

European Business

Facts and Figures

Part 3:

Services, including finance

(NACE Sections H, I, J, K)

Data 1990-2000



EUROPEAN
COMMISSION



THEME 4
Industry, trade
and services

4

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, 2002

ISBN 92-894-4085-6

© European Communities, 2002

**European Business,
Facts & Figures**

This publication has been produced by unit D2 of Eurostat, responsible for structural business statistics. The opinions expressed are those of the individual authors alone and do not necessarily reflect the position of the European Commission.

Co-ordinator:

Jean Lienhardt
Eurostat D2
Statistical Office of the
European Communities,
Bâtiment Joseph Bech
Rue Alphonse Weicker, 5
L-2721 Luxembourg
jean.lienhardt@cec.eu.int

Production:

data processing, statistical
analysis, economic analysis,
design and desktop publishing
Informa sàrl
Giovanni Albertone, Simon
Allen, Iain Christopher, Sabine
Joham, Andrew Redpath,
Markus Voget, Daniel
Waterschoot
informa@informa.lu

Translation:
translation service of the
European Commission,
Luxembourg

Published by:

Office for Official Publications
of the European
Communities,
Luxembourg

All data requests should be
addressed to one of the
Eurostat Data Shops, listed
on the Internet, at the
following address:
[http://europa.eu.int/comm/
eurostat/](http://europa.eu.int/comm/eurostat/)

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	7
Contents of the publication	7
Guide to the statistics	8
Official data sources used in this publication	9
Glossary of terms	17
Abbreviations	19
OVERVIEW - THE EU BUSINESS ECONOMY	23
Structure of the EU's business economy	24
Globalisation and intangibles	26
The EU's manufacturing sector	28
Country specialisation in manufacturing	31
Trade developments	32
Statistical annex	34
SECTORAL ANALYSIS	
1. Energy	43
1.1 Crude oil and natural gas	47
1.2 Electricity generation and distribution	50
1.3 Water supply and sewerage	53
2. Non-energy mining and quarrying	73
3. Food, beverages and tobacco	81
3.1 Meat	87
3.2 Fish	90
3.3 Dairy products	91
3.4 Miscellaneous food products	93
3.5 Beverages	96
3.6 Tobacco	100
4. Textiles, clothing, leather and footwear	107
4.1 Clothing (including knitted articles)	112
4.2 Leather and footwear	115
5. Wood, paper, publishing and printing	123
5.1 Wood and wood products	129
5.2 Publishing and printing	130

6.	Chemicals, rubber and plastics	137
6.1	Basic industrial chemicals	142
6.2	Agro-chemicals	146
6.3	Paints, varnishes and printing inks	147
6.4	Pharmaceuticals	149
6.5	Soaps, detergents and toiletries	153
6.6	Miscellaneous chemical products	155
6.7	Man-made fibres	156
6.8	Rubber	158
6.9	Plastics	161
7.	Non-metallic mineral products	171
7.1	Glass	175
7.2	Ceramic and clay products	178
7.3	Concrete, plaster and cement	179
8.	Basic metals	187
8.1	Ferrous metals	190
9.	Fabricated metal products	197
9.1	Structural metal products	201
9.2	Boilers, metal containers and steam generators	203
9.3	Miscellaneous metal products	204
10.	Machinery and equipment	211
10.1	Power machinery	216
10.2	Industrial processing machinery	218
10.3	Agricultural machines and tractors	221
10.4	Weapons and ammunitions	223
11.	Electrical machinery and optical equipment	227
11.1	Manufacture of electrical machinery and equipment	233
11.2	Measuring, precision and process control equipment	236
11.3	Electronic components	238
11.4	Computer and office equipment	240
11.5	Telecommunications equipment	243
11.6	Consumer electronics	246
11.7	Domestic appliances	248
12.	Transport equipment	259
12.1	Motor vehicles	264
12.2	Motor vehicle parts and accessories	266
12.3	Shipbuilding	268
12.4	Aerospace equipment	269
13.	Other manufacturing industries	277
13.1	Furniture	280
14.	Construction and real estate	283
14.1	Site preparation and constuction	288
14.2	Installation and completion	290
14.3	Real estate services	292

