:	80	78	52	46	:	64	62	65	68	75	55	72	84	100
<b>Enterprises with a web-site or homepage in 2001: proportion offering the following Internet services</b>																
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
<b>Enterprises having used the Internet during 2001: proportion that purchased products via the Internet in 2001</b>																
<b>All sizes</b>	29	:	49	45	17	8	:	46	10	29	37	37	24	54	62	47
<b>SME</b>	29	:	48	45	16	8	:	45	10	29	37	36	24	53	62	47
<b>Large</b>	40	:	80	41	27	15	:	62	15	23	54	56	30	70	83	45
<b>Enterprises having used the Internet during 2001: proportion that received orders via the Internet in 2001</b>																
<b>All sizes</b>	14	:	25	19	14	3	:	26	5	15	40	25	11	17	14	19
<b>SME</b>	14	:	25	19	14	3	:	26	5	15	40	25	10	17	14	19
<b>Large</b>	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 <sup>(11)</sup>. Results from the third Community innovation survey (CIS3) show that there were 233 200 enterprises with 10 or more employees within the business economy <sup>(12)</sup> 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).

<sup>(11)</sup> 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.

<sup>(12)</sup> 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 (%)
<b>Total</b>	546.8	100	100	100
<b>Enterprises with innovation activity</b>	233.2	43	45	39
<b>Successful innovators</b>	212.3	41	42	34
<b>Product only innovators</b>	58.3	10	10	12
<b>Process only innovators</b>	39.2	7	9	5
<b>Product and process innovators</b>	114.7	23	23	17
<b>Enterprises with only on-going and/or abandoned innovations</b>	31.7	3	5	6
<b>Enterprises without innovation activity</b>	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 <sup>(13)</sup> 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.

<sup>(13)</sup> 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
<b>All sizes</b>	45	39
<b>Small</b>	39	35
<b>Medium-sized</b>	61	51
<b>Large</b>	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.

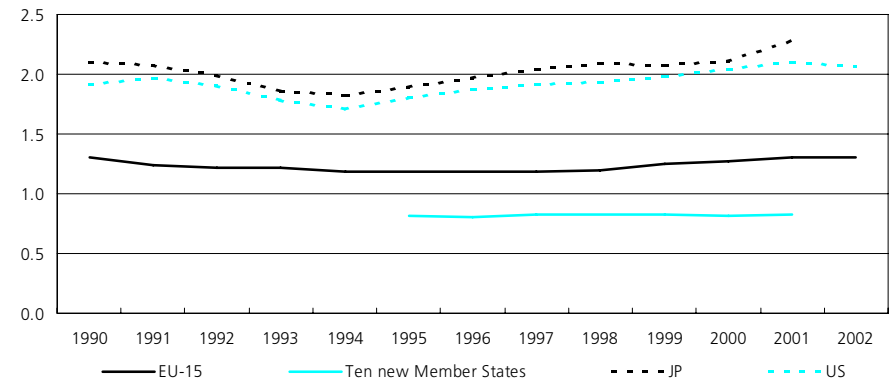
In 2002, R & D expenditure in the EU-15, relative to GDP, was 1.99 %; this was the same ratio that had been recorded in 1990. Within the EU-25, the ratio was slightly lower at 1.93 % in 2001. At the time of writing (spring 2004), there were only two Member States that had attained the Barcelona objectives, 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 % <sup>(14)</sup>.

<sup>(14)</sup> 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
<b>Total R&amp;D expenditure</b>	182 387	5 515	744	4 265	51 539	37	:	6 227	33 414	1 339	:	25	38
<b>Of which:</b>													
<b>Business enterprise sector</b>	119 000	4 062	381	2 934	36 350	9	:	3 261	20 779	917	6 870	4	11
<b>Government sector</b>	23 949	331	331	503	6 923	22	:	989	5 664	128	2 657	16	16
<b>Higher education sector</b>	38 197	1 059	4	796	8 266	1	:	1 925	6 506	294	:	0	:
<b>Private non-profit sector</b>	1 240	62	5	32	:	1	:	52	465	:	:	1	:
	LT	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK
<b>Total R&amp;D expenditure</b>	73	:	405	:	8 090	4 217	1 197	1 038	297	143	4 873	10 459	30 501
<b>Of which:</b>													
<b>Business enterprise sector</b>	:	:	153	:	4 712	:	390	330	159	78	3 447	8 118	19 683
<b>Government sector</b>	:	33	201	:	1 194	:	759	216	119	61	521	297	3 683
<b>Higher education sector</b>	:	2	:	:	2 184	:	20	381	1	1	905	2 033	6 724
<b>Private non-profit sector</b>	:	:	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 phenomena 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
<b>Total number of patent applications (units)</b>							
<b>EU-25</b>	34 487	36 465	43 230	49 084	53 301	60 328	61 458
<b>EU-15</b>	34 205	36 180	42 894	48 671	52 896	59 754	60 890
<b>10 NMS (1)</b>	282	284	337	414	405	574	568
<b>JP</b>	11 084	12 641	14 342	15 500	16 649	20 250	22 226
<b>US</b>	25 246	28 130	31 225	35 035	38 552	45 778	47 202
<b>Patent applications per million inhabitants (units)</b>							
<b>EU-25</b>	77.2	81.4	96.3	109.2	118.3	133.6	135.7
<b>EU-15</b>	92.1	97.1	114.8	130.0	141.0	158.7	161.1
<b>10 NMS (1)</b>	3.7	3.8	4.5	5.5	5.4	7.7	7.6
<b>JP</b>	88.3	100.7	115.1	122.9	131.7	159.5	174.7
<b>US</b>	96.5	106.5	117.2	130.2	141.9	166.2	169.8
<b>High-technology patent applications (units)</b>							
<b>EU-25</b>	3 902	4 385	5 695	7 321	8 759	11 126	12 017
<b>EU-15</b>	3 880	4 367	5 674	7 281	8 718	11 048	11 928
<b>10 NMS (1)</b>	23	18	21	39	42	78	89
<b>JP</b>	2 464	2 787	3 361	3 678	4 096	5 085	5 707
<b>US</b>	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
<b>Proportion of enterprises providing training</b>	62	70	69	96	75	63	18	36	76	79	24	:	53
<b>Continuing vocational training</b>	54	48	61	88	67	47	9	28	71	56	23	:	26
<b>Other forms of training</b>	53	67	59	87	72	57	15	27	41	75	22	:	50
<b>Proportion of enterprises providing training (breakdown by enterprise size-class)</b>													
<b>Small</b>	56	66	62	95	71	58	11	31	70	75	20	:	49
<b>Medium-sized</b>	81	93	84	98	87	85	43	58	93	98	48	:	70
<b>Large</b>	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
<b>Proportion of enterprises providing training</b>	43	71	37	:	88	72	39	22	48	:	82	91	87
<b>Continuing vocational training</b>	21	50	24	:	82	71	26	11	33	:	75	83	76
<b>Other forms of training</b>	39	65	30	:	70	27	36	20	46	:	72	78	83
<b>Proportion of enterprises providing training (breakdown by enterprise size-class)</b>													
<b>Small</b>	37	67	32	:	85	68	36	17	35	:	78	88	85
<b>Medium-sized</b>	60	83	51	:	96	91	52	46	72	:	97	99	91
<b>Large</b>	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 <sup>(15)</sup> 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).

<sup>(15)</sup> *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
<b>BEF/LUF</b>	40.4713	39.6565	38.5519	39.2986	40.5332	40.6207	40.3399	40.3399	40.3399	-	-
<b>CZK</b>	34.1690	34.1509	34.6960	34.4572	35.9304	36.3196	36.8843	35.5995	34.0680	30.8040	31.8460
<b>DKK</b>	7.59359	7.54328	7.32804	7.35934	7.48361	7.49930	7.43556	7.45382	7.45210	7.43050	7.43070
<b>DEM</b>	1.93639	1.92453	1.87375	1.90954	1.96438	1.96913	1.95583	1.95583	1.95583	-	-
<b>EEK</b>	15.4911	15.3962	14.9900	15.2763	15.7150	15.7530	15.6466	15.6466	15.6466	15.6466	15.6466
<b>GRD</b>	268.568	288.026	302.989	305.546	309.355	330.731	325.820	336.678	340.750	-	-
<b>ESP</b>	149.124	158.918	163.000	160.748	165.887	167.184	166.386	166.386	166.386	-	-
<b>FRF</b>	6.63368	6.58262	6.52506	6.49300	6.61260	6.60141	6.55957	6.55957	6.55957	-	-
<b>IEP</b>	0.799952	0.793618	0.815525	0.793448	0.747516	0.786245	0.787564	0.787564	0.787564	-	-
<b>ITL</b>	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	-	-
<b>CYP</b>	0.582941	0.583931	0.591619	0.591904	0.582628	0.577418	0.578850	0.573924	0.575890	0.575300	0.584090
<b>LVL</b>	0.793600	0.664101	0.689537	0.699605	0.659401	0.660240	0.625601	0.559227	3.582300	3.459400	3.452700
<b>LTL</b>	5.08682	4.73191	5.23203	5.07899	4.53616	4.48437	4.26405	3.69516	0.56010	0.58100	0.64070
<b>HUF</b>	107.611	125.030	164.545	193.741	211.654	240.573	252.767	260.045	256.590	242.960	253.620
<b>MTL</b>	0.447021	0.448852	0.461431	0.458156	0.437495	0.434983	0.425773	0.404138	0.403000	0.408900	0.426100
<b>NLG</b>	2.17521	2.15827	2.09891	2.13973	2.21081	2.21967	2.20371	2.20371	2.20371	-	-
<b>ATS</b>	13.6238	13.5396	13.1824	13.4345	13.8240	13.8545	13.7603	13.7603	13.7603	-	-
<b>PLN</b>	2.12217	2.70153	3.17049	3.42232	3.71545	3.91784	4.22741	4.00817	3.67210	3.85740	4.39960
<b>PTE</b>	188.370	196.896	196.105	195.761	198.589	201.695	200.482	200.482	200.482	-	-
<b>SIT</b>	132.486	152.766	154.880	171.778	180.996	185.958	194.473	206.613	43.300	42.694	41.489
<b>SKK</b>	36.0317	38.1182	38.8649	38.9229	38.1061	39.5407	44.1229	42.6017	217.9797	225.9772	233.8493
<b>FIM</b>	6.69628	6.19077	5.70855	5.82817	5.88064	5.98251	5.94573	5.94573	5.94573	-	-
<b>SEK</b>	9.12151	9.16308	9.33192	8.51472	8.65117	8.91593	8.80752	8.44519	9.25510	9.16110	9.12420
<b>GBP</b>	0.779988	0.775903	0.828789	0.813798	0.692304	0.676434	0.658735	0.609478	0.621870	0.628830	0.691990
<b>BGN</b>	0.03231	0.06439	0.08787	0.22515	1.90157	1.96913	1.95584	1.94792	1.94820	1.94920	1.94900
<b>ROL</b>	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
<b>TRL</b>	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
<b>JPY</b>	130.148	121.322	123.012	138.084	137.077	146.415	121.317	99.475	108.680	118.060	130.970
<b>USD</b>	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
<b>EU-15</b>	368 935	370 323	371 442	372 476	373 487	374 345	375 277	376 482	:	:	:
<b>BE</b>	10 068	10 101	10 131	10 143	10 170	10 192	10 214	10 239	10 263	10 310	10 356
<b>CZ</b>	10 326	10 334	10 333	10 321	10 309	10 299	10 290	10 278	10 267	10 206	10 203
<b>DK</b>	5 181	5 197	5 216	5 251	5 275	5 295	5 314	5 330	5 349	5 368	5 384
<b>DE</b>	80 975	81 338	81 539	81 817	82 012	82 057	82 037	82 163	82 260	82 440	82 537
<b>EE</b>	1 527	1 507	1 492	1 476	1 462	1 454	1 446	1 372	1 367	1 361	1 356
<b>EL</b>	10 349	10 410	10 443	10 465	10 487	10 511	10 522	10 554	:	:	:
<b>ES</b>	39 057	39 136	39 197	39 249	39 308	39 388	39 519	39 733	40 122	40 409	:
<b>FR</b>	57 369	57 565	57 753	57 936	58 116	58 299	58 497	58 749	59 043	59 342	59 630
<b>IE</b>	3 569	3 583	3 598	3 620	3 652	3 694	3 735	3 777	3 826	3 900	3 964
<b>IT</b>	56 960	57 138	57 269	57 333	57 461	57 563	57 613	57 680	57 844	:	:
<b>CY</b>	714	723	730	736	741	746	752	755	698	706	715
<b>LV</b>	2 606	2 566	2 530	2 502	2 480	2 458	2 439	2 380	2 364	2 346	2 331
<b>LT</b>	3 736	3 724	3 718	3 712	3 707	3 704	3 701	3 699	3 487	3 476	3 463
<b>LU</b>	395	401	407	413	418	424	429	436	440	444	448
<b>HU</b>	10 310	10 277	10 246	10 212	10 174	10 135	10 092	10 043	10 200	10 175	10 142
<b>MT</b>	363	366	369	371	374	377	379	380	391	395	:
<b>NL</b>	15 239	15 342	15 424	15 494	15 567	15 654	15 760	15 864	15 987	16 105	16 193
<b>AT</b>	7 962	8 015	8 040	8 055	8 068	8 075	8 083	8 103	8 021	8 039	8 067
<b>PL</b>	38 418	38 505	38 581	38 609	38 639	38 660	38 667	38 654	38 644	38 632	38 219
<b>PT</b>	9 965	9 983	10 013	10 041	10 070	10 108	10 150	10 198	10 263	10 329	10 407
<b>SI</b>	1 994	1 989	1 989	1 990	1 987	1 985	1 978	1 988	1 990	1 994	1 995
<b>SK</b>	5 314	5 336	5 356	5 368	5 379	5 388	5 393	5 399	5 379	5 379	5 379
<b>FI</b>	5 055	5 078	5 099	5 117	5 132	5 147	5 160	5 171	5 181	5 195	5 206
<b>SE</b>	8 692	8 745	8 816	8 837	8 844	8 848	8 854	8 861	8 883	8 909	8 941
<b>UK</b>	58 099	58 293	58 500	58 704	58 905	59 090	59 391	59 623	59 863	:	:
<b>BG</b>	8 485	8 460	8 427	8 385	8 341	8 283	8 230	8 191	7 929	7 892	7 846
<b>RO</b>	22 779	22 748	22 712	22 656	22 582	22 526	22 489	22 455	22 430	21 833	21 773
<b>TR</b>	:	:	:	:	:	:	:	:	:	:	:

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)
<b>EU-15</b>	-0.4	2.8	2.4	1.6	2.5	2.9	2.8	3.4	1.5	1.0	0.7
<b>BE</b>	-1.0	3.2	2.4	1.2	3.6	2.0	3.2	3.7	0.8	0.7	0.8
<b>CZ</b>	0.1	2.2	5.9	4.3	-0.8	-1.0	0.5	3.3	3.3	2.0	2.9
<b>DK</b>	0.0	5.5	2.8	2.5	3.0	2.5	2.3	3.0	1.0	1.0	0.0
<b>DE</b>	-1.1	2.3	1.7	0.8	1.4	2.0	2.0	2.9	0.6	0.2	-0.1
<b>EE</b>	:	-2.0	4.3	3.9	9.8	4.6	-0.6	7.1	5.0	6.0	4.8
<b>EL</b>	-1.6	2.0	2.1	2.4	3.6	3.4	3.6	4.2	4.1	3.9	4.7
<b>ES</b>	-1.0	2.4	2.8	2.4	4.0	4.3	4.2	4.2	2.7	2.0	2.4
<b>FR</b>	-0.9	2.1	1.7	1.1	1.9	3.4	3.2	3.8	1.8	1.2	0.2
<b>IE</b>	2.7	5.8	9.9	8.1	10.9	8.8	11.1	10.0	5.7	6.9	1.2
<b>IT</b>	-0.9	2.2	2.9	1.1	2.0	1.8	1.6	2.9	1.8	0.4	0.3
<b>CY</b>	0.7	5.9	6.2	1.9	2.5	5.0	4.8	5.2	4.1	2.0	2.0
<b>LV</b>	-14.9	0.6	-1.6	3.7	8.4	4.8	2.8	6.8	7.7	6.1	7.4
<b>LT</b>	-16.2	-9.8	3.3	4.7	7.3	5.1	-3.9	3.8	5.9	6.8	8.9
<b>LU</b>	4.2	3.8	1.3	3.7	7.7	7.5	6.0	8.9	1.0	1.3	1.8
<b>HU</b>	:	:	1.5	1.3	4.6	4.9	4.2	5.2	3.7	3.5	2.9
<b>MT</b>	4.5	5.7	6.2	4.0	4.9	3.4	4.1	4.8	-0.4	1.7	0.4
<b>NL</b>	0.9	2.6	3.0	3.0	3.8	4.3	4.0	3.3	1.3	0.2	-0.8
<b>AT</b>	0.4	2.6	1.6	2.0	1.6	3.9	2.7	3.5	0.7	1.4	0.7
<b>PL</b>	:	:	:	6.0	6.8	4.8	4.1	4.0	1.1	1.4	3.7
<b>PT</b>	-2.0	1.0	4.3	3.5	3.9	4.5	3.5	3.5	1.7	0.4	-1.3
<b>SI</b>	2.8	5.3	4.1	3.5	4.6	3.8	5.2	4.6	3.0	2.9	2.3
<b>SK</b>	:	5.2	6.5	5.8	5.6	4.0	1.3	2.2	3.3	4.4	4.2
<b>FI</b>	-1.1	4.0	3.8	4.0	6.3	5.3	4.1	6.1	0.7	2.3	1.9
<b>SE</b>	-1.8	4.1	3.7	1.1	2.1	3.6	4.5	3.6	1.2	2.1	1.6
<b>UK</b>	2.5	4.7	2.9	2.6	3.4	2.9	2.4	3.1	2.0	1.6	2.2
<b>BG</b>	-1.5	1.8	2.9	-9.4	-5.6	4.0	2.3	5.4	4.0	4.8	4.3
<b>RO</b>	1.5	3.9	7.1	3.9	-6.1	-4.8	-1.2	1.8	5.3	4.9	4.9
<b>TR</b>	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
<b>Total (A to Q)</b>	-0.3	2.5	2.4	1.7	2.5	3.0	2.7	3.7	1.8	1.1
<b>Agriculture, hunting, forestry and fishing (A &amp; B)</b>	-0.6	-0.5	2.2	4.1	0.5	1.7	2.6	-0.9	-2.0	-0.1
<b>Mining &amp; quarrying; manufacturing; electricity, gas &amp; water supply (C to E)</b>	-3.5	4.3	3.1	0.0	3.0	3.0	1.1	3.8	0.6	0.4
<b>Construction (F)</b>	-4.1	2.2	0.0	-1.1	-1.3	0.8	2.4	2.3	-0.1	0.1
<b>Distributive trades; hotels &amp; restaurants; transport, storage &amp; comm. (G to I)</b>	0.1	2.7	2.2	1.6	3.4	4.0	4.6	4.9	2.8	1.5
<b>Financial intermediation; real estate, renting &amp; business activities (J &amp; K)</b>	1.9	1.9	3.5	3.7	3.7	4.1	3.7	4.6	3.0	2.0
<b>Public administration, community, social &amp; personal services (L to Q)</b>	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
<b>EU-15</b>	8.3	8.5	8.9	7.5	6.3	4.9	4.7	5.4	5.0	4.9	4.2
<b>BE</b>	7.2	7.8	7.5	6.5	5.8	4.8	4.8	5.6	5.1	5.0	4.2
<b>DK</b>	7.3	7.8	8.3	7.2	6.3	4.9	4.9	5.6	5.1	5.1	4.3
<b>DE</b>	6.5	6.9	6.9	6.2	5.6	4.6	4.5	5.3	4.8	4.8	4.1
<b>EL</b>	23.3	20.7	17.0	14.5	9.9	8.5	6.3	6.1	5.3	5.1	4.3
<b>ES</b>	10.2	10.0	11.3	8.7	6.4	4.8	4.7	5.5	5.1	5.0	4.1
<b>FR</b>	6.8	7.2	7.5	6.3	5.6	4.6	4.6	5.4	4.9	4.9	4.1
<b>IE</b>	7.7	7.9	8.3	7.3	6.3	4.8	4.7	5.5	5.0	5.0	4.1
<b>IT</b>	11.2	10.5	12.2	9.4	6.9	4.9	4.7	5.6	5.2	5.0	4.3
<b>LU</b>	6.9	7.2	7.2	6.3	5.6	4.7	4.7	5.5	4.9	4.7	3.3
<b>NL</b>	6.4	6.9	6.9	6.2	5.6	4.6	4.6	5.4	5.0	4.9	4.1
<b>AT</b>	6.7	7.0	7.1	6.3	5.7	4.7	4.7	5.6	5.1	5.0	4.2
<b>PT</b>	11.2	10.5	11.5	8.6	6.4	4.9	4.8	5.6	5.2	5.0	4.2
<b>FI</b>	8.8	9.1	8.8	7.1	6.0	4.8	4.7	5.5	5.0	5.0	4.1
<b>SE</b>	8.5	9.7	10.2	8.0	6.6	5.0	5.0	5.4	5.1	5.3	4.6
<b>UK</b>	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
<b>EU-15</b>	3.4	2.8	2.8	2.4	1.7	1.3	1.2	2.1	2.2	2.1	2.0
<b>BE</b>	2.5	2.4	1.3	1.8	1.5	0.9	1.1	2.7	2.4	1.6	1.5
<b>CZ</b>	:	:	:	9.1	8.0	9.7	1.8	3.9	4.5	1.4	-0.1
<b>DK</b>	0.9	1.8	2.0	2.1	1.9	1.3	2.1	2.7	2.3	2.4	2.0
<b>DE</b>	:	:	:	1.2	1.5	0.6	0.6	2.1	1.9	1.3	1.0
<b>EE</b>	:	:	:	19.8	9.3	8.8	3.1	3.9	5.6	3.6	1.4
<b>EL</b>	:	:	:	7.9	5.4	4.5	2.1	2.9	3.7	3.9	3.4
<b>ES</b>	4.9	4.6	4.6	3.6	1.9	1.8	2.2	3.5	2.8	3.6	3.1
<b>FR</b>	2.2	1.7	1.8	2.1	1.3	0.7	0.6	1.8	1.8	1.9	2.2
<b>IE</b>	:	:	:	2.2	1.2	2.1	2.5	5.3	4.0	4.7	4.0
<b>IT</b>	4.5	4.2	5.4	4.0	1.9	2.0	1.7	2.6	2.3	2.6	2.8
<b>CY</b>	:	:	:	:	3.3	2.3	1.1	4.9	2.0	2.8	4.0
<b>LV</b>	:	:	:	:	8.1	4.3	2.1	2.6	2.5	2.0	2.9
<b>LT</b>	:	:	:	24.7	8.8	5.0	0.7	0.9	1.3	0.4	-1.1
<b>LU</b>	:	:	:	1.2	1.4	1.0	1.0	3.8	2.4	2.1	2.5
<b>HU</b>	:	:	:	23.5	18.5	14.2	10.0	10.0	9.1	5.2	4.7
<b>MT</b>	:	:	:	:	:	:	:	:	:	:	:
<b>NL</b>	1.6	2.1	1.4	1.4	1.9	1.8	2.0	2.3	5.1	3.9	2.2
<b>AT</b>	3.2	2.7	1.6	1.8	1.2	0.8	0.5	2.0	2.3	1.7	1.3
<b>PL</b>	:	:	:	:	15.0	11.8	7.2	10.1	5.3	1.9	0.7
<b>PT</b>	5.9	5.0	4.0	2.9	1.9	2.2	2.2	2.8	4.4	3.7	3.3
<b>SI</b>	:	:	:	9.9	8.3	7.9	6.1	8.9	8.6	7.5	5.7
<b>SK</b>	:	:	:	5.8	6.0	6.7	10.4	12.2	7.2	3.5	8.5
<b>FI</b>	3.3	1.6	0.4	1.1	1.2	1.4	1.3	3.0	2.7	2.0	1.3
<b>SE</b>	4.8	2.9	2.7	0.8	1.8	1.0	0.6	1.3	2.7	2.0	2.3
<b>UK</b>	2.5	2.0	2.7	2.5	1.8	1.6	1.3	0.8	1.2	1.3	1.4
<b>BG</b>	:	:	:	:	:	18.7	2.6	10.3	7.4	5.8	2.3
<b>RO</b>	:	:	:	38.8	154.9	59.1	45.8	45.7	34.5	22.5	15.3
<b>TR</b>	:	:	:	:	:	:	:	:	:	:	:

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

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

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
<b>EU-15</b>	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3
<b>BE</b>	1.2	1.2	1.2	1.3	1.3	1.4	1.4	1.5	1.6	1.6
<b>DK</b>	1.0	:	1.1	1.1	1.2	1.3	1.3	1.5	1.7	:
<b>DE</b>	1.6	1.5	1.4	1.5	1.6	1.6	1.7	1.7	1.8	1.7
<b>EL</b>	0.1	:	0.1	0.1	0.1	:	0.2	:	:	:
<b>ES</b>	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	:
<b>FR</b>	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
<b>IE</b>	0.8	0.9	1.0	0.9	0.9	0.9	0.9	0.8	0.8	:
<b>IT</b>	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.6	:
<b>LU</b>	:	:	:	:	:	:	:	1.6	:	:
<b>NL</b>	0.9	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	:
<b>AT</b>	0.8	:	:	:	:	1.1	:	:	:	:
<b>PT</b>	:	:	0.1	:	0.1	:	0.2	:	0.3	:
<b>FI</b>	1.4	1.5	1.4	1.7	1.8	2.0	2.2	2.4	2.4	2.5
<b>SE</b>	2.2	:	2.5	:	2.7	2.8	2.8	:	3.3	:
<b>UK</b>	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&amp;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
<b>EU-15</b>	-24.8	-3.6	-1.8	-14.5	-2.9	-2.7	-8.0	3.3	-10.1	-11.6	-11.1
<b>BE</b>	-28.8	-6.3	-9.1	-17.8	-2.9	-7.8	-8.6	1.9	-14.0	-11.9	-15.0
<b>CZ</b>	:	-7.2	2.9	-0.8	3.8	-8.7	-10.5	15.3	3.0	-0.5	2.8
<b>DK</b>	-9.5	12.5	5.4	-8.7	5.5	-0.8	-12.9	5.7	-1.7	-4.0	-6.4
<b>DE</b>	-31.6	-10.3	-6.5	-19.8	-7.4	-4.3	-13.4	-2.6	-16.2	-18.3	-16.8
<b>EE</b>	-4.1	8.1	7.2	-2.8	6.7	7.9	-7.5	3.5	9.7	13.5	11.2
<b>EL</b>	-6.0	-0.1	3.8	-2.4	3.6	4.3	1.3	8.8	4.3	3.1	-0.4
<b>ES</b>	-34.8	-8.7	-3.3	-14.4	-1.4	1.4	-3.1	3.2	-4.2	-5.7	-0.9
<b>FR</b>	-34.4	-3.3	-2.3	-17.5	-5.3	5.3	-2.2	11.8	-4.0	-9.2	-8.6
<b>IE</b>	-12.8	2.5	7.1	-1.1	3.3	3.2	5.0	9.8	-7.7	-7.2	-8.8
<b>IT</b>	-16.4	2.8	5.7	-12.5	1.0	-0.8	-2.8	11.8	-4.3	-3.5	-3.9
<b>CY</b>	:	:	:	:	:	:	:	:	0.3	1.9	1.3
<b>LV</b>	:	-23.1	-18.3	-18.8	-12.3	-15.7	-17.3	-9.0	-1.8	1.1	3.8
<b>LT</b>	:	-25.8	-6.9	-16.3	-17.8	-22.7	-26.0	-14.9	-7.6	-8.8	-10.2
<b>LU</b>	-25.0	-7.7	9.7	-22.0	4.2	6.7	-11.0	5.3	-15.5	-22.5	-16.9
<b>HU</b>	:	:	:	-2.1	4.3	0.8	-6.9	2.3	-4.3	-6.8	-6.4
<b>MT</b>	:	:	:	:	:	:	:	:	:	:	:
<b>NL</b>	-10.3	-0.9	1.5	-2.4	2.5	1.7	-0.4	4.1	-3.5	-4.8	-8.3
<b>AT</b>	-27.2	-7.5	-12.2	-23.9	-9.5	-8.6	-13.8	-2.8	-13.3	-15.8	-11.0
<b>PL</b>	:	:	:	:	:	-14.6	-20.0	-13.2	-21.8	-20.0	-13.2
<b>PT</b>	-24.8	-3.9	-3.9	-9.6	0.4	2.2	-4.3	2.1	-5.8	-12.0	-15.9
<b>SI</b>	:	:	:	-11.7	-0.1	-3.8	-8.5	7.0	-2.3	-4.6	-4.4
<b>SK</b>	2.8	4.5	1.6	2.7	1.6	6.4	-3.0	9.5	6.7	5.3	6.4
<b>FI</b>	-4.5	18.2	7.8	-11.3	11.2	2.0	-3.8	17.4	-6.8	-5.7	-5.8
<b>SE</b>	:	:	:	:	-0.9	3.1	-7.1	10.8	-18.7	-13.1	-6.8
<b>UK</b>	-10.9	1.8	2.6	-5.1	-1.4	-15.5	-14.3	-6.6	-15.6	-14.6	-17.2
<b>BG</b>	:	:	:	:	:	:	:	:	:	:	:
<b>RO</b>	:	:	:	:	:	:	:	:	:	:	:
<b>TR</b>	:	:	:	:	:	:	:	:	:	:	:

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

(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
<b>Number of persons employed (thousands)</b>															
<b>Total</b>	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
<b>Male</b>	43 914	839	1 289	558	9 087	171	753	3 537	5 182	423	4 640	83	237	322	40
<b>Female</b>	81 073	1 737	2 127	1 077	15 444	227	1 649	7 799	9 534	751	10 082	130	316	455	78
<b>Full-time and part-time work (% share of persons employed)</b>															
<b>Full-time</b>	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
<b>Part-time</b>	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
<b>Unemployment rate (% share of labour force aged 15-64) (2)</b>															
<b>Total</b>	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
<b>Male</b>	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
<b>Female</b>	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	
<b>Number of persons employed (thousands)</b>															
<b>Total</b>	2 633	105	4 687	2 612	8 001	3 298	633	1 435	1 502	2 606	18 910	1 833	4 565	:	
<b>Male</b>	1 032	28	1 581	978	3 026	1 192	252	556	557	871	6 681	804	1 873	:	
<b>Female</b>	1 600	77	3 106	1 634	4 975	2 107	381	879	945	1 735	12 229	1 028	2 693	:	
<b>Full-time and part-time work (% share of persons employed)</b>															
<b>Full-time</b>	96.9	92.4	64.9	:	92.9	94.9	95.9	98.4	88.5	84.1	79.3	98.1	98.2	:	
<b>Part-time</b>	3.1	7.6	35.1	:	7.1	5.1	4.1	1.6	11.5	15.9	20.7	1.9	1.8	:	
<b>Unemployment rate (% share of labour force aged 15-64) (2)</b>															
<b>Total</b>	5.6	:	3.7	4.2	20.2	4.8	18.7	8.6	10.5	5.0	5.1	18.3	8.8	:	
<b>Male</b>	6.1	:	3.8	3.7	19.6	4.1	18.7	7.0	10.7	5.4	5.6	19.0	9.1	:	
<b>Female</b>	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).

## 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<sup>(1)</sup>. 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<sup>(2)</sup>, 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*<sup>(3)</sup> 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.

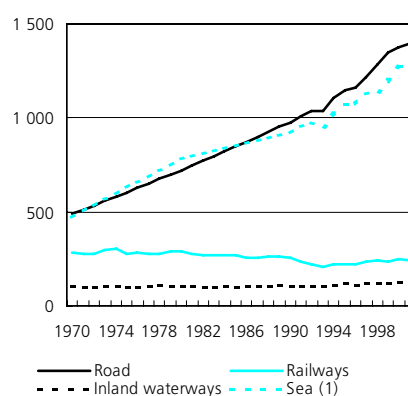
<sup>(1)</sup> Articles 70 to 80.

<sup>(2)</sup> 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](http://europa.eu.int/eur-lex/en/lif/ind/en_analytical_index_07.html).

<sup>(3)</sup> Available at: [http://europa.eu.int/comm/energy\\_transport/en/lb\\_en.html](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
<b>Road</b>					
<b>CZ (1)</b>	:	:	:	39.0	40.3
<b>EE</b>	2.4	4.2	4.5	3.9	4.7
<b>CY</b>	:	:	3.7	:	:
<b>LV</b>	2.9	5.1	5.9	4.8	5.4
<b>LT</b>	3.4	6.9	7.3	7.8	8.3
<b>HU</b>	5.8	11.4	15.2	19.1	18.5
<b>MT</b>	:	:	2.5	:	:
<b>PL</b>	15.8	44.6	40.3	72.8	74.4
<b>SI</b>	1.5	2.8	3.5	5.3	5.5
<b>SK (1)</b>	:	:	:	21.4	20.2
<b>Rail</b>					
<b>CZ (2)</b>	:	:	:	17.5	16.9
<b>EE</b>	5.7	6.5	7.0	8.1	8.6
<b>CY</b>	0.0	0.0	0.0	0.0	0.0
<b>LV</b>	15.5	17.6	18.5	13.3	14.2
<b>LT</b>	13.6	18.2	19.3	8.9	7.7
<b>HU</b>	19.8	24.4	16.8	8.1	7.7
<b>MT</b>	0.0	0.0	0.0	0.0	0.0
<b>PL</b>	98.0	132.4	81.6	54.0	47.7
<b>SI</b>	3.3	3.8	4.2	2.9	2.8
<b>SK (2)</b>	:	:	:	11.2	10.9
<b>Inland waterways</b>					
<b>CZ (3)</b>	:	:	:	0.8	0.6
<b>EE</b>	0.0	0.0	0.0	0.0	0.0
<b>CY</b>	0.0	0.0	0.0	0.0	0.0
<b>LV</b>	0.1	0.1	0.3	0.0	0.0
<b>LT</b>	0.1	0.2	0.2	0.0	0.0
<b>HU</b>	1.8	2.2	2.0	0.9	1.1
<b>MT</b>	0.0	0.0	0.0	0.0	0.0
<b>PL</b>	2.3	2.3	1.0	1.1	1.2
<b>SI</b>	0.0	0.0	0.0	0.0	0.0
<b>SK (3)</b>	:	:	:	1.4	1.0

(1) Czechoslovakia: 1970, 10.1; 1980, 21.3; 1990, 23.3.

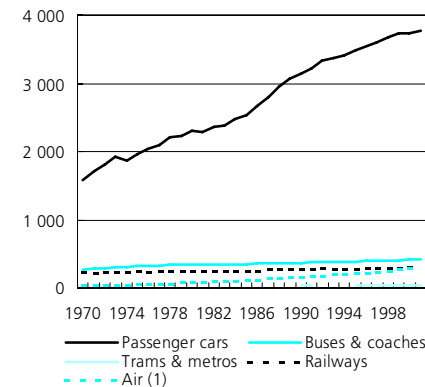
(2) Czechoslovakia: 1970, 55.9; 1980, 66.2; 1990, 59.4.

(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<sup>(4)</sup> (tkm) when combining road, rail, inland waterways and sea transport (excluding pipeline transport), corresponding to an

<sup>(4)</sup> 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<sup>(5)</sup> - 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<sup>(6)</sup> 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

<sup>(5)</sup> Excluding sea transport; Cyprus and Malta, road transport, not available.

<sup>(6)</sup> Including urban rail.

**Table 20.2**  
Evolution of land passenger transport in the new Member States (billion passenger-kilometres)

	1970	1980	1990	2000	2001
<b>Railways</b>					
<b>CZ (1)</b>	:	:	:	7.3	7.3
<b>EE</b>	1.2	1.6	1.5	0.3	0.2
<b>CY</b>	0.0	0.0	0.0	0.0	0.0
<b>LV</b>	3.8	4.8	5.4	0.7	0.7
<b>LT</b>	2.1	3.3	3.6	0.6	0.5
<b>HU</b>	15.2	13.7	11.4	9.7	10.0
<b>MT</b>	0.0	0.0	0.0	0.0	0.0
<b>PL</b>	36.9	46.3	50.4	19.7	18.2
<b>SI</b>	1.5	1.4	1.4	0.7	0.7
<b>SK (1)</b>	:	:	:	2.9	2.8
<b>Buses and coaches</b>					
<b>CZ (2)</b>	:	:	:	9.6	10.6
<b>EE</b>	2.6	3.7	4.5	2.6	2.5
<b>CY</b>	:	:	:	:	:
<b>LV</b>	3.3	4.6	5.9	2.3	2.3
<b>LT</b>	4.9	6.7	6.7	1.0	1.0
<b>HU</b>	7.4	11.9	10.5	12.1	12.0
<b>MT</b>	:	:	:	:	:
<b>PL (3)</b>	29.1	49.2	46.3	31.7	31.0
<b>SI</b>	2.6	4.9	6.6	1.6	1.5
<b>SK (2)</b>	:	:	:	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<sup>(7)</sup> - 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.

<sup>(7)</sup> 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
<b>Goods</b>		
Road	3.9	10.1
Sea (1)	3.8	9.2
Railways	2.3	1.8
Inland waterways	0.8	0.9
<b>Passengers</b>		
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<sup>(8)</sup>) 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.

<sup>(8)</sup> 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).

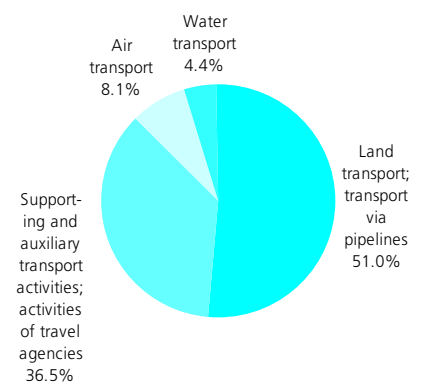
Malta was the country that was relatively most specialised in transport services within the EU-25<sup>(9)</sup> in 2001, probably due to the importance of tourism activities and the sizeable merchant fleet registered in this country (see Subchapter 20.3). In Malta and the Baltic States, the contribution 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<sup>(10)</sup>: 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.

<sup>(9)</sup> Germany and the Netherlands, 2000; Greece, Cyprus and Poland, not available.

<sup>(10)</sup> 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)
<b>EU-25</b>	16.9	22.6	18.6	18.9	:	:	:	:
<b>EU-15</b>	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 <sup>(11)</sup> 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 <sup>(12)</sup> 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 <sup>(13)</sup> were in Cyprus (12.6 %) and Denmark (11.2 %).

<sup>(11)</sup> Greece, Poland and Slovenia, not available.<sup>(12)</sup> The Czech Republic, Estonia, Greece, Ireland, Poland, Slovenia and Slovakia, not available.<sup>(13)</sup> 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 <sup>(14)</sup> 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 <sup>(15)</sup> in 2002 worked on a full-time basis, compared with a services' average of 81.7 %.

<sup>(14)</sup> Poland, not available.<sup>(15)</sup> 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 <sup>(16)</sup> (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 <sup>(17)</sup> 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.

<sup>(16)</sup> Slovenia, 2000; Cyprus, not available.

<sup>(17)</sup> 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)
<b>EU-25</b>	:	:	:	:	:	:
<b>EU-15</b>	79.1	140.4	91.0	113.6	85.5	105.8
<b>BE</b>	85.9	145.1	93.0	113.8	93.5	120.6
<b>CZ</b>	79.4	149.7	98.8	104.9	85.4	113.3
<b>DK</b>	77.0	129.2	91.5	115.5	91.3	104.1
<b>DE</b>	75.1	146.5	89.0	118.7	90.7	106.9
<b>EE</b>	75.1	144.8	98.2	103.7	92.1	100.6
<b>EL</b>	86.4	140.6	98.5	102.2	66.5	114.9
<b>ES</b>	85.1	147.5	96.4	105.9	71.0	95.5
<b>FR</b>	78.1	137.4	92.7	109.3	94.5	106.4
<b>IE</b>	75.9	143.3	89.6	113.0	75.8	89.9
<b>IT</b>	83.5	134.9	96.3	106.7	76.6	127.5
<b>CY</b>	63.1	119.3	96.9	104.1	80.4	106.3
<b>LV</b>	74.4	160.2	96.6	104.0	95.0	103.7
<b>LT</b>	77.8	148.8	95.0	103.9	93.2	111.0
<b>LU</b>	87.6	155.9	97.2	109.9	97.1	108.0
<b>HU</b>	80.3	149.4	98.9	103.1	86.4	107.1
<b>MT</b>	86.5	124.5	94.8	107.4	80.6	99.7
<b>NL</b>	75.2	128.2	71.7	123.7	92.8	105.7
<b>AT</b>	77.1	156.0	:	:	91.4	105.2
<b>PL</b>	:	:	:	:	:	:
<b>PT</b>	83.4	149.5	96.8	104.5	85.0	120.3
<b>SI</b>	82.0	155.5	95.5	100.9	81.8	94.2
<b>SK</b>	79.5	153.1	99.5	101.6	92.6	107.7
<b>FI</b>	77.7	146.3	92.9	111.6	83.5	95.6
<b>SE</b>	75.3	127.1	87.4	110.4	86.6	101.3
<b>UK</b>	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)
<b>Transport services</b>	46.6	137.5	33.9
<b>Land transport; transport via pipelines</b>	38.2	122.3	31.3
<b>Water transport</b>	91.6	231.8	39.5
<b>Air transport</b>	64.6	118.1	54.7
<b>Supporting and auxiliary transport activities; activities of travel agencies</b>	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 <sup>(18)</sup> 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.

<sup>(18)</sup> Available at: [http://europa.eu.int/comm/energy\\_transport/en/lb\\_en.html](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)
<b>EU-25 (1)</b>	197.3	49.8	1 046.3	339.9	354.6
<b>BE</b>	3.5	83.4	42.5	8.3	8.4
<b>CZ</b>	9.5	30.8	81.8	6.6	17.0
<b>DK</b>	2.0	30.5	11.9	5.5	1.9
<b>DE (2)</b>	35.9	53.7	162.6	69.3	72.7
<b>EE</b>	1.0	13.5	4.5	0.2	9.3
<b>EL</b>	2.4	3.4	9.1	1.8	0.3
<b>ES</b>	13.9	54.6	36.0	20.7	13.8
<b>FR</b>	29.4	49.3	178.0	73.2	50.0
<b>IE</b>	1.9	2.7	6.0	1.6	0.4
<b>IT</b>	16.3	68.0	104.9	47.2	23.4
<b>CY (1)</b>	-	-	-	-	-
<b>LV</b>	2.3	11.3	14.7	0.7	15.0
<b>LT</b>	1.8	6.9	13.1	0.5	9.8
<b>LU</b>	0.3	95.3	3.2	0.3	0.6
<b>HU</b>	8.0	35.2	55.1	7.5	7.0
<b>MT (1)</b>	-	-	-	-	-
<b>NL</b>	2.8	73.4	25.5	14.3	3.7
<b>AT</b>	5.7	57.7	47.4	8.4	17.6
<b>PL</b>	20.2	59.4	143.3	17.3	46.6
<b>PT</b>	2.9	37.0	10.5	3.7	2.6
<b>SI</b>	1.2	41.0	8.9	0.7	2.8
<b>SK</b>	3.7	42.5	43.6	2.7	10.4
<b>FI</b>	5.9	41.0	11.8	3.3	9.7
<b>SE (3)</b>	9.9	76.8	10.3	5.9	12.0
<b>UK (4)</b>	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
<b>BE</b>	0.0	0.0	0.9	0.9	0.9
<b>DE</b>	0.0	8.7	13.9	15.5	15.3
<b>ES</b>	-	1.2	2.2	2.4	2.5
<b>FR</b>	14.9	21.4	34.7	37.4	39.9
<b>IT</b>	0.3	1.1	5.1	6.8	7.5
<b>NL</b>	0.0	0.0	0.1	0.1	0.1
<b>FI</b>	0.0	0.0	0.1	0.1	0.1
<b>SE</b>	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 <sup>(19)</sup> 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 <sup>(20)</sup> 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.

<sup>(19)</sup> Transport by road, rail, inland-waterways and sea.

<sup>(20)</sup> 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 <sup>(21)</sup>. 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.

<sup>(21)</sup> 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 <sup>(22)</sup> covering numerous aspects, including market access, fiscal and technical harmonisation, social legislation, safety and environment.

<sup>(22)</sup> 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](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 <sup>(23)</sup> 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 <sup>(24)</sup> 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 % <sup>(25)</sup>. 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 <sup>(26)</sup>.

<sup>(23)</sup> 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.

<sup>(24)</sup> Denmark and Latvia, 1999; Germany, Hungary and the Netherlands, 2000; Estonia, Greece, Ireland, Cyprus, and Poland, not available.

<sup>(25)</sup> Denmark and Latvia, 1999; Germany and Hungary, 2000; Estonia, Greece, Ireland and Poland, not available.

<sup>(26)</sup> 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).

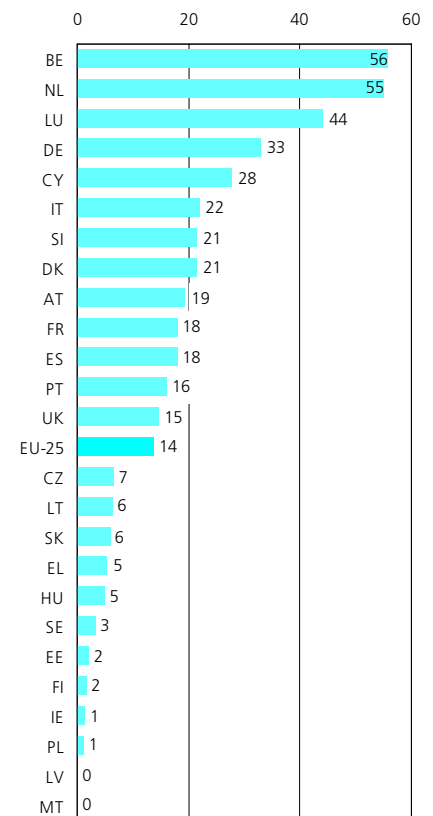
Road transport services could count on an estimated 4.7 million km of roads in the EU-25 in 2000, of which 0.9 million km were situated in the new Member States. As such, average road density was similar in the EU-15 and the new Member States, both in comparison to surface area and population. However, 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 km<sup>2</sup>), Finland (1.6 km/1 000 km<sup>2</sup>) and Ireland (1.5 km/1 000 km<sup>2</sup>) 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 km<sup>2</sup>), 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
<b>Passenger cars</b>	62.5	103.9	143.2	161.0	180.6	184.7
<b>Buses and coaches</b>	0.3	0.4	0.5	0.5	0.5	0.5
<b>Freight vehicles</b>	7.5	10.6	17.4	19.8	23.7	24.7
<b>Powered two-wheelers</b>	:	:	:	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 km<sup>2</sup>)



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
<b>Passenger cars</b>					
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
<b>Buses and coaches</b>					
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
<b>Freight vehicles</b>					
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
<b>EU-15</b>	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 %).

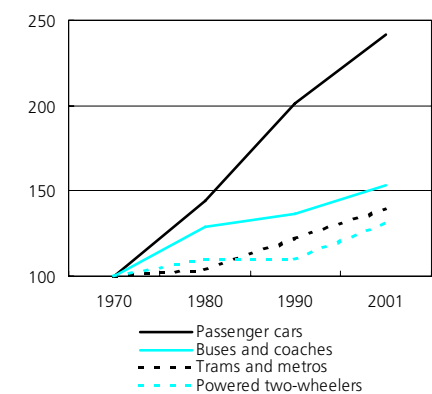
Personal cars were the preferred mode of transport for passengers in the EU-15 in 2001, with total traffic of 3.8 billion passenger-km (pkm), representing as much as 80.4 % of total land passenger transport (27). The dominance of cars was somewhat eroded by buses and railways in Austria and by powered 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)
<b>Other land transport</b>	35.5	123.3	28.8
<b>Freight transport by road</b>	38.3	132.2	29.0
<b>Other scheduled passenger land transport; taxi operation; other land passenger transport</b>	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 <sup>(28)</sup>. 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 <sup>(29)</sup>. Only six countries <sup>(30)</sup> 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 <sup>(31)</sup> 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 <sup>(32)</sup>, a share that rose to 19.2 % in road freight transport <sup>(33)</sup>. 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.

<sup>(28)</sup> Estonia and Poland, NACE Class 60.24 only; Hungary, 2000; Latvia, 1999; Slovenia, number of employees.

<sup>(29)</sup> Slovenia, number of employees.

<sup>(30)</sup> Denmark and Latvia, 1999; Germany and Hungary, 2000; Slovenia, number of employees; Estonia, Greece, Ireland and Poland, not available.

<sup>(31)</sup> Denmark and Latvia, 1999; Germany and Hungary, 2000; Slovenia, number of employees; Estonia, Greece, Ireland, Cyprus and Poland, not available.

<sup>(32)</sup> Hungary, 2000; Latvia, 1999; Estonia, Poland and Slovenia, not available.

<sup>(33)</sup> 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 <sup>(34)</sup>, 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.

<sup>(34)</sup> 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 <sup>(35)</sup> 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 <sup>(36)</sup>. 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.