15. Distributive trades	297
15.1 Sale of motor vehicles	302
15.2 Repair of motor vehicles	304
15.3 Retail sale of automotive fuel	305
15.4 Wholesale on a fee or contract basis	306
15.5 Wholesaling on own account	307
15.6 Retail trade of food items	309
15.7 Retail trade of non-food items	312
16. Tourism	323
16.1 Accommodation services	328
16.2 Restaurants, bars and catering	332
16.3 Recreation parks	333
16.4 Travel agencies	335
17. Transport services	339
17.1 Railway transport	343
17.2 Road transport	345
17.3 Water transport	348
17.4 Air transport	352
17.5 Auxiliary transport activities	358
18. Financial services	363
18.1 Financial intermediation	366
18.2 Insurance and pension funds	372
18.3 Financial auxiliaries	377
19. Business services	381
19.1 Renting and leasing	386
19.2 Research and development	389
19.3 Legal, accountancy and management services	390
19.4 Architectural and engineering activities; technical, testing and analysis	394
19.5 Advertising and direct marketing	397
19.6 Labour recruitment and temporary work services	399
19.7 Security services	402
19.8 Industrial cleaning services	404
20. Information and audio-visual services	409
20.1 Postal and courier services	412
20.2 Telecommunications' services	416
20.3 Software and computing services	420
20.4 Film and video	424
20.5 Radio and television	428
20.6 Music recording	430
21. Community, social and personal services	437

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 European Union. The data provided in European Business traces the major developments of output, employment and external trade. The commentaries concentrate largely on the 3-digit level of the NACE Rev. 1 classification of economic activities¹.

Publication format

The publication is available as a paper or electronic product (CD-ROM). The paper publication contains a descriptive text of the evolution of the EU's business economy - it is available in German, English and French versions.

Structure of the publication

European Business is divided into three main sections:

1. The first provides a general overview of the structure of the EU's business economy, looking at the changes in output, employment and external trade.
2. The second provides a sectoral breakdown of industrial activities into 14 separate chapters, each of which contains a number of sub-chapters usually based on the 3-digit level of the NACE classification. Each chapter concludes with a statistical annex based on structural business statistics and external trade statistics.

3. The third section provides a sectoral breakdown of service activities into 7 separate chapters (again with sub-chapters 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 largely on the basis of their NACE code, starting with energy and the extractive industries and finishing with business services, the information society and community and personal services. Each chapter begins with a preliminary section explaining the sectoral coverage of the data provided.

NACE is a hierarchical classification made up of Sections (1-letter codes), Sub-sections (2-letter codes), Divisions (2-digit codes), Groups (3-digit codes) and Classes (4-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 2-digit level and the lower levels of ISIC Rev.3 can be calculated by aggregating the more detailed levels of NACE.

The compilation of industry and services data has followed a different historical development, and furthermore it is generally easier to compile activity and product statistics about goods/merchandise than it is to collect information 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. For this reason, a different form of presentation is employed for industrial and service chapters.

It should be noted that there has already been a rapid improvement in data availability for services during the last few years and most EU Member States now compile annual statistics for the majority of the service activities covered in this publication. Clearly it will take a number of years to build up robust time-series and considerable work still needs to be done in the area of product statistics for services. The (non-) availability of services' data often renders it difficult to provide a standard set of information and where this is the case, Eurostat's functional databases have been used to complement structural business statistics. Non-official sources have also been used more extensively in several services' chapters where little official data exists.

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

GUIDE TO THE STATISTICS

Two main data sources should be distinguished when using this publication: those originating from official sources (collected by the national statistical institutes in each Member State and harmonised by Eurostat) and those provided by trade associations (representative organisations of manufacturers and service providers) and other non-official bodies. Non-official sources are easily recognised as they always appear in a shaded box, as does background information on Community legislation.

Time frame

The data within this publication was extracted from various Eurostat databases during October 2001. The accompanying text was written during the fourth quarter of 2001 and the first quarter of 2002.

The time-series for industrial activities are ideally presented for the EU between 1990 and 2000. Individual country data are generally available up until 1997, 1998 or 1999 depending upon the country and activity in question. EU totals have been estimated for 1998, 1999 and 2000 for industrial activities. The estimation procedures do not currently extend to cover services (other than distributive trades). Services data are usually presented in the form of a snapshot for the latest year available.

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, eleven 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, whilst data available afterwards should be denominated in euro (EUR). However, as the conversion rate was equal to 1 ECU = 1 EUR, 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.

Whilst the conversion of data expressed in national currencies to a common currency facilitates comparison, large fluctuations in currency markets are partially responsible for movements identified when looking at the evolution of a series in EUR terms (especially at the level of an individual country).

Geographical coverage

EU totals given in this publication cover all 15 Member States. Footnotes are added 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 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 USED IN THIS PUBLICATION

SBS

The bulk of the information contained within European Business is derived from the SBS (Structural Business Statistics) database. This data has been collected within the legal framework provided by the SBS Regulation². There are three main collections of SBS data that have been used in this publication.