<sup>(35)</sup> Cyprus, 2000; Poland, for NACE Group 61.1 only; Slovenia, 1999; Slovakia, 1999 for NACE Group 61.2 only.

<sup>(36)</sup> 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 <sup>(37)</sup>. 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 %).

<sup>(37)</sup> 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)
<b>Total fleet controlled</b>	8 965	264.5
<b>National flag</b>	3 297	88.0
<b>Foreign flag</b>	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<sup>(38)</sup> in 2000, ahead of Hamburg (Germany, 4.7 million TEU) and Antwerp (Belgium, 4.2 million).

<sup>(38)</sup> 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<sup>(39)</sup>, 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<sup>(40)</sup>, 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.

<sup>(39)</sup> The Czech Republic, 2000; Estonia and Slovenia, number of employees, 1999; Poland and Slovakia, number of employees for NACE Group 61.1 only.

<sup>(40)</sup> 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 %) <sup>(41)</sup>.

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 <sup>(42)</sup> 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.

<sup>(41)</sup> Belgium, the Czech Republic, Germany, Greece, Spain, Cyprus, Luxembourg, Hungary, Malta, the Netherlands and Finland, not available.

<sup>(42)</sup> 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)
<b>EU-25</b>	:	:	:	:	:	:
<b>EU-15</b>	80.2	142.3	94.7	118.2	95.4	118.0
<b>BE</b>	100.0	168.8	100.0	122.3	100.0	128.9
<b>CZ</b>	88.5	166.8	100.0	106.2	100.0	132.8
<b>DK</b>	69.8	117.0	82.3	103.9	100.0	114.0
<b>DE</b>	82.6	161.2	94.8	126.4	93.1	109.7
<b>EE</b>	85.3	164.5	100.0	105.6	100.0	109.3
<b>EL</b>	93.6	152.5	100.0	103.8	99.0	171.1
<b>ES</b>	77.7	134.6	96.7	106.3	96.0	129.0
<b>FR</b>	71.0	124.9	95.6	112.7	94.7	106.7
<b>IE</b>	:	:	87.0	109.7	97.1	115.2
<b>IT</b>	83.9	135.6	97.4	107.8	91.7	152.6
<b>CY</b>	38.3	72.3	100.0	107.5	100.0	132.3
<b>LV</b>	95.6	205.8	96.1	103.4	89.1	97.3
<b>LT</b>	:	:	:	:	:	:
<b>LU</b>	:	:	:	:	:	:
<b>HU</b>	:	:	:	:	:	:
<b>MT</b>	100.0	144.0	100.0	113.3	100.0	123.7
<b>NL</b>	80.9	137.9	78.4	135.2	89.3	101.7
<b>AT</b>	:	:	:	:	:	:
<b>PL</b>	:	:	:	:	:	:
<b>PT</b>	:	:	:	:	:	:
<b>SI</b>	85.2	161.5	100.0	105.7	100.0	115.2
<b>SK</b>	:	:	:	:	:	:
<b>FI</b>	59.0	111.1	94.6	113.6	96.9	111.0
<b>SE</b>	68.8	116.1	89.7	113.2	98.7	115.5
<b>UK</b>	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)
<b>Water transport</b>	91.6	231.8	39.5
<b>Sea and coastal water transport</b>	111.0	:	:
<b>Inland water transport</b>	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<sup>(43)</sup> 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<sup>(44)</sup>. 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)<sup>(45)</sup>, 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.

<sup>(45)</sup> 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).

<sup>(43)</sup> Cyprus, 2000; Poland, not available; Slovakia, 1999.

<sup>(44)</sup> 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)
<b>Total scheduled</b>	1.2	1.4	-0.2
<b>Domestic</b>	1.6	-1.4	2.0
<b>Total international</b>	1.2	1.7	-0.4
<b>Total long haul</b>	1.0	2.0	-0.7
<b>Geographical Europe (2)</b>	1.5	1.4	0.1
<b>North Atlantic</b>	4.0	4.4	-0.3
<b>Mid Atlantic</b>	4.9	4.3	0.4
<b>South Atlantic</b>	5.4	-2.9	6.4
<b>North Africa</b>	6.8	12.2	-3.3
<b>Sub Saharan Africa</b>	3.1	3.8	-0.5
<b>Middle East</b>	-0.5	-3.1	1.8
<b>Far East - Australasia</b>	-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)
<b>SN Brussels Airlines</b>	BE	2 606	:	2 606	48.1	60.8	45.3
<b>CSA Czech Airlines</b>	CZ	4 184	4.5	3 841	70.6	58.9	64.7
<b>SAS</b>	DK	24 579	5.5	24 170	70.9	40.6	63.5
<b>Lufthansa</b>	DE	93 757	2.5	93 643	77.1	19.7	66.5
<b>Olympic Airways</b>	EL	7 735	-8.4	7 548	66.1	48.4	63.0
<b>Iberia</b>	ES	40 464	-2.3	40 464	73.1	22.9	66.6
<b>Spanair</b>	ES	8 690	-14.1	4 265	60.9	20.8	56.0
<b>Air France</b>	FR	98 541	2.8	98 508	76.1	12.2	65.0
<b>Alitalia</b>	IT	29 836	-17.8	29 618	71.0	25.3	67.7
<b>Meridiana</b>	IT	2 311	6.0	2 248	62.7	16.1	57.0
<b>Cyprus Airways</b>	CY	3 307	9.6	3 275	73.1	96.4	74.4
<b>Luxair</b>	LU	1 094	3.1	578	53.5	100.0	53.5
<b>Malev</b>	HU	3 461	-0.1	3 076	63.0	63.0	59.4
<b>Air Malta</b>	MT	2 746	-4.2	2 305	69.2	97.4	69.9
<b>KLM</b>	NL	59 190	0.3	59 181	80.2	18.3	74.4
<b>Austrian Airlines</b>	AT	17 981	6.3	13 794	70.5	31.7	60.7
<b>LOT Polish Airlines</b>	PL	5 923	1.7	5 166	69.4	36.2	54.9
<b>TAP Air Portugal</b>	PT	11 266	8.9	11 257	69.5	38.4	63.9
<b>Adria Airways</b>	SI	794	0.5	678	56.2	100.0	56.2
<b>Finnair</b>	FI	13 064	0.8	8 462	65.4	45.0	58.4
<b>British Airways</b>	UK	99 710	-4.1	99 123	72.8	15.4	67.5
<b>bmi</b>	UK	5 681	14.6	5 303	63.3	47.0	62.6
<b>Virgin Atlantic</b>	UK	27 174	-4.4	27 174	81.1	0.0	:
<b>Total</b>		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 <sup>(46)</sup> 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.

<sup>(46)</sup> 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
<b>London Heathrow</b>	UK	15.6	27.5	43.0	64.6	63.3
<b>Frankfurt Rhein-Main</b>	DE	9.4	17.6	29.4	49.4	48.5
<b>Paris Ch. de Gaulle</b>	FR	2.2	10.1	22.5	48.2	48.4
<b>Amsterdam Schiphol</b>	NL	5.2	9.4	16.5	39.6	40.7
<b>Madrid Barajas</b>	ES	4.8	10.1	16.2	32.9	33.9
<b>London Gatwick</b>	UK	3.7	9.7	21.2	32.1	29.6
<b>Roma Fiumicino</b>	IT	6.5	11.4	17.7	26.3	25.3
<b>Paris Orly</b>	FR	10.4	15.7	24.3	25.4	23.2
<b>München F.J. Strauss</b>	DE	3.6	6.0	11.4	23.1	23.2
<b>Barcelona Transoceanico</b>	ES	4.0	5.8	9.0	19.8	21.3
<b>Manchester Ringway Intl</b>	UK	1.9	4.3	10.1	18.8	19.0
<b>København Kastrup</b>	DK	6.5	8.6	12.1	18.3	18.2
<b>Palma de Mallorca</b>	ES	4.8	7.3	11.3	19.4	17.8
<b>Milano Malpensa</b>	IT	:	:	:	20.7	17.4
<b>Stockholm Arlanda</b>	SE	2.6	4.3	14.0	18.4	16.5
<b>London Stansted</b>	UK	:	:	:	11.9	16.0
<b>Dublin Collinstown</b>	IE	1.9	2.6	5.5	13.8	15.1
<b>Düsseldorf Rhein-Ruhr</b>	DE	3.6	7.2	11.9	16.0	14.7
<b>Bruxelles National</b>	BE	2.8	5.1	7.1	21.6	14.4
<b>Wien Schwechat</b>	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
<b>Frankfurt Rhein-Main</b>	DE	1 297	1 710	1 495
<b>Paris Ch. de Gaulle</b>	FR	824	1 610	1 399
<b>Amsterdam Schiphol</b>	NL	978	1 267	1 240
<b>London Heathrow</b>	UK	1 043	1 402	1 235
<b>Luxembourg Findel</b>	LU	286	501	549
<b>Bruxelles National</b>	BE	427	687	510
<b>Köln/Bonn</b>	DE	276	442	495
<b>København Kastrup</b>	DK	310	419	374
<b>Liège Bierset</b>	BE	8	270	327
<b>Madrid Barajas</b>	ES	230	338	296
<b>Milano Malpensa</b>	IT	126	301	280
<b>London Gatwick</b>	UK	232	338	243
<b>East Midlands</b>	UK	83	194	220
<b>London Stansted</b>	UK	93	183	186
<b>München F.J. Strauss</b>	DE	65	148	144
<b>Roma Fiumicino</b>	IT	257	201	131
<b>Stockholm Arlanda</b>	SE	104	154	123
<b>Manchester Ringway Intl</b>	UK	51	122	117
<b>Wien Schwechat</b>	AT	93	135	114
<b>Paris Orly</b>	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 (%)
<b>Cimber Air</b>	DK	163	-22.8	287	-22.1	56.9
<b>Augsburg Airways</b>	DE	422	26.9	837	22.8	50.4
<b>Deutsche BA</b>	DE	1 462	-3.7	2 466	-8.0	59.3
<b>Eurowings</b>	DE	1 399	64.9	2 591	56.1	54.0
<b>Lufthansa CityLine</b>	DE	3 657	0.8	6 088	-2.0	60.1
<b>Aegean Airlines</b>	EL	1 036	70.0	1 608	59.7	64.5
<b>Air Nostrum</b>	ES	1 598	24.3	2 635	19.6	60.6
<b>Binter Canarias</b>	ES	386	0.6	512	3.6	75.4
<b>Brit Air</b>	FR	1 925	5.1	3 095	3.1	62.2
<b>Régional</b>	FR	1 520	33.1	2 668	28.0	57.0
<b>Air Dolomiti</b>	IT	711	29.8	1 287	18.3	55.2
<b>airBaltic</b>	LV	173	8.2	309	1.5	55.9
<b>Air Lithuania</b>	LT	43	-1.0	80	-1.2	53.3
<b>Lithuanian Airlines</b>	LT	312	3.2	627	0.9	49.8
<b>KLM Cityhopper</b>	NL	1 415	2.5	2 025	8.2	69.9
<b>KLM exel</b>	NL	141	-16.4	136	-60.6	103.2
<b>Tyrolean Airways</b>	AT	1 335	-7.5	2 241	-6.2	59.6
<b>EuroLOT</b>	PL	238	24.6	500	15.9	47.7
<b>ATA Aerocondor</b>	PT	48	16.5	63	21.2	75.6
<b>PGA Portugalia</b>	PT	775	1.4	1 344	-3.8	57.7
<b>SATA Air Açores</b>	PT	78	0.9	121	1.0	64.2
<b>Air Botnia</b>	FI	332	30.1	670	15.8	49.6
<b>Malmö Aviation AB</b>	SE	396	15.7	766	22.2	51.7
<b>Skyways</b>	SE	425	-7.8	787	-7.8	54.1
<b>flybe.</b>	UK	1 216	19.7	1 887	3.3	64.5
<b>Total</b>		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 <sup>(47)</sup>, 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 <sup>(48)</sup>.

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 <sup>(49)</sup>. 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.

<sup>(47)</sup> Slovenia, number of employees; Estonia, number of employees, 1999; Slovakia, 1999; the Czech Republic and Poland, not available.

<sup>(48)</sup> Estonia, Latvia, Lithuania, Poland and Slovakia, not available.

<sup>(49)</sup> 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 <sup>(50)</sup>.

<sup>(50)</sup> 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)
<b>EU-25</b>	:	:	:	:	:	:
<b>EU-15</b>	63.2	112.3	87.4	109.1	98.7	122.1
<b>BE</b>	73.6	124.2	88.3	108.0	96.8	124.8
<b>CZ</b>	54.9	103.5	100.0	106.2	100.0	132.8
<b>DK</b>	74.9	125.7	99.3	125.3	100.0	114.0
<b>DE</b>	60.7	118.5	82.6	110.2	99.9	117.7
<b>EE</b>	:	:	:	:	:	:
<b>EL</b>	64.2	104.5	100.0	103.8	98.6	170.5
<b>ES</b>	63.5	110.0	95.5	104.9	99.7	134.1
<b>FR</b>	61.3	108.0	85.7	101.0	100.0	112.7
<b>IE</b>	49.1	92.7	89.7	113.2	99.6	118.2
<b>IT</b>	71.4	115.4	94.9	105.1	94.9	157.9
<b>CY</b>	48.3	91.4	98.0	105.3	100.0	132.3
<b>LV</b>	:	:	:	:	:	:
<b>LT</b>	:	:	:	:	:	:
<b>LU</b>	81.4	144.8	99.1	112.1	100.0	111.2
<b>HU</b>	67.0	124.6	97.1	101.2	97.3	120.6
<b>MT</b>	88.7	127.6	91.7	103.8	100.0	123.7
<b>NL</b>	63.2	107.7	66.3	114.4	99.1	113.0
<b>AT</b>	48.4	97.8	:	:	100.0	115.2
<b>PL</b>	:	:	:	:	:	:
<b>PT</b>	66.5	119.3	97.0	104.6	100.0	141.5
<b>SI</b>	81.4	154.4	73.5	77.7	100.0	115.2
<b>SK</b>	:	:	:	:	:	:
<b>FI</b>	52.6	98.9	98.3	118.1	100.0	114.6
<b>SE</b>	61.0	102.9	91.0	114.8	100.0	117.0
<b>UK</b>	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 <sup>(51)</sup>, 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 %.

<sup>(51)</sup> 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.

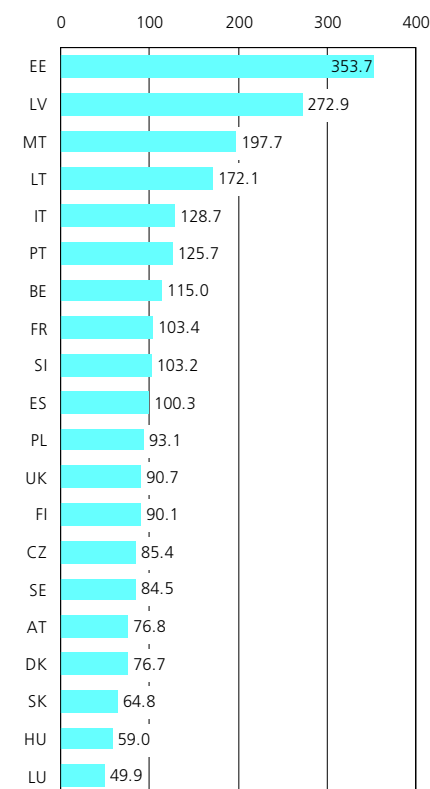
(2) Germany, Greece, Ireland, Cyprus and the Netherlands, not available.

(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 <sup>(52)</sup> 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 <sup>(53)</sup>. 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 <sup>(54)</sup>, some 26.2 percentage points above the average for non-financial services. Only Luxembourg and Hungary <sup>(55)</sup> reported lower wage adjusted labour productivity ratios for auxiliary transport activities compared with their national averages for non-financial services.

<sup>(52)</sup> Poland and Slovenia, number of employees.

<sup>(53)</sup> Slovenia, 2000; Cyprus, not available.

<sup>(54)</sup> Poland and Slovenia, not available.

<sup>(55)</sup> 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 <sup>(1)</sup>. 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).

<sup>(1)</sup> *Financial Services: Implementing the framework for financial markets: action plan*, COM(1999) 232.

More than five years after its publication, the 10<sup>th</sup> 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).

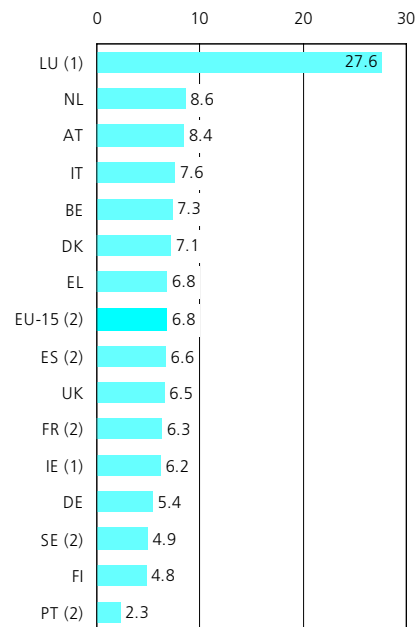
### NACE

- 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.

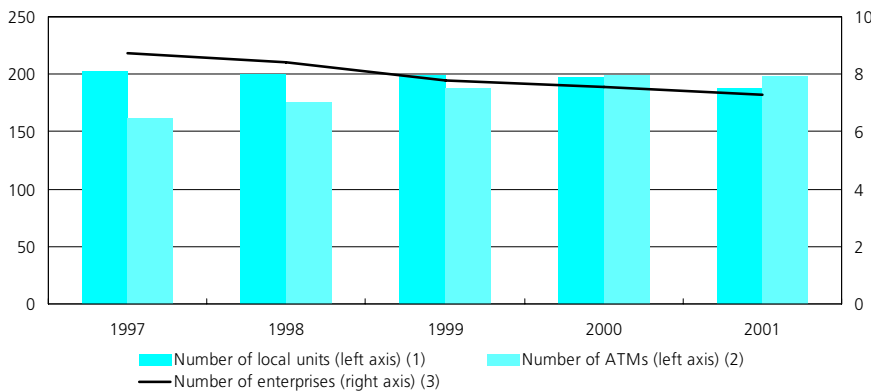
Europe's financial markets are often described as fragmented, and it is thought that the introduction of the euro may help to change this situation. Nevertheless, national patterns of banking have historically been quite different, as various forms of bank predominate, for example cooperative banks, 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).

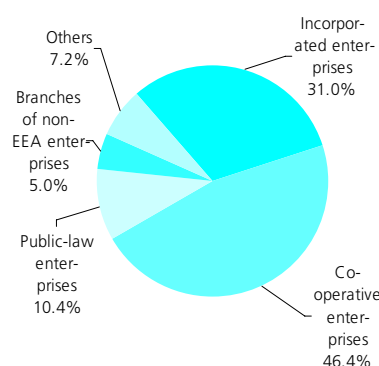
One of the most important regulatory changes is the likely introduction of Basel II, a regulatory framework designed to encourage best practice in risk management and minimum capital requirements in the banking sector. The Basel Committee is composed of central bank governors from a group of 10 countries (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.

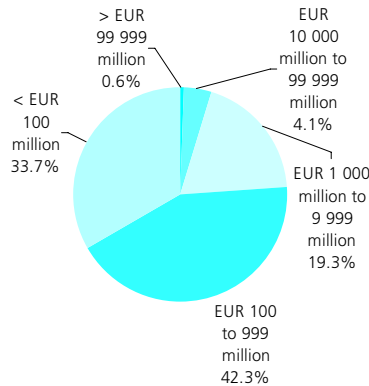
A breakdown of the number of financial intermediation enterprises according to the size of their balance sheets provides one way of studying concentration levels, as well as showing that the EU's largest banks tend to be located in Germany, the United Kingdom, France and the Netherlands. Data for 2001 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 <sup>(8)</sup>. 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.

<sup>(8)</sup> 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<sup>(9)</sup>, 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<sup>(10)</sup>, 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<sup>(11)</sup> were valued at EUR 4.8 billion, of which 78.0 % were UCITS, a share that remained fairly stable over the last decade.

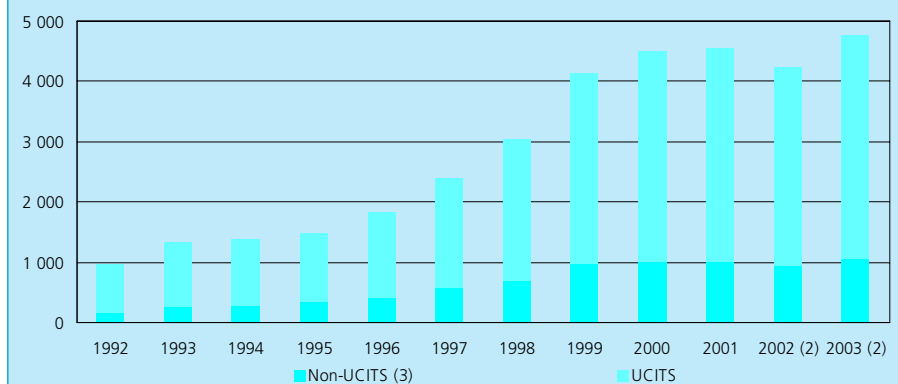
As well as the classification between open and closed-ended funds, a further distinction can be made between funds specialising in investments in bonds, equities and money markets, or balanced funds with a mix of these three types of investments. Figure 21.6 shows the change in the composition of the 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.

<sup>(9)</sup> Directive 2001/108/EC.

<sup>(10)</sup> Directive 2001/107/EC.

<sup>(11)</sup> EU-15, plus the Czech Republic, Hungary, Poland, Norway and Switzerland.

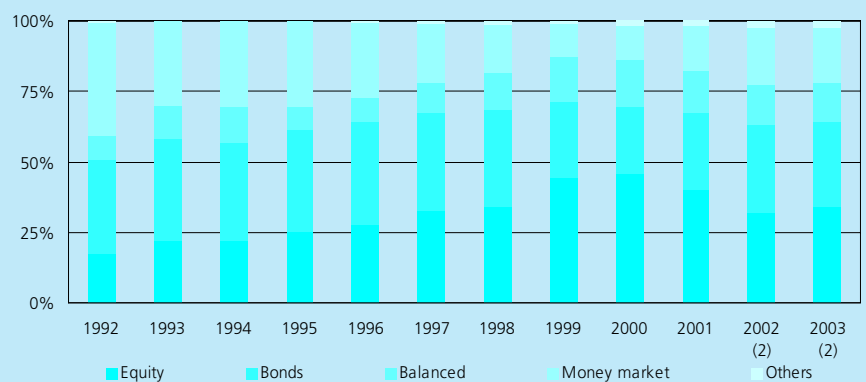
**Figure 21.5**  
**Net assets of the European investment funds industry, Europe (EUR million) (1)**



(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](http://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](http://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 (%)
<b>BE</b>	78 166	60.0	12.2	25.3	2.4	0.0
<b>CZ</b>	3 233	3.0	24.9	24.8	47.3	0.0
<b>DK</b>	39 219	27.9	71.0	1.1	0.0	0.0
<b>DE</b>	218 780	44.0	31.0	6.4	17.8	0.8
<b>EL</b>	30 399	16.0	21.5	10.6	51.9	0.0
<b>ES</b>	202 173	30.0	29.0	12.4	28.6	0.0
<b>FR</b>	909 300	23.5	18.0	22.4	36.1	0.0
<b>IE</b>	285 372	:	:	:	:	:
<b>IT</b>	379 044	19.7	39.7	15.2	25.4	0.0
<b>LU</b>	874 198	32.3	45.1	7.5	8.8	6.4
<b>HU</b>	3 116	9.4	67.3	2.1	21.3	0.0
<b>NL (1)</b>	80 300	39.1	18.2	11.1	1.4	30.3
<b>AT</b>	69 661	16.5	64.8	10.8	7.9	0.0
<b>PL</b>	6 790	7.8	50.6	24.3	17.3	0.0
<b>PT</b>	21 366	7.3	41.8	7.3	43.4	0.2
<b>FI</b>	23 727	36.6	15.1	13.0	35.2	0.0
<b>SE</b>	69 474	67.2	6.6	16.3	7.9	2.0
<b>UK</b>	313 953	74.5	16.9	7.8	0.8	0.0
<b>Total (2)</b>	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](http://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 <sup>(12)</sup> 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 <sup>(13)</sup>, 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.

<sup>(12)</sup> Estonia and Poland, not available.

<sup>(13)</sup> 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)
<b>EU-25</b>	:	:	:	:	:	:
<b>EU-15</b>	50.6	89.8	86.6	108.0	97.8	121.0
<b>BE</b>	52.5	88.6	83.6	102.3	93.2	120.2
<b>CZ</b>	38.8	73.1	97.6	103.7	89.3	118.6
<b>DK</b>	53.7	90.2	86.8	109.6	98.6	112.5
<b>DE</b>	44.1	86.0	81.8	109.1	97.7	115.2
<b>EE</b>	:	:	:	:	:	:
<b>EL</b>	49.1	79.9	99.2	103.0	99.8	172.6
<b>ES</b>	64.2	111.2	97.8	107.5	98.8	132.9
<b>FR</b>	48.2	84.8	90.1	106.2	99.5	112.1
<b>IE</b>	40.2	75.9	89.1	112.3	97.5	115.7
<b>IT</b>	64.7	104.6	93.6	103.7	94.4	157.1
<b>CY</b>	41.7	78.8	100.0	107.5	99.4	131.5
<b>LV</b>	:	:	100.0	107.6	100.0	109.2
<b>LT</b>	:	:	100.0	109.4	100.0	119.1
<b>LU</b>	53.2	94.7	92.1	104.2	100.0	111.2
<b>HU</b>	26.8	49.8	97.0	101.1	96.0	119.0
<b>MT</b>	37.2	53.6	96.5	109.3	100.0	123.7
<b>NL</b>	53.3	90.9	71.8	123.8	99.6	113.5
<b>AT</b>	44.5	90.0	:	:	99.3	114.4
<b>PL</b>	:	:	:	:	:	:
<b>PT</b>	56.3	100.8	94.8	102.3	100.0	141.5
<b>SI</b>	30.6	58.0	94.5	99.8	99.7	114.9
<b>SK</b>	28.4	54.7	100.0	102.1	96.2	111.9
<b>FI</b>	22.8	43.0	92.0	110.5	98.3	112.6
<b>SE</b>	44.2	74.6	89.0	112.4	99.2	116.1
<b>UK</b>	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 <sup>(14)</sup>. 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.

<sup>(14)</sup> 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 <sup>(15)</sup>, 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

<sup>(15)</sup> Directive 2002/83/EC of the European Parliament and of the Council concerning life assurance.

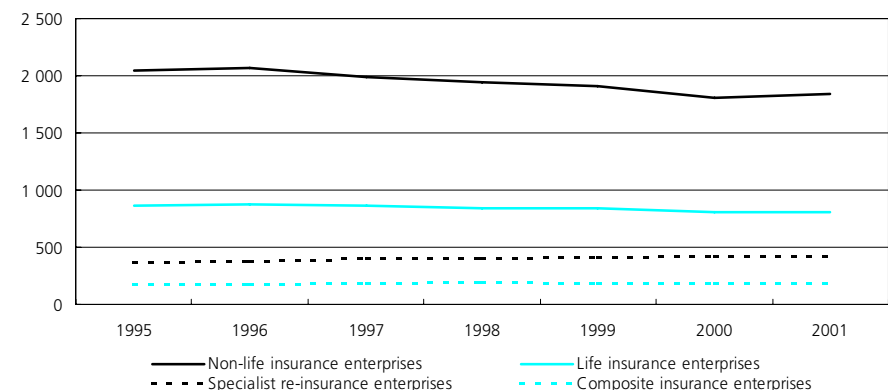
for non-life insurance, leading to the adoption of an amending directive on 29 June 1995 <sup>(16)</sup>. In relation to motor vehicle insurance (considered as part of the non-life market), there have been four directives, which aim to guarantee the free movement of vehicles within the EU such that all 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 <sup>(17)</sup> 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.

<sup>(16)</sup> Directive 95/26/EC of the European Parliament and of the Council.  
<sup>(17)</sup> 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 <sup>(18)</sup> - 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.

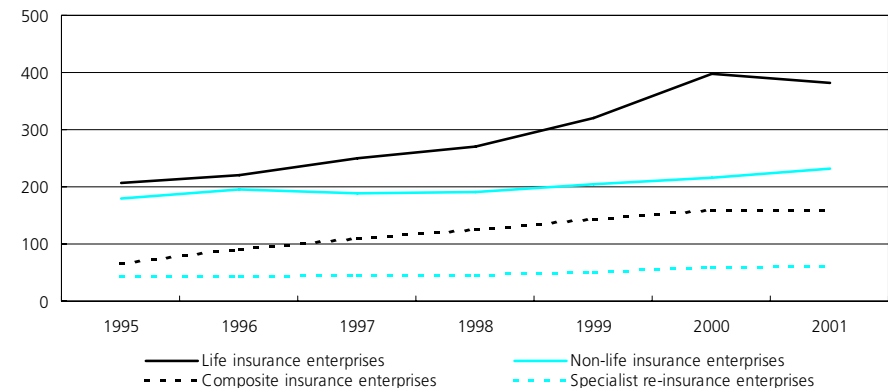
<sup>(18)</sup> All data in this section on insurance are for an EU-15 aggregate excluding Belgium, Greece and Ireland.

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 <sup>(19)</sup> 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
<b>EU-15</b>	:	:	:	:	:	:
<b>BE</b>	1 970	:	:	473	:	:
<b>DK</b>	6 614	7 326	8 145	1 623	1 902	1 838
<b>DE</b>	59 085	61 247	62 458	59 187	58 805	57 849
<b>EL</b>	:	:	:	:	:	:
<b>ES</b>	9 984	12 124	8 207	2 962	2 772	2 470
<b>FR</b>	34 082	38 840	:	:	:	:
<b>IE</b>	8 528	:	:	4 939	:	:
<b>IT</b>	26 219	28 843	37 580	3 339	3 294	3 432
<b>LU</b>	4 688	5 982	5 389	912	1 156	1 412
<b>NL</b>	21 193	23 022	25 814	8 000	9 200	9 400
<b>AT</b>	447	534	:	213	234	:
<b>PT</b>	2 140	2 582	3 039	850	863	884
<b>FI</b>	3 152	2 517	3 330	715	786	851
<b>SE</b>	10 843	14 843	13 000	4 600	3 900	4 100
<b>UK</b>	142 899	199 807	175 944	:	:	:

Source: Eurostat, Structural Business Statistics (theme4/sbs/statonis/serie\_5a).

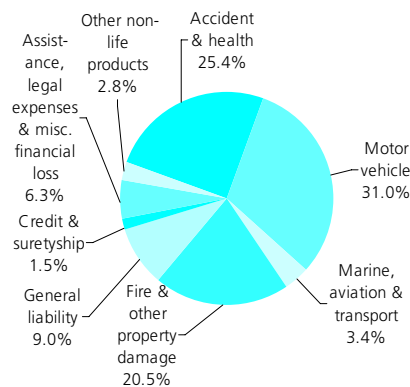
**Table 21.5**  
**Non-life insurance enterprises**  
**Main indicators**

	Gross premiums written (EUR million)			Number of persons employed (units)		
	1999	2000	2001	1999	2000	2001
<b>EU-15</b>	:	:	:	:	:	:
<b>BE</b>	3 832	4 057	4 578	6 234	:	7 223
<b>DK</b>	3 817	4 015	4 226	13 555	11 860	11 546
<b>DE</b>	73 853	76 203	79 128	160 398	159 735	158 320
<b>EL</b>	:	:	:	:	:	:
<b>ES</b>	6 472	7 927	8 981	14 604	17 181	18 253
<b>FR</b>	42 391	43 892	:	:	:	:
<b>IE</b>	3 376	:	:	4 222	:	:
<b>IT</b>	10 578	10 940	11 117	12 534	12 392	12 095
<b>LU</b>	647	742	831	870	948	890
<b>NL</b>	15 550	17 314	18 219	40 000	38 600	38 100
<b>AT</b>	1 718	1 742	:	4 967	1 211	:
<b>PT</b>	1 595	1 859	1 828	6 219	5 381	5 387
<b>FI</b>	2 416	1 493	2 671	7 485	8 589	10 401
<b>SE</b>	6 310	8 411	8 017	11 600	13 800	13 600
<b>UK</b>	38 456	42 365	50 611	:	:	:

Source: Eurostat, Structural Business Statistics (theme4/sbs/statonis/serie\_5a).

<sup>(19)</sup> 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 <sup>(20)</sup>. 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.

<sup>(20)</sup> 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 <sup>(21)</sup> was adopted on 3 June 2003 that provides a framework for the operation and

<sup>(21)</sup> 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 <sup>(22)</sup> 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 <sup>(23)</sup>, 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).

<sup>(22)</sup> Estonia, Latvia, Lithuania, Austria and Poland, not available.