The first (see table 1) covers long time-series³ for enterprises with 20 or more persons employed (often available from 1985 onwards). These series are only published for industrial activities and they are used predominantly in the second section of this publication⁴. However, not all Member States have transmitted data relating to the enterprise as the statistical unit and the specified size threshold. The table below presents the main discrepancies with respect to these standards.

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

(3) Public access is available via the Eurostat Datashop network: NewCronos, theme 4, domain SBS, collection Enterpr, table Ent_L_MS.

(4) Except for energy (chapter 1) and construction (chapter 14) where there is poor data availability for EU-15 totals.

Table 1

Country	Year	Population covered
Belgium	1985-1994	Enterprises with 20 employees or more
	1995-1999	Enterprises with 1 person employed or more
Greece	1985-1998	Local kind-of-activity units employing 20 persons or more
Spain	1985-1999	Enterprises with 1 employee or more
France	1985-1999	Enterprises with 20 employees or more
Ireland	1985-1999	Enterprises with 3 persons employed or more for NACE Divisions 10 to 41
Luxembourg	1985-1994	Kind-of-activity units with 20 persons employed or more
	1995-1997	Kind-of-activity units with 1 person employed or more
Netherlands	1997-1998	Number of enterprises: data for this variable are rounded to multiples of 5; a "0" therefore means 2 or less enterprises
Austria	1985-1994	Establishments with 20 persons employed or more for NACE Divisions 10 to 37
Portugal	1985-1999	Enterprises with 1 person employed or more
Finland	1986-1994	Establishments with 5 persons employed or more
	1995-1999	Enterprises with 1 person employed or more

The second collection covers all enterprises⁵ and these series have been used for services activities⁶. The data generally start in 1995 although for some services a small number of Member States have provided longer time-series. However, not all Member States have transmitted data relating to this population. In particular, some Member States can only provide data for units with employment above a certain size threshold. Table 2 presents the main deviations from the standard population as laid down in the SBS Regulation (enterprise with 1 person employed or more).

(5) Public access is available via the Eurostat Datashop network: NewCronos, theme 4, domain SBS, collection Enterpr, table enter_ms.

(6) In addition, for industrial activities where small enterprises carry an important weight (e.g. textiles and clothing), figures from this database are also cited.

Table 2

Country	Statistical unit and size coverage used from 1995 onwards			
	Industry (NACE Sections C, D and E)	Construction (NACE Section F)	Trade (NACE Section G)	Services (NACE Sections H to K)
Germany	1995 to 1998 for NACE Sections C and D and 1995 to 1997 for NACE Section E; data missing because it is only available for enterprises with 20 persons employed or more	1995 to 1998 data missing because it is only available for enterprises with 20 persons employed or more	No major deviations	No major deviations
Greece	1995 to 1998 data missing because it is only available for enterprises with 10 persons employed or more	1995 to 1998 data missing because it is only available for enterprises with 10 persons employed or more	Enterprises with a turnover of 15 million GDR or more	Enterprises with a turnover of 15 million GDR or more
Spain	Enterprises with 1 employee or more	Enterprises with 1 employee or more	No major deviations	No major deviations
France	1995 data missing because it is only available for enterprises with 20 employees or more	1995 data missing because it is only available for enterprises with 20 employees or more	No major deviations	In transport activities NACE 61.2Z and 61.2B, enterprises with 6 employees or more
Ireland	Enterprises with 3 persons employed or more	1995 to 1999 data missing because it is only available for enterprises with 20 persons employed or more	No major deviations	No major deviations
Italy	1996 turnover from the principal activity at the NACE 4-digit level: this code is supplied only for enterprises with 200 employees or more	No major deviations	No major deviations	No major deviations
Luxembourg	1996 onwards kind-of-activity units with 1 person employed or more	1996 onwards kind-of-activity units with 1 person employed or more	No major deviations	No major deviations
Netherlands	<i>Number of enterprises: data for this variable are rounded to multiples of 5; a "0" therefore means 2 or less enterprises</i>			
	Enterprises with 20 employees or more for NACE Section E; total intramural R&D expenditure and total number of R&D personnel refer to enterprises with 10 employees or more	No major deviations	No major deviations	Survey on holdings (NACE Class 74.11): enterprises with 5 employees or more
United Kingdom	1995 data missing because it is only available for enterprises with 20 persons employed or more	1995 data missing because it is only available for enterprises with 20 persons employed or more	No major deviations	No major deviations