<sup>(23)</sup> 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)
<b>EU-25</b>	:	:	:	:
<b>EU-15</b>	50.3	89.3	86.5	108.0
<b>BE</b>	50.3	84.8	77.0	94.2
<b>CZ</b>	50.1	94.5	94.3	100.1
<b>DK</b>	51.0	85.6	89.7	113.3
<b>DE</b>	54.6	106.6	84.4	112.5
<b>EE</b>	:	:	:	:
<b>EL</b>	53.2	86.7	96.9	100.6
<b>ES</b>	46.5	80.6	92.8	102.0
<b>FR</b>	38.7	68.1	86.3	101.7
<b>IE</b>	41.0	77.5	89.9	113.4
<b>IT</b>	57.6	93.1	90.8	100.5
<b>CY</b>	33.9	64.1	95.6	102.8
<b>LV</b>	:	:	:	:
<b>LT</b>	:	:	:	:
<b>LU</b>	53.9	96.0	81.5	92.1
<b>HU</b>	40.9	76.1	98.8	103.0
<b>MT</b>	62.9	90.5	74.7	84.7
<b>NL</b>	58.1	99.1	72.4	124.9
<b>AT</b>	57.6	116.5	:	:
<b>PL</b>	:	:	:	:
<b>PT</b>	45.2	81.0	95.7	103.2
<b>SI</b>	46.9	88.9	88.3	93.3
<b>SK</b>	42.4	81.6	100.0	102.1
<b>FI</b>	40.5	76.3	92.8	111.5
<b>SE</b>	38.8	65.6	92.2	116.3
<b>UK</b>	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 <sup>(24)</sup>, the Deutsche Börse, the Spanish exchanges (BME) (the exchanges of Barcelona, Bilbao, Madrid and Valencia) and the Italian exchange.

<sup>(24)</sup> 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
<b>Total</b>		<b>6 243 252</b>

(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
<b>Total</b>		<b>9 624</b>	<b>:</b>	<b>:</b>

(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
<b>Total</b>			<b>4 810 316</b>	<b>3 465 330</b>	<b>8 723 442</b>

(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 <sup>(25)</sup> 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.

<sup>(25)</sup> 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
<b>Copenhagen</b>	DK	22	23	27	28	36	46	63	65	100	69	52
<b>Deutsche Börse</b>	DE	21	27	28	28	38	50	70	73	100	67	57
<b>Athens</b>	EL	2	3	6	6	9	22	53	201	100	40	25
<b>Spain (2)</b>	ES	:	:	:	:	30	57	71	75	100	95	41
<b>Irish</b>	IE	-	-	-	-	82	120	277	331	100	158	231
<b>Italy</b>	IT	3	6	12	9	10	20	48	53	100	62	62
<b>Luxembourg</b>	LU	18	66	62	29	47	63	101	86	100	42	30
<b>Budapest</b>	HU	:	:	:	:	:	:	:	:	100	40	49
<b>Malta</b>	MT	-	-	-	70	6	11	188	28	100	25	25
<b>Euronext (3)</b>		10	14	17	20	27	41	60	73	100	115	108
<b>Vienna</b>	AT	53	76	91	139	111	132	194	132	100	80	63
<b>Warsaw</b>	PL	1	10	27	14	29	41	46	58	100	51	40
<b>Ljubljana</b>	SI	-	-	45	38	53	59	92	130	100	129	165
<b>Helsinki</b>	FI	1	4	6	9	11	17	29	53	100	87	86
<b>Stockholmsbörsen</b>	SE	6	9	18	19	28	36	47	65	100	79	58
<b>London</b>	UK	15	19	23	25	31	44	63	75	100	99	88
<b>Tokyo and Osaka</b>	JP	23	35	40	43	45	42	35	72	100	69	64
<b>Nasdaq</b>	US	5	7	7	12	17	23	28	53	100	55	37
<b>NYSE</b>	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](http://www.fibv.com)).

**Table 21.12**  
**Number of listed bonds, end 2003 (units)**

Exchange		Domestic public	Domestic non-public	International	Total
<b>Prague stock exchange</b>	CZ	14	20	13	47
<b>Copenhagen stock exchange</b>	DK	140	2 111	69	2 320
<b>Deutsche Börse</b>	DE	1 028	4 927	1 260	7 215
<b>Athens exchange</b>	EL	67	67	:	:
<b>Spanish exchanges (BME)</b>	ES	381	2 204	68	2 653
<b>Irish stock exchange</b>	IE	33	508	3 175	3 716
<b>Italian exchange</b>	IT	113	324	72	509
<b>Cyprus stock exchange</b>	CY	56	10	:	:
<b>Lithuanian stock exchange</b>	LT	37	:	:	:
<b>Luxembourg stock exchange</b>	LU	6	0	21 279	21 285
<b>Budapest stock exchange</b>	HU	24	40	1	65
<b>Malta stock exchange</b>	MT	39	27	:	:
<b>Euronext (1)</b>		:	:	:	:
<b>Wiener Börse</b>	AT	146	2 311	114	2 571
<b>Warsaw stock exchange</b>	PL	58	8	4	70
<b>Ljubljana stock exchange</b>	SI	39	53	:	:
<b>Bratislava stock exchange</b>	SK	40	28	2	70
<b>Helsinki exchanges</b>	FI	18	242	6	266
<b>Stockholmsbörsen</b>	SE	114	1 255	43	1 412
<b>London stock exchange</b>	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 <sup>(26)</sup> 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.

<sup>(26)</sup> 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)
<b>EU-25</b>	:	:	:	:	:	:
<b>EU-15</b>	56.5	100.3	85.9	107.2	81.4	100.8
<b>BE</b>	64.0	108.0	85.1	104.1	79.7	102.8
<b>CZ</b>	46.0	86.7	95.5	101.4	66.6	88.5
<b>DK</b>	:	:	:	:	:	:
<b>DE</b>	61.0	119.1	84.1	112.2	52.8	62.2
<b>EE</b>	:	:	:	:	:	:
<b>EL</b>	62.1	101.1	98.8	102.5	74.7	129.2
<b>ES</b>	51.9	89.9	90.8	99.8	60.0	80.6
<b>FR</b>	50.1	88.1	89.7	105.7	77.7	87.5
<b>IE</b>	48.7	91.9	91.7	115.6	82.1	97.4
<b>IT</b>	58.7	94.8	86.4	95.7	63.0	104.9
<b>CY</b>	55.3	104.6	92.5	99.4	42.3	55.9
<b>LV</b>	:	:	:	:	:	:
<b>LT</b>	:	:	:	:	:	:
<b>LU</b>	53.4	95.0	90.9	102.8	87.8	97.7
<b>HU</b>	:	:	86.2	89.8	79.6	98.7
<b>MT</b>	56.2	81.0	81.8	92.7	100.0	123.7
<b>NL</b>	57.8	98.5	66.1	114.1	83.1	94.6
<b>AT</b>	65.6	132.7	:	:	48.6	56.0
<b>PL</b>	:	:	:	:	:	:
<b>PT</b>	:	:	:	:	:	:
<b>SI</b>	:	:	94.2	99.5	100.0	115.2
<b>SK</b>	:	:	:	:	:	:
<b>FI</b>	:	:	100.0	120.1	93.4	107.0
<b>SE</b>	50.7	85.6	82.8	104.6	87.7	102.6
<b>UK</b>	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	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	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 <sup>(1)</sup>, 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 <sup>(2)</sup>. At the beginning of 2004, the European Commission proposed a directive to create a real internal market in services <sup>(3)</sup>. 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.

<sup>(1)</sup> *Enterprise Europe, Enterprise policy news and reviews*, published by the European Commission's Directorate-General for Enterprise; No°14 January-March 2004.

<sup>(2)</sup> *Report on competition in professional services*, European Commission, COM(2004) 83 final.

<sup>(3)</sup> 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](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 <sup>(4)</sup> (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 <sup>(5)</sup>, 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 <sup>(6)</sup>. 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 %).

<sup>(4)</sup> Cyprus and Malta (NACE Divisions 71 and 73), not available, Poland (NACE Division 73 only) and Slovakia, number of employees.

<sup>(5)</sup> Cyprus and Malta, not available.

<sup>(6)</sup> 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)

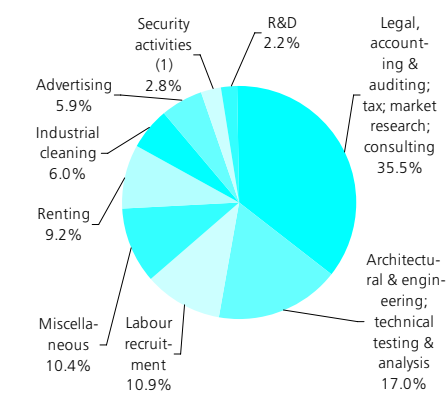
(1) Germany, Greece, Cyprus, Malta and the Netherlands, not available.

(2) Informa estimates.

(3) Greece, Cyprus, Malta, Poland and Slovenia, not available.

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

Figure 22.1

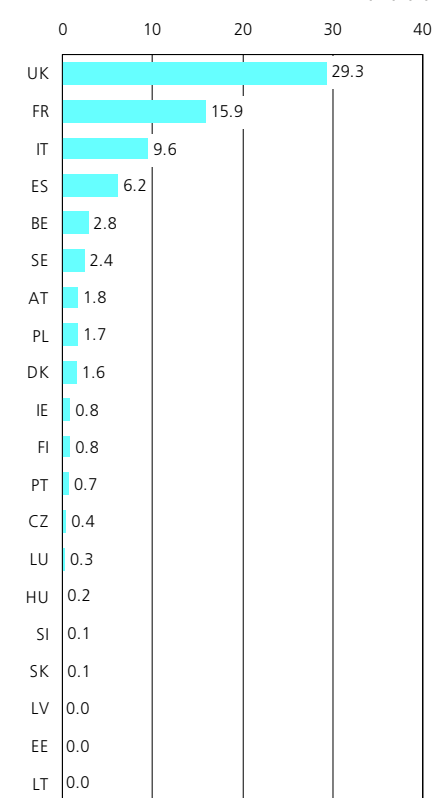
**Business services  
(NACE Divisions 71, 73 and 74)  
Share of value added at factor cost,  
EU-25, 2001**


(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
<b>EU-25</b>	29.4	29.1	20.8	17.6	18.9	16.6	31.0	36.8
<b>EU-15</b>	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
<b>Total</b>	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		
<b>Advertising</b>	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		
<b>Labour recruitment &amp; provision of personnel</b>	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		
<b>Investigation and security activities</b>	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				
<b>Industrial cleaning</b>	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)**

<b>BE</b> Personnel services Renting	<b>CZ</b> Advertising Architecture, engineering, technical testing	<b>DK</b> Industrial cleaning Architecture, engineering, technical testing
<b>DE</b> :	<b>EE</b> Advertising Architecture, engineering, technical testing	<b>EL</b> :
<b>ES</b> Industrial cleaning Advertising	<b>FR</b> Personnel services Renting	<b>IE</b> Legal, accountancy and management services Architecture, engineering, technical testing
<b>IT</b> Industrial cleaning Legal, accountancy and management services	<b>CY</b> :	<b>LV</b> Advertising Miscellaneous business activities
<b>LT</b> Architecture, engineering, technical testing Advertising	<b>LU</b> Legal, accountancy and management services Renting	<b>HU</b> Advertising Architecture, engineering, technical testing
<b>MT</b> Legal, accountancy and management services Miscellaneous business activities	<b>NL</b> Personnel services Renting	<b>AT</b> Renting Advertising
<b>PL</b> Advertising Miscellaneous business activities	<b>PT</b> Renting Advertising	<b>SI</b> Architecture, engineering, technical testing Industrial cleaning
<b>SK</b> Advertising Architecture, engineering, technical testing	<b>FI</b> Industrial cleaning Architecture, engineering, technical testing	<b>SE</b> Advertising Miscellaneous business activities
<b>UK</b> 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<sup>(7)</sup>. 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.

<sup>(7)</sup> 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)
<b>EU-25</b>	:	:	:	:	:	:
<b>EU-15</b>	52.6	93.3	78.2	97.6	77.4	95.8
<b>BE</b>	54.8	92.4	79.8	97.5	74.0	95.4
<b>CZ</b>	51.2	96.4	90.7	96.3	61.2	81.3
<b>DK</b>	52.3	87.7	80.5	101.6	78.1	89.0
<b>DE</b>	48.4	94.5	71.1	94.7	78.6	92.7
<b>EE</b>	56.6	109.2	90.5	95.6	96.6	105.5
<b>EL</b>	52.3	85.2	95.7	99.3	51.2	88.6
<b>ES</b>	49.4	85.6	85.1	93.5	77.6	104.3
<b>FR</b>	53.0	93.3	82.8	97.6	88.4	99.6
<b>IE</b>	49.2	93.1	81.5	102.7	80.4	95.5
<b>IT</b>	52.0	84.0	85.0	94.1	53.7	89.4
<b>CY</b>	42.8	81.0	92.5	99.4	74.9	99.1
<b>LV</b>	45.1	97.2	89.3	96.1	86.8	94.7
<b>LT</b>	54.8	104.8	90.6	99.1	88.9	105.9
<b>LU</b>	46.0	81.8	84.7	95.8	81.6	90.7
<b>HU</b>	51.7	96.2	94.8	98.8	72.4	89.7
<b>MT</b>	68.2	98.1	89.9	101.9	81.8	101.1
<b>NL</b>	56.6	96.5	59.2	102.1	82.3	93.7
<b>AT</b>	46.6	94.1	:	:	78.9	90.8
<b>PL</b>	:	:	:	:	:	:
<b>PT</b>	50.6	90.7	89.3	96.3	76.0	107.6
<b>SI</b>	53.0	100.5	93.0	98.3	81.8	94.3
<b>SK</b>	56.6	109.1	96.7	98.7	76.7	89.3
<b>FI</b>	50.6	95.2	83.5	100.4	85.4	97.8
<b>SE</b>	57.9	97.7	80.7	101.9	82.4	96.5
<b>UK</b>	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<sup>(8)</sup>, 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<sup>(9)</sup>, 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.

<sup>(8)</sup> Germany and the Netherlands, 2000; Greece, Cyprus, Malta, Poland and Slovenia, not available.

<sup>(9)</sup> 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<sup>(10)</sup>, 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.

<sup>(10)</sup> 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)
<b>Business services (1)</b>	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) <sup>(1)</sup>, based on results for 12 Member States <sup>(2)</sup>, the proportion of investment financed by leasing was 12.5 % in 2002, with rates equal to or above 16 % in Italy and France.

<sup>(1)</sup> *Leasing activity in Europe - Key Facts and Figures*, September 2003.

<sup>(2)</sup> 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 <sup>(13)</sup>.

<sup>(13)</sup> 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.

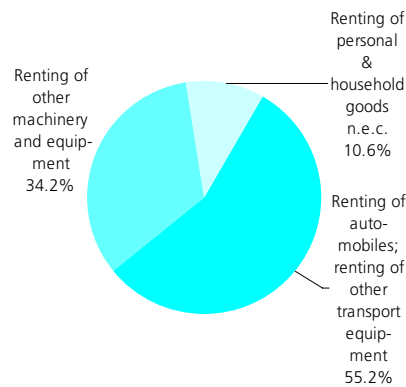
According to the European Federation of Leasing Company Associations (Leaseurope), an analysis of leasing activities by type of asset indicates that motor cars generated 31.9 % of EU-25 turnover in 2002, industrial equipment accounted for 24.8 %, while other road transport vehicles and other transport 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 %.

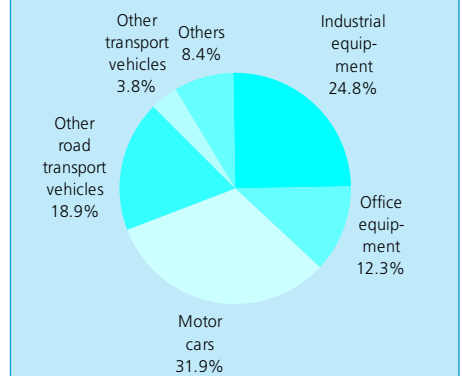
**Figure 22.3**  
**Renting of machinery and equipment without operator and of personal and household goods (NACE Division 71)**  
**Share of value added at factor cost, EU-25, 2001**



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 <sup>(14)</sup>.

## 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 <sup>(15)</sup>, 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 %.

<sup>(14)</sup> Cyprus and Malta, not available; Poland and Slovenia, number of employees.

<sup>(15)</sup> 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 <sup>(16)</sup>.

<sup>(16)</sup> 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 <sup>(17)</sup> 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 %.

<sup>(17)</sup> 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 <sup>(18)</sup> (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

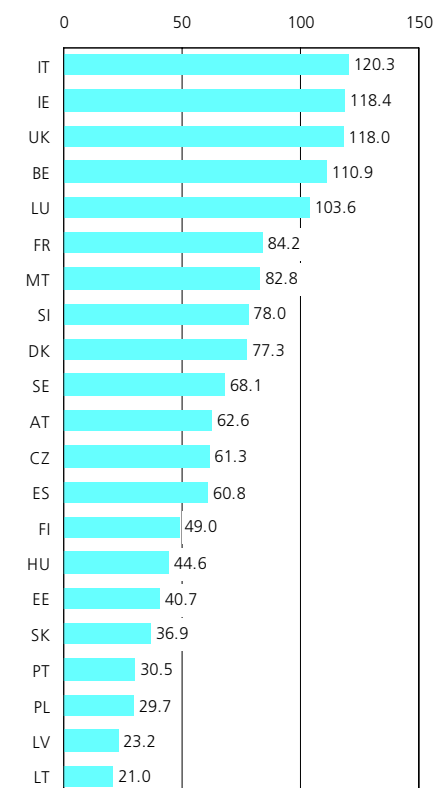
Legal services cover the activities of advocates, barristers, solicitors, notaries, registered lawyers and legal consultants, as classified under NACE Class 74.11. According to figures published by the Council of the Bars and Law Societies of the European Union (CCBE), there were about 753 700 fully qualified lawyers in the EU-25 <sup>(19)</sup> 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.

<sup>(18)</sup> The Czech Republic, Denmark, Germany, Estonia, Greece, Spain, Cyprus, Lithuania, Hungary and Malta, not available.

<sup>(19)</sup> 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

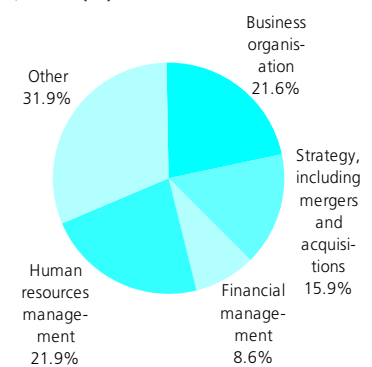
	Global research turnover (EUR million) (1)	
VNU	NL	2 945
IMS Health Inc.	US	1 276
The Kantar Group	UK	1 081
Taylor Nelson Sofres Plc.	UK	950
Information Resources Inc.	US	581
GfK Group	DE	553
Ipsos Group S.A.	FR	533
NFO WorldGroup Inc.	US	488
Westat	US	358
NOP World	UK	335

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<sup>(26)</sup>. 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).

<sup>(26)</sup> 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<sup>(27)</sup>, compared to non-financial services (NACE Sections G to I and K) as a whole.

A special survey<sup>(28)</sup> 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<sup>(29)</sup> (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 %.

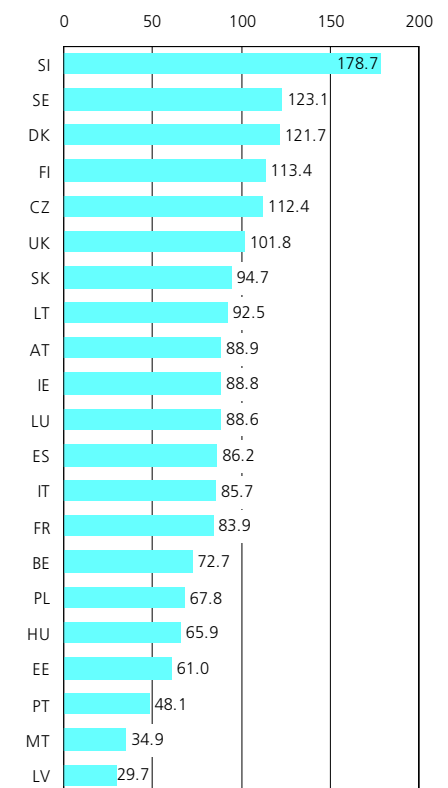
<sup>(27)</sup> Germany and the Netherlands, 2000, Greece and Cyprus, not available.

<sup>(28)</sup> See Statistics in Focus, theme 4 No 11/2004, *Architectural and engineering activities and related technical consultancy*, Eurostat, KS-NP-04-011-EN-N.

<sup>(29)</sup> 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 <sup>(30)</sup> 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 <sup>(31)</sup>, 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 %.

<sup>(30)</sup> The United Kingdom, not available.

<sup>(31)</sup> 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)
<b>DK</b>	:	:	2 807	:	:
<b>ES</b>	75 358	150 513	11 286	5 384	2 224
<b>FR</b>	3 721	20 412	2 454	1 307	906
<b>PT</b>	3 994	20 339	1 338	505	378
<b>FI</b>	5 686	23 287	2 227	1 155	854
<b>SE</b>	24 062	49 215	6 213	3 048	:
<b>UK</b>	:	:	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)
<b>Altran Technologies</b>	F	17 862	1 392
<b>WS Atkins plc</b>	UK	15 450	1 357
<b>Arcadis Group</b>	NL	8 020	819
<b>Fugro N.V</b>	NL	7 003	946
<b>ARUP Group</b>	UK	6 300	584
<b>Mott MacDonald Group</b>	UK	6 265	618
<b>WSP Group plc</b>	UK	5 019	419
<b>Jaakko Pöyry Group</b>	FIN	4 635	407
<b>Grontmij Group</b>	NL	4 000	495
<b>Rambøll-Scandiaconsult Group (proforma)</b>	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)<sup>(32)</sup> 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<sup>(33)</sup>, that was adopted in 2003, imposes more restriction on the use of personal information databases.

<sup>(32)</sup> 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).

<sup>(33)</sup> 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<sup>(34)</sup>, 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.

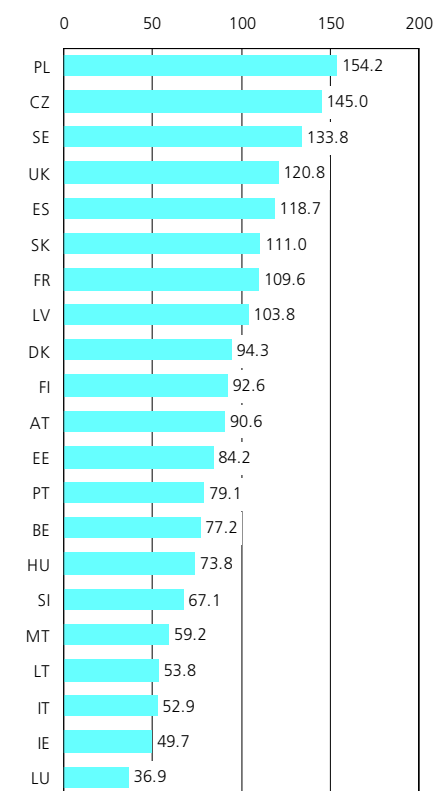
For a time-series analysis of value added (at current prices) in this sector, an aggregate was compiled based on 15 Member States<sup>(35)</sup> that together accounted for 72.5 % of the EU-25's value added in 2001 (based on SBS data). This aggregate highlighted a five-year period of growth between 1997 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.

<sup>(34)</sup> Germany and the Netherlands, 2000; Greece and Cyprus, not available.

<sup>(35)</sup> 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 <sup>(36)</sup> 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.

<sup>(36)</sup> 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 <sup>(37)</sup>, Latvia and Malta recorded the highest values for this ratio.

<sup>(37)</sup> 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 <sup>(38)</sup>, 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.

<sup>(38)</sup> *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<sup>(39)</sup> 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.

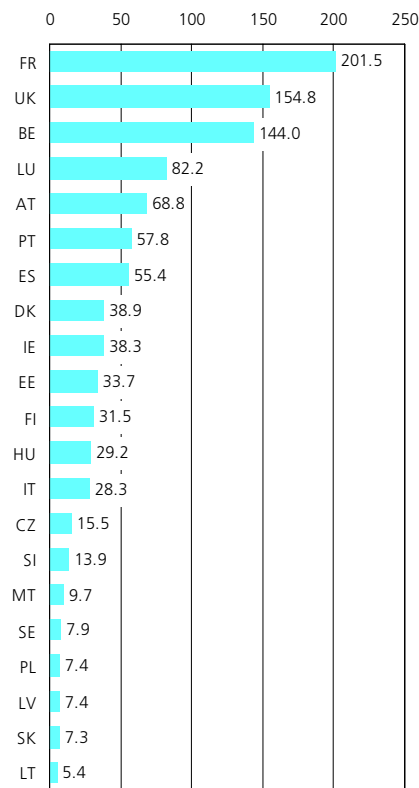
Between 1997 and 2001, the EU's personnel services sector showed a rapid development of value added (at current prices), according to SBS data. An aggregate of 15 Member States<sup>(40)</sup>, who accounted for 86.4 % of the EU-25's value added in 2001, reported 18.1 % average growth per annum, a relatively 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.

<sup>(39)</sup> Germany and the Netherlands, 2000; Greece and Cyprus, not available.

<sup>(40)</sup> 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<sup>(41)</sup> this ratio exceeded 100 % indicating that value added covered personnel costs; nonetheless, this was not the case in Italy, Portugal, Sweden or Luxembourg.

<sup>(41)</sup> 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 <sup>(42)</sup>, 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.

<sup>(42)</sup> 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 <sup>(43)</sup> were working part-time and more than 75 % of the workforce was female.

<sup>(43)</sup> 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).

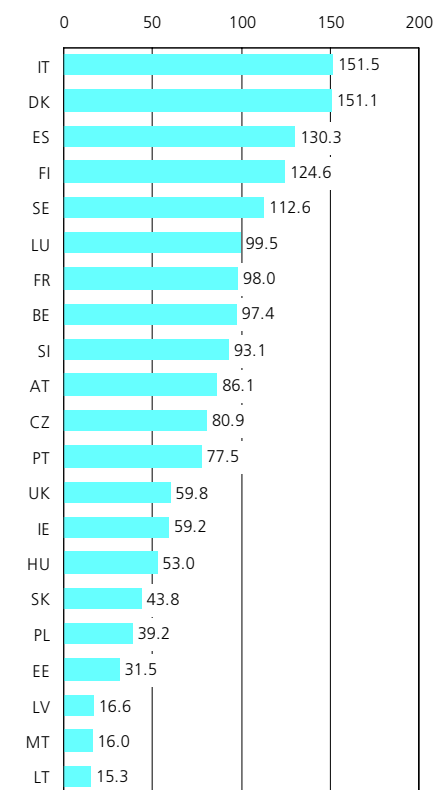
### STRUCTURAL PROFILE

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 <sup>(44)</sup> 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 %.

<sup>(44)</sup> 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) <sup>(45)</sup> in 2001, the most important market segment for cleaning services enterprises in the EU-15 <sup>(46)</sup> 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.

<sup>(45)</sup> *The cleaning industry in Europe 2003*, an EFCI survey, July 2003.

<sup>(46)</sup> 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 <sup>(47)</sup> that together accounted for 64.6 % of the EU-25's value added in 2001.

<sup>(47)</sup> 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 <sup>(48)</sup> the wage adjusted labour productivity ratio surpassed 100 % in the cleaning services sector in 2001.

<sup>(48)</sup> 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 <sup>(49)</sup>, 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.

<sup>(49)</sup> 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 <sup>(50)</sup>, 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 %.

<sup>(50)</sup> 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 <sup>(1)</sup>. 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 <sup>(2)</sup> 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)'.

<sup>(1)</sup> Information society: expression referring to a society whose wealth and growth is based on its ability to process, store, retrieve and communicate information.

<sup>(2)</sup> 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](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 <sup>(3)</sup>. 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.

<sup>(3)</sup> 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	:
<b>Share of employees using Internet connected computers during 2001 (% of all employees)</b>																
<b>Average</b>	27	:	50	27	23	19	:	:	21	24	:	29	19	51	51	:
<b>Manufacturing</b>	22	:	38	24	20	16	:	:	17	14	:	25	14	44	41	:
<b>Distribution</b>	26	:	60	26	25	18	:	16	21	21	:	28	20	56	51	:
<b>Hotels &amp; accommodation</b>	17	:	14	18	9	11	:	7	16	24	:	15	23	37	37	:
<b>Transport &amp; communication</b>	30	:	48	33	30	26	:	36	20	18	:	27	29	52	52	:
<b>Auxiliary financial activities</b>	:	:	:	:	71	75	:	:	:	60	:	59	59	:	89	:
<b>Business services</b>	37	:	66	35	35	24	:	48	40	40	:	49	32	71	75	:

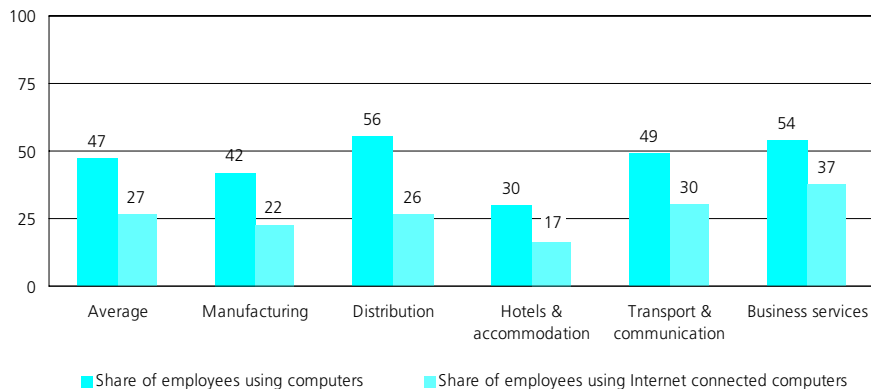
(1) Enterprises in NACE Sections D, G, I and K and Groups 55.1 and 55.2; including Division 67, except for Denmark, Germany, Ireland and Italy; the Netherlands, including Divisions 65 and 66; Finland, excluding part of Group 74.5.

(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 <sup>(4)</sup>, 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).

<sup>(4)</sup> 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.

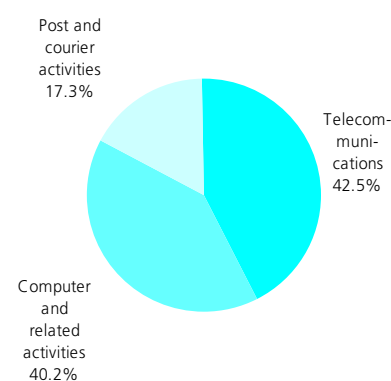
Available time-series from STS show the dynamic nature of the information and communication services sector. The index of turnover in post and telecommunications boasted a 14.8 % increase in the EU-15 in 2000 compared to the year before, slowing down to 11.3 % growth in 2001 and 4.3 % in 2002. That year, 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 %) <sup>(5)</sup>. 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 <sup>(6)</sup>, 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.

<sup>(5)</sup> Germany, Greece, Spain, Cyprus, Luxembourg, Hungary, Malta, Austria and Slovenia, not available.

<sup>(6)</sup> 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 <sup>(7)</sup>, 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 <sup>(8)</sup>, 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 %).

<sup>(7)</sup> Poland, not available.

<sup>(8)</sup> 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)
<b>EU-25</b>	:	:	:	:	:	:
<b>EU-15</b>	68.4	121.4	88.0	109.8	92.4	114.3
<b>BE</b>	75.6	127.6	90.9	111.1	94.0	121.2
<b>CZ</b>	49.2	92.8	91.3	96.9	88.2	117.1
<b>DK</b>	66.4	111.4	86.6	109.3	94.5	107.8
<b>DE</b>	66.5	129.8	83.5	111.3	91.6	107.9
<b>EE</b>	:	:	91.8	96.9	98.8	108.0
<b>EL</b>	73.6	119.8	97.6	101.2	94.7	163.8
<b>ES</b>	65.7	113.8	94.2	103.5	94.5	127.0
<b>FR</b>	61.6	108.4	88.4	104.2	97.3	109.6
<b>IE</b>	68.5	129.4	94.5	119.2	90.0	106.8
<b>IT</b>	67.6	109.2	94.5	104.7	87.1	145.0
<b>CY</b>	73.4	138.8	98.9	106.3	93.0	123.0
<b>LV</b>	58.4	125.8	91.7	98.6	95.4	104.2
<b>LT</b>	52.6	100.6	83.5	91.4	97.0	115.5
<b>LU</b>	69.0	122.8	89.1	100.7	97.2	108.1
<b>HU</b>	55.8	103.8	95.9	99.9	89.3	110.7
<b>MT</b>	80.1	115.4	98.7	111.8	97.4	120.4
<b>NL</b>	75.7	129.1	72.1	124.4	92.0	104.8
<b>AT</b>	71.6	144.8	:	:	90.9	104.7
<b>PL</b>	:	:	:	:	:	:
<b>PT</b>	65.2	116.9	97.4	105.1	92.9	131.5
<b>SI</b>	65.0	123.3	98.0	103.6	91.9	105.8
<b>SK</b>	52.0	100.2	95.6	97.6	95.6	111.2
<b>FI</b>	65.3	123.0	87.7	105.4	95.1	109.0
<b>SE</b>	66.5	112.3	88.2	111.4	92.3	108.0
<b>UK</b>	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 <sup>(9)</sup>. 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.