Table 3

Country	Statistical unit coverage			
	Industry (NACE Sections C, D and E)	Construction (NACE Section F)	Trade (NACE Section G)	Services (NACE Sections H to K and M to O)
Spain	1995 onwards enterprises with 1 employee or more	No major deviations	No major deviations	No major deviations
France	1995 enterprises with 20 employees or more	1995 enterprises with 20 employees or more	No major deviations	No major deviations
Ireland	1995 onwards enterprises with 3 persons employed or more	1995 onwards enterprises with 20 persons employed or more	No major deviations	No major deviations
Netherlands	1995 onwards employment size classes are defined in terms of employees; size class 250-499 has been approximated with size class 200-499 employees	1995 onwards employment size classes are defined in terms of employees; size class 250-499 has been approximated with size class 200-499 employees	1996 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 250-499 has been approximated with size class 200-499 employees	1996 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 250-499 has been approximated with size class 200-499 employees
Portugal	1996 onwards employment size classes are defined in terms of employees; size class 1-9 has been approximated with size class 0-9 employees	1996 onwards employment size classes are defined in terms of employees; size class 1-9 has been approximated with size class 0-9 employees	1996 onwards employment size classes are defined in terms of employees	1996 onwards employment size classes are defined in terms of employees
Sweden	1996 employment size classes are defined in terms of employees; size class 1-9 has been approximated with size class 0-9 employees	No major deviations	No major deviations	No major deviations
United Kingdom	1995 enterprises with 20 persons employed or more	1995 enterprises with 20 persons employed or more	No major deviations	No major deviations

The third collection of SBS data covers information broken down by employment size class. These series cover enterprises of all size classes. However, not all Member States have transmitted data to Eurostat that relates to this statistical unit or population. In particular some Member States can only provide data for units with employment above a certain size threshold. Table 3 summarises the main deviations from the standard statistical unit as laid down in the SBS Regulation (an enterprise with 1 person employed or more).

The series come from a combination of regular or ad hoc surveys conducted by the Member States and administrative sources. Data in this publication are generally available at the 3-digit NACE level, whilst more detailed information is available within the SBS Enter table covering 4-digit activity codes.

The definitions are standardised, and so the figures are largely comparable across industries and countries. Variable definitions do however vary somewhat between the countries. Until the reference year 1994 inclusive, EU Member States transmitted the data to Eurostat according to either the previous legal basis for industry or on a voluntary basis for services. As far as possible Eurostat and Member States have converted these data in line with the variable definitions as implemented in the SBS Regulation. However, the results of the conversion are not 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 4 presents the main discrepancies with the standard variable definitions.

Estimates

EU-15 data for 1998-2000 are estimated. Estimates are made using individual country information and short-term indicators such as indices of production, output prices and employment. The individual country estimates are not published and as a result the information by Member State is only available up until 1997, 1998 or 1999 depending upon the country in question. Estimates are only made for series concerning 20 or more persons employed (SBS ent_l_ms). As such, the time-series presented for industrial activities normally under-report absolute values. This can be particularly important in industries where small and medium-sized enterprises play an important role (for example, textiles).

Table 4

SBS ent_l_ms: enterprises employing 20 or more persons			
Country	Year	Variable	Discrepancy
Denmark	1990-1998	Value added at factor cost Gross operating surplus	Value added at basic prices Value added at basic prices - personnel costs
Spain	1985-1999	Gross investment in tangible goods	Gross investment in land and gross investment in machinery and equipment
Ireland	1985-1999	Value added at factor cost Gross operating surplus	Irish value added is calculated at market prices excluding VAT; for sectors where other indirect taxes play an important role, for example where there are taxes on petroleum products, Irish value added is disproportionately large; this non-standard definition of value added influences the Irish manufacturing total (through aggregation of NACE), EU totals (through aggregation across countries) and ratios, notably labour productivity measures. Value added at market price excluding VAT - personnel costs
Italy	1992-1995	Number of persons employed	Number of employees
Finland	1986-1995	Value added at factor cost Gross operating surplus	Value added at market price Value added at market price - personnel costs
SBS enter_ms: Enterprises employing 1 or more persons			
Country	Year	Variable	Discrepancy
Germany	1999	Value added at factor cost for NACE Sections I to K	Value added at factor cost BUT does not include subsidies
Spain	1995-1998	Gross investment in tangible goods	Gross investment in land and gross investment in machinery and equipment
Ireland	1995-1999	Value added at factor cost	Irish value added is calculated at market prices excluding VAT; for sectors where other indirect taxes play an important role, for example where there are taxes on petroleum products, Irish value added is disproportionately large; this non-standard definition of value added influences the Irish manufacturing total (through aggregation of NACE), EU totals (through aggregation across countries) and ratios, notably labour productivity measures.
	1998	Personnel costs for NACE Sections H, I and K	Wages and salaries
Finland	1995	Value added at factor cost Gross operating surplus	Value added at market price Value added at market price - personnel costs
Sweden	1995-1996	Number of persons employed: since self-employed are not included and since the variable collected for enterprises with less than 10 employees is the number of employees in full time equivalents then the number of persons employed and number of employees are very close	
United Kingdom	1996-1999	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

Table 4 (continued)

SBS sizclass/indus_ms - Industry (Sections C, D and E)			
Country	Year	Variable	Discrepancy
Denmark	1995-1996	Number of employees	Employees in full-time equivalents
Ireland	1995-1998	Value added at factor cost	Irish value added is calculated at market prices excluding VAT; for sectors where other indirect taxes play an important role, for example where there are taxes on petroleum products, Irish value added is disproportionately large; this non-standard definition of value added influences the Irish manufacturing total (through aggregation of NACE), EU totals (through aggregation across countries) and ratios, notably labour productivity measures.
Sweden	1996	Number of persons employed: since self-employed are not included and since the variable collected for enterprises with less than 10 employees is the number of employees full time equivalent, then the number of persons employed and number of employees are very close	
SBS sizclass/const_ms - Construction (Section F)			
Country	Year	Variable	Discrepancy
Denmark	1995-1996	Number of employees	Employees in full-time equivalents
Ireland	1995-1998	Value added at factor cost	Irish value added is calculated at market prices excluding VAT; for sectors where other indirect taxes play an important role, for example where there are taxes on petroleum products, Irish value added is disproportionately large; this non-standard definition of value added influences the Irish manufacturing total (through aggregation of NACE), EU totals (through aggregation across countries) and ratios, notably labour productivity measures.
SBS sizclass/trade_ms - Trade (Section G)			
Country	Year	Variable	Discrepancy
Denmark	1995-1996	Number of employees	Employees in full-time equivalents
Ireland	1996-1997	Value added at factor cost	Irish value added is calculated at market prices excluding VAT; for sectors where other indirect taxes play an important role, for example where there are taxes on petroleum products, Irish value added is disproportionately large; this non-standard definition of value added influences the Irish manufacturing total (through aggregation of NACE), EU totals (through aggregation across countries) and ratios, notably labour productivity measures.
SBS sizclass/servi_ms - Services (Sections H to K and M to O)			
Country	Year	Variable	Discrepancy
Ireland	1995-1997	Value added at factor cost	Irish value added is calculated at market prices excluding VAT; for sectors where other indirect taxes play an important role, for example where there are taxes on petroleum products, Irish value added is disproportionately large; this non-standard definition of value added influences the Irish manufacturing total (through aggregation of NACE), EU totals (through aggregation across countries) and ratios, notably labour productivity measures.

PRODCOM

The legal basis of the 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 nomenclature, the Combined Nomenclature (CN). The list does not, however, cover all products. The list is divided into Divisions corresponding to the (2-digit) Divisions of NACE Rev. 1. Each Prodcom code is identified by an eight-digit code. The first six digits are the CPA code (Community 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:

- a) production sold during the survey period;
- b) 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;
- c) 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.

The 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 (4-digit) Class of NACE Rev. 1 must also be recorded.

External trade

EU external trade statistics are available in the Comext database, broken down according to the product classification (CPA). The analysis focuses on trade data for the period between 1990 and 2000. 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). The data for EU-15 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 ECU/EUR terms.

European Business Trends

Tracking the business cycle is indispensable for many economic actors. The European Business Trends (EBT) database provides 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 Statistics is the Council Regulation No. 1165/98 concerning short-term statistics, which was adopted on 19th May 1998 and is in the process of being implemented.

One variable from the EBT database is directly presented in this publication, namely the domestic output price index. Output price indices report the short-term changes in the prices of commodities produced and sold in a given Member State. Converted to an annual series, this index has also been used to deflate SBS turnover, production value and value added data, using appropriate activity indices to create series in constant price terms. Production and employment indices from the EBT database also provide valuable information that is used to "nowcast" structural business statistics for the latest years, extending time-series.

All price-determining characteristics of the products should be taken into account, including 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", 1998 edition. The main statistical objective of the Labour Force Survey is to divide the population of working age (generally 15 years and above⁷) 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 a defined reference week.

(7) For the classification of the labour force by educational attainment, use was made of the age group 25-59.

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 Survey⁸, is based upon a sample of the population. The results are therefore subject to the usual types of errors associated with sampling techniques. Eurostat implement basic guidelines intended to avoid the publication of figures which are statistically unreliable. Figures below these thresholds are not published. A second threshold is applied to data that may only be published with a warning concerning its reliability. These data are footnoted in the tables that use LFS data. In the case that non-response (unknown) for a breakdown characteristic of the labour force (for example, educational attainment, gender or full-time/part-time) exceeds 5% of the total, data have not been published.

There was a methodological change between 1998 and 1999 in the collection of Belgian Labour Force Survey data. As such there may well be a rupture in the series in 1999.

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).

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

Table 5
Sample thresholds for the publication of LFS data (minimum sample size)

	A	B
EU-15	63,500	-
Belgium	2,500	4,500
Denmark	2,500	4,500
Germany	8,000	-
Greece	2,500	4,500
Spain	2,500	5,000
France	3,500	8,500
Ireland	2,500	4,500
Italy	3,500	7,500
Luxembourg	500	1,500
Netherlands	4,500	10,000
Austria	2,000	-
Portugal	7,500	15,000
Finland	2,500	4,500
Sweden	9,000	-
United Kingdom	10,000	-

A: threshold for publishing data.
B: threshold for reliable data.

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: (a) the sector accounts and (b) 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).

Foreign Direct Investment

FDI is cross-border investment for which a direct investor has the objective of a lasting interest in an enterprise resident in another economy (direct investment enterprise). Constitutional characteristics for a direct investment are the intention for a long-term relationship between the direct investor and the enterprise, and a significant influence in the management of the enterprise. These are assumed to be fulfilled when an investor owns ten per-cent or more of ordinary shares or voting power in an incorporated or unincorporated enterprise respectively (OECD benchmark definition).

Equity capital: includes equity in branches and ordinary shares in subsidiaries and associates.

Other capital: covers inter-company debt (including short-term loans such as trade credits) between direct investors and subsidiaries, branches and associates.

Reinvested earnings: consist of the direct investor's share (in proportion to direct equity participation) of earnings not distributed as dividends by subsidiaries or associates and earnings of branches not remitted to the direct investor.

Disinvestment: is formally defined as withdrawal of direct investment capital. The most frequent cases are those where the direct investor sells participation (e.g. shares) it had invested in the direct investment enterprise or where inter-company debt (e.g. loans) is paid back.

Reporting economy: is the country or economic zone from whose view data are reported.

Partner economy: is the country or economic zone that has a foreign direct investment relationship with the reporting economy.

FDI flows and positions: by direct investment flows the investor builds up a foreign direct investment position, making part of his balance sheet. The FDI position (referred to in this publication as FDI stocks) differs from accumulated flows because of revaluation (changes in prices or exchange rates, and other adjustments such as the rescheduling or cancellation of loans, debt forgiveness or debt-equity swaps with differing values).

Research and Development

These data were provided by the OECD. They are intended to provide internationally comparable indicators of resources devoted to R&D at an industry level. The business enterprise sector covers private and public enterprises and institutes serving such enterprises.

As from 1987, the classification is based on the International Standard Industrial Classification (ISIC Rev. 3). The breakdown between industries is, in principle, made at the enterprise level, although some countries are able to break down R&D data for multi-product enterprises between their main lines of business. National statistical regulations prevent publication of results where there are very few firms in the given category, hence the many gaps in the tables.

Community Innovation Survey

The second Community Innovation Survey (CIS2) was launched in the EEA Member States in 1997/1998. All the participating countries have agreed on a common set of methodology and a core questionnaire aimed at providing comparable, harmonised and representative data on a pan-European scale. The survey is based on the Oslo-manual. In general, it is either the National Statistical Institute or a Ministry that is directly responsible for the survey at the national level.

The reference year for the survey is 1996 for most of the countries. The data for Norway and Portugal refer to 1997. The results can deviate from national published results, mainly due to different target population.

The target population

The statistical unit is the enterprise.

The following economic activities have been included in the target population:

- all manufacturing industries
- electricity, gas and water supply
- service sectors: wholesale trade, transport, telecommunications, financial intermediation, computer and related activities and engineering services.

In Spain and Italy the survey was only done for manufacturing industry. In France the wholesale sector was not surveyed.

The cut off point for inclusion in the target population is 20 employees in the manufacturing sector and 10 employees in the service sector. Some Member States used lower cut-off points, but these enterprises are not included here. The sampling frames are business registers with as good quality as possible. Official statistical business register have been used whenever available.

The Survey method

A combination of sampling and census has been used; census down to a certain threshold of employees depending upon the country's enterprise population, and sampling for the rest. The samples have been selected by using a simple random selection in each stratum (defined by size class according to number of employees and economic activity based on NACE Rev. 1 at the 2-digit level). A full census was applied if the total number of enterprises in the frame population in a particular stratum was less than 5.

The results are based on answers from 39,500 enterprises. In total the response rate was about 57%, nationally the response rate varies from 24% to over 90%. To secure an acceptable response rate, at least two reminders were made to the enterprises. If the response rate was below 70% of the active enterprises in the sample in the manufacturing and service sectors respectively, a non-response analysis was performed. The non-response analysis was made on the basis of a simple random sample of the non-respondent population.

Quality of the data

The results presented are grossed-up figures for the whole population, using weighting factors. The weighting factors are based on shares between the numbers of enterprises in the realised sample and total number of enterprises in each stratum of the frame population.

The results of the non-response analysis were taken into account to adjust the weighting factors if the results proved to be different from the original survey results.

Whenever possible variables have been cross-checked to verify the consistency of the answers. In this process, a set of core variables has been considered to be more reliable than others.

In case of item non-response the missing values have been imputed. Other information from the same enterprise or the enterprise's NACE-group has been used to impute the missing data.

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).

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 specialisation: relative index that compares the production share of a given manufacturing activity in total manufacturing production 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).

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.

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

ABBREVIATIONS

Countries

EU	European Union
EU-15	Fifteen Member States of the European Union
B	Belgium
BENELUX	Belgium, the Netherlands and Luxembourg
DK	Denmark
D	Germany
EL	Greece
E	Spain
F	France
IRL	Ireland
I	Italy
L	Luxembourg
NL	the Netherlands
A	Austria
P	Portugal
FIN	Finland
S	Sweden
UK	the United Kingdom
AU	Australia
CA	Canada
CH	Switzerland
CIS	Commonwealth of Independent States
CN	China
CZ	Czech Republic
EEA	European Economic Area
EE	Estonia
HK	Hong Kong
HU	Hungary
IS	Iceland
JP	Japan
KR	South Korea
MX	Mexico
NO	Norway
PL	Poland
RO	Romania
RU	Russia
SG	Singapore
SK	Slovakia
SI	Slovenia
TH	Thailand
TR	Turkey
US	United States (of America)

Professional trade associations

ACEA	Association des Constructeurs Européens d'Automobiles (European Automobile manufacturers Association)
ACEM	Association des Constructeurs Européens de Motocycles (European Motorcycle manufacturers Association)
ACI	Airports Council International (European Region)
AEA	Association of European Airlines
AECMA	Association Européenne des Constructeurs de Matériel Aérospatial (European Association of Aerospace Industries)
AESGP	Association Européenne des Spécialités Pharmaceutiques Grand Public (Association of the European Self-Medication Industry)
AISE	Association Internationale de la Savonnerie, de la Détergence et des Produits d'Entretien (International Association of the Soap & Detergent industry)
APME	Association of Plastics Manufacturers in Europe
CAEF	Comité des Associations Européennes de Fonderie (Committee of European Foundry Associations)
CAOBISCO	Association of the Chocolate, Confectionery, Biscuit industries of the EU
CBMC	Confédération des Brasseurs du Marché Commun (Trade Confederation of the Brewing Industry in the European Union)
CCBE	Conseil des Barreaux de la Communauté européenne (Council of the Bars and Law Societies of the European Community)
CECCM	Confederation of European Community Cigarette Manufacturers
CEPIC	Conseil Européen de l'Industrie Chimique (European Chemical Industry Council)
CEI-BOIS	Confédération Européenne des Industries du Bois (European Confederation of Woodworking Industries)
Cembureau	The European Cement Association
CEPI	Confederation of European Paper Industries
CIETT	Confédération Internationale des Entreprises de Travail Temporaire (International Confederation of Temporary Work Businesses)
CLEPA	Comité de Liaison des Fabricants d'Équipements et Pièces Automobiles (Liaison Committee for Manufacturers of Car Equipment and Parts)
CLGE	Comité de Liaison des Géomètres Experts (The European Council of Geodetic Surveyors)
CONCAWE	Conservation of Clean Air and Water in Europe - the oil companies' European Organization for environmental and health protection
CPDP	Comité Professionnel du Pétrole (Association of oil refiners)
CPIV	Comité Permanent de l'Industrie du Verre de la CEE (Standing Committee of the EU Glass industries)
EAZA	European Association of Zoos and Aquaria
EBMA	European Bicycle Manufacturers Association
ECTAA	Group of National Travel Agents' and Tour Operators' Associations within the EU
EDA	European Dairy Association
EFCA	European Federation of Engineering Consultancy Associations

EFCI	Fédération Européenne du Nettoyage Industriel (European Federation of Cleaning Industries)	UITP	Union International des Transports Publics (International Union of Public Transport)
ELCA	European Landscape Contractors Association	UNAFPA	Union des Associations de Fabricants de Pâtes Alimentaires de la Communauté Européenne (Union of Organisations of Manufacturers of Pasta Products in the European Community)
EMF	European Mortgage Federation	UNESDA-	Union of EU Soft Drinks Associations
EPF	European Panels Federation	CISDA	
ERMCO	European Ready-Mixed Concrete Association	UNIFE	Union des Industries Ferroviaires Européennes (Union of European Railway Industries)
ESBG	European Savings Bank Group	UPU	Union postale universelle (Universal Postal Union)
ESOMAR	European Society for Opinion and Marketing Research	ZMP	Zentrale Markt- und Preisberichtsstelle der Land- und Ernährungswirtschaft (German agricultural market watch)
ESTA	European Security Transport Association		
ESTA	European Steel Tube Association		
ETRA	European Tyre Recycling Association		
EURATEX	European Apparel and Textile Organisation		
EUROFINAS	European Federation of Finance House Associations		
EUROPIA	European Petroleum Industry Association		
EUROSPACE	Organisation of the European space industry		
FBE	Fédération Bancaire Européenne (European Banking Federation)		
FEACO	Fédération Européenne des Associations de Conseil en Organisation (European Federation of Management Consulting Associations)		
FEDIOL	EC Seed Crushers' and Oil Processors' Federation		
FEDMA	Federation of European Direct Marketing		
FEE	Fédération des Experts Comptables Européens (European Federation of Accountants)		
FEFCO	Fédération européenne des Fabricants de Carton Ondulé (European Federation of Corrugated Board Manufactureres)		
FEFSI	Fédération Européenne des Fonds et Sociétés d'Investissement (European Federation of Investment Funds)		
FEVE	Fédération Européenne du Verre d'Emballage (European Container Glass Federation)		
FIBV	Fédération Internationale des Bourses de Valeurs (International Federation of Stock Exchanges)		
FIEC	Fédération de l'Industrie Européenne de la Construction (European Construction Industry Federation)		
GEBC	Groupeement Européen des Banques Coopératives (European Association of Cooperative Banks)		
GISEMES/ UNESEM	Groupeement International et Union Européenne des Sources d'Eaux Minérales Naturelles (European Union Mineral Water producers)		
IAAPA	International Association of Amusement Parks and Attractions		
IACA	International Air Carriers Association		
IATA	International Air Transport Association		
ICAO	International Civil Aviation Organization, European and North Atlantic Office		
IISI	International Iron and Steel Institute		
IMACE	International Federation of Margarine Associations		
IPC	International Post Corporation		
Leaseurope	European Federation of Leasing Company Associations		
OETH	L'observatoire européen du textile et de l'habillement (European Observatory for Textiles and Clothing)		
STD	Swedish Federation of Consulting Engineers and Architects (Svensk Teknik och Design)		
UIC	Union Internationale des Chemins de Fer (International Union of Railways)		

Other organisations

CEESA	Centre européen d'Etudes pour la Santé Animale (European Animal Health Study Centre)
EIA	Energy Information Administration (US)
EITO	European Information Technology Observatory
FAO	Food and Agricultural Organization (of the United Nations)
IEA	International Energy Agency
ILO	International Labour Organization
LME	The London Metal Exchange Limited
UN	United Nations
USGS	US Geological Survey
WNA	World Nuclear Association
WTO	World Trade Organization

Statistical abbreviations

CIS	Community Innovation Survey
COICOP	Classification Of Individual Consumption according to Purpose
CPA	Classification of Products by Activity
FATS	Foreign Affiliates Trade Statistics
FDI	Foreign Direct Investment
HBS	Household Budget Survey
LFS	Labour Force Survey
NACE	Nomenclature statistique des Activités économiques dans la Communauté Européenne (Statistical Classification of economic activities in the European Community)
PRODCOM	PRODUcts of the European COMMunity
SBS	Structural Business Statistics
SME	Small and medium sized enterprises

Other abbreviations

ABS	Antilock Braking System
AM	After-Market
ATC	Agreement on Textiles and Clothing
ATM	Automatic Teller Machine
BSE	Bovine Spongiform Encephalopathy (Mad-cow disease)
CAP	Common Agriculture Policy
CFP	Common Fisheries Policy
DVD	Digital Versatile Disc