<sup>(9)</sup> 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 <sup>(10)</sup>.

<sup>(10)</sup> 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)
<b>Post and telecommunications; computer and related activities</b>	65.4	151.0	43.3
<b>Post and courier activities</b>	35.6	115.7	30.8
<b>Telecommunications</b>	123.8	246.4	50.3
<b>Computer and related activities</b>	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) <sup>(11)</sup>. 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.

<sup>(11)</sup> 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 <sup>(12)</sup> (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 <sup>(13)</sup> 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.

<sup>(12)</sup> 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.

<sup>(13)</sup> 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.

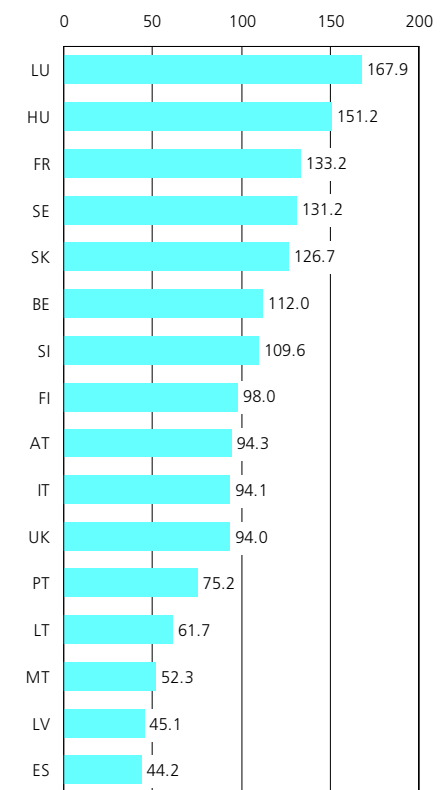
(4) Greece, Spain, France, Ireland, Italy, Cyprus, Hungary, Malta and the United Kingdom, Source: UPU.

(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 <sup>(14)</sup> 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.

<sup>(14)</sup> 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)
<b>CZ</b>	18	:	:
<b>DK (2)</b>	1 210	2 095	325
<b>DE</b>	46 000	185 000	8 300
<b>EE</b>	12	788	12
<b>ES (2)</b>	6 084	47 965	1 961
<b>IE (2)</b>	3	47	2 413
<b>CY (3)</b>	50	280	9
<b>LV</b>	15	255	9
<b>LT</b>	30	500	11
<b>LU</b>	44	:	:
<b>HU (4)</b>	369	604	25
<b>NL (2)</b>	:	17 114	1 202
<b>PT</b>	7	16 457	173
<b>SK</b>	6	444	23
<b>FI (3)</b>	270	:	305
<b>SE</b>	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
<b>Origin</b>															
<b>BE</b>	-	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
<b>DK</b>	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
<b>DE</b>	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
<b>EL</b>	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
<b>ES</b>	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
<b>FR</b>	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
<b>IE</b>	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
<b>IT</b>	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
<b>LU</b>	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
<b>NL</b>	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
<b>AT</b>	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
<b>PT</b>	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
<b>FI</b>	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
<b>SE</b>	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
<b>UK</b>	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 <sup>(15)</sup>, namely Luxembourg and Portugal, reported higher labour productivity in postal and courier activities than in non-financial services as a whole.

<sup>(15)</sup> 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 <sup>(16)</sup> (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 <sup>(17)</sup> with higher wage adjusted labour productivity ratios in postal and courier activities than their national averages for non-financial services.

<sup>(16)</sup> Cyprus and Slovenia, not available.

<sup>(17)</sup> 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 <sup>(18)</sup> 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.

<sup>(18)</sup> *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](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' <sup>(19)</sup> 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.

<sup>(19)</sup> Communication COM(2003) 65 final of 11/02/2003, available at [http://europa.eu.int/information\\_society/europe/2005/doc/all\\_about/acte\\_sector\\_en.pdf](http://europa.eu.int/information_society/europe/2005/doc/all_about/acte_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.

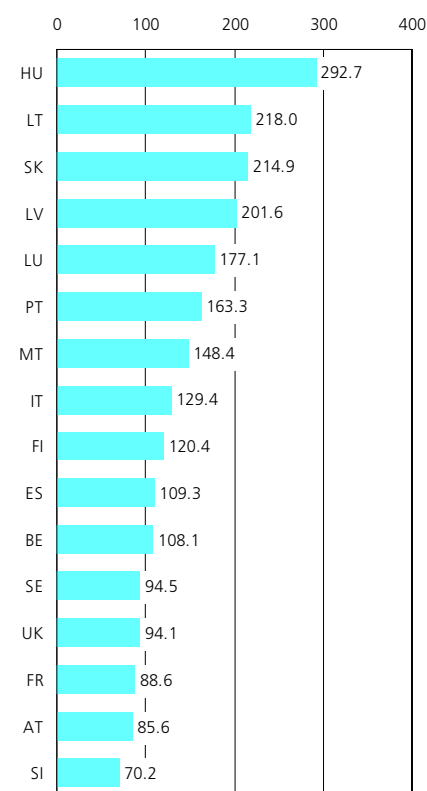
(2) The Czech Republic, Denmark, Germany, Estonia, Greece, Ireland, Cyprus, the Netherlands and Poland, not available.

(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).

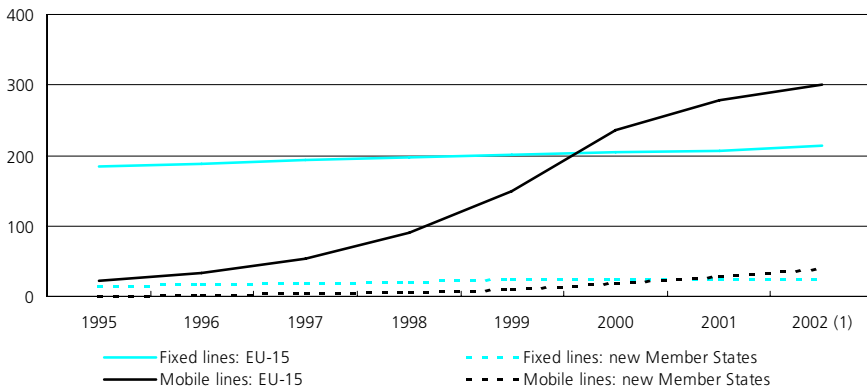
In relative terms, however, the highest specialisation ratios in telecommunications<sup>(20)</sup> were recorded in four of the 10 new Member States, led by Hungary, where this activity's share in national non-financial services value added was close to three times (292.7 %) the corresponding EU-25 average. 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.

<sup>(20)</sup> 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)



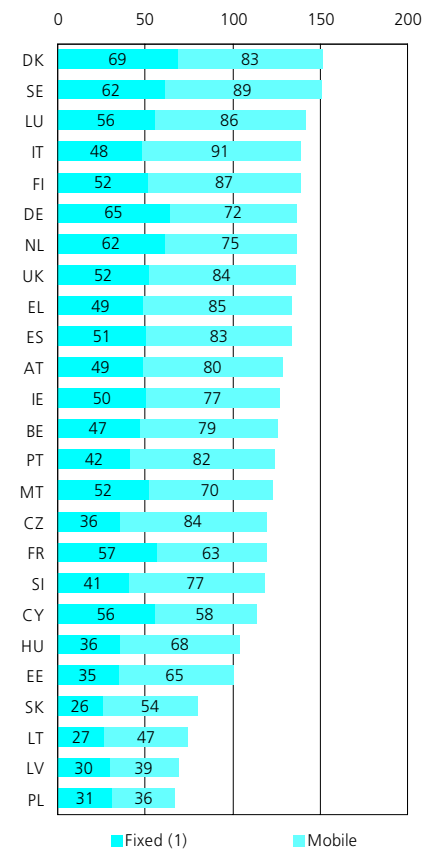
(1) Data for the EU-15 and for Malta, *Source: ITU.*  
*Source: Eurostat, Communications (theme4/coins/telecom).*

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. 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 <sup>(21)</sup> 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 <sup>(22)</sup> 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 <sup>(23)</sup> 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 %).

<sup>(21)</sup> Denmark and Germany, 2000; the Czech Republic, Estonia, Greece, Ireland, Cyprus, the Netherlands, Poland and Slovenia, not available.

<sup>(22)</sup> Cyprus and Slovenia, not available.

<sup>(23)</sup> 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)
<b>IBM</b>	52 278	85 857	315 889
<b>Microsoft</b>	29 997	29 997	50 621
<b>EDS</b>	22 739	22 739	137 000
<b>Lockheed Martin</b>	13 491	28 107	125 000
<b>Accenture</b>	12 240	12 240	75 000
<b>Computer Sciences</b>	12 083	12 083	67 000
<b>Hewlett-Packard</b>	10 772	47 828	141 000
<b>Oracle</b>	10 230	10 230	42 006
<b>Hitachi</b>	8 680	72 192	339 572
<b>SAP</b>	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 <sup>(24)</sup> 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.

<sup>(24)</sup> 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.

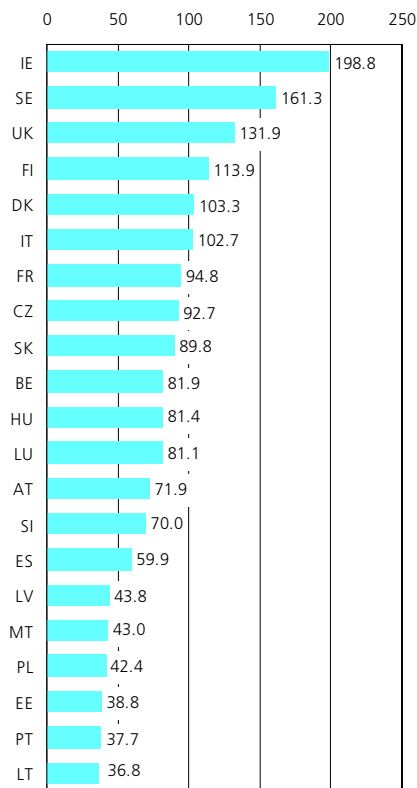
(2) Germany, Greece, Cyprus and the Netherlands, not available.

(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<sup>(25)</sup>. 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 %).

<sup>(25)</sup> 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<sup>(26)</sup>, 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<sup>(27)</sup>.

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<sup>(28)</sup> 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<sup>(29)</sup>. 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 %).

<sup>(26)</sup> Denmark, Germany, Greece, Spain, Ireland, Cyprus, Luxembourg, Hungary, Malta, Austria and Slovenia, not available.

<sup>(27)</sup> Germany, Greece, Ireland, Cyprus, Luxembourg, Hungary, Malta, Austria and Slovenia, not available.

<sup>(28)</sup> NACE Divisions 70, 71 and 73, not available.

<sup>(29)</sup> 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.

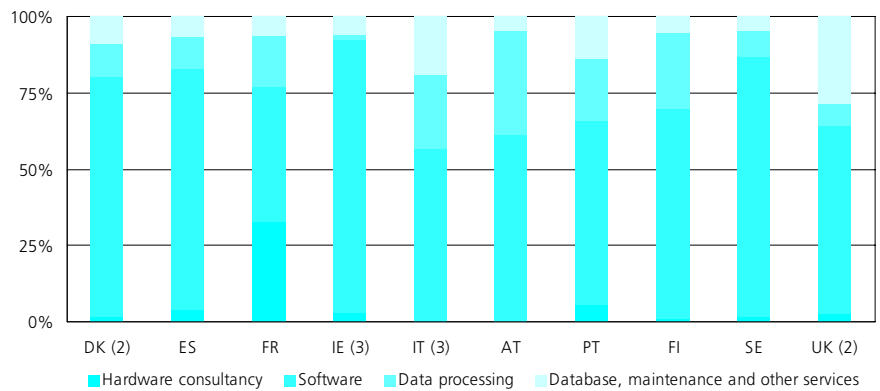
Additional information on software and computing services is provided by a pilot survey carried out in a limited number of Member States<sup>(30)</sup>. As a part of this project, participating countries launched two surveys on this sector in 2001 and 2002, respectively for the reference years 2000 and 2001, concentrating on turnover data, broken down by client and product.

<sup>(30)</sup> 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.

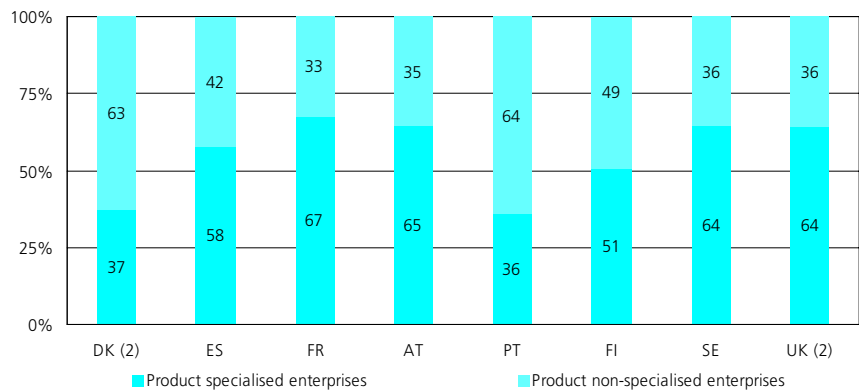
Product specialisation among software enterprises was also measured by the survey. For this purpose, enterprises were defined as product-specialised if their most important product accounted for at least three quarters of their total net turnover. Looking at software consultancy and supply, the majority 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 <sup>(31)</sup> 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 <sup>(32)</sup>.

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 <sup>(33)</sup>, 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 %).

<sup>(31)</sup> Estonia, Lithuania, Luxembourg and Poland, not available.

<sup>(32)</sup> Lithuania, Austria and Poland, not available.

<sup>(33)</sup> 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 <sup>(34)</sup>. Furthermore, average personnel costs were at least 50 % higher than national averages for non-financial services in all Member States <sup>(35)</sup>, except Italy (33.3 % higher) and Finland (44.1 % higher).

<sup>(34)</sup> Cyprus and Slovenia, not available.

<sup>(35)</sup> 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 <sup>(36)</sup>, the productivity gap according to this measure was between 20 % and 30 %.

<sup>(36)</sup> 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)
<b>EU-25</b>	:	:	:	:	:	:
<b>EU-15</b>	74.4	132.0	92.6	115.6	86.2	106.7
<b>BE</b>	80.8	136.4	92.2	112.7	89.3	115.2
<b>CZ</b>	66.6	125.5	95.3	101.1	73.0	96.9
<b>DK</b>	75.2	126.1	96.8	122.2	87.5	99.8
<b>DE</b>	76.0	148.2	90.2	120.2	85.2	100.5
<b>EE</b>	:	:	100.0	105.6	100.0	109.3
<b>EL</b>	70.8	115.3	99.5	103.3	86.2	149.0
<b>ES</b>	71.9	124.6	96.9	106.5	90.1	121.1
<b>FR</b>	71.6	126.0	93.3	110.0	93.5	105.4
<b>IE</b>	67.3	127.2	95.8	120.8	89.2	105.9
<b>IT</b>	70.7	114.2	95.3	105.5	76.3	126.9
<b>CY</b>	65.3	123.5	97.2	104.5	81.9	108.4
<b>LV</b>	76.2	164.0	88.5	95.3	88.9	97.1
<b>LT</b>	:	:	:	:	:	:
<b>LU</b>	:	:	100.0	113.1	96.9	107.8
<b>HU</b>	73.2	136.1	99.4	103.6	72.3	89.6
<b>MT</b>	79.8	114.9	100.0	113.3	90.5	111.9
<b>NL</b>	83.5	142.5	86.5	149.2	86.4	98.4
<b>AT</b>	70.9	143.2	:	:	80.8	93.1
<b>PL</b>	:	:	:	:	:	:
<b>PT</b>	71.7	128.5	99.0	106.8	82.6	116.9
<b>SI</b>	71.5	135.5	96.8	102.2	81.6	94.0
<b>SK</b>	77.2	148.8	98.8	100.9	86.2	100.3
<b>FI</b>	75.9	142.8	93.5	112.3	90.6	103.8
<b>SE</b>	73.5	124.1	94.2	118.9	86.9	101.7
<b>UK</b>	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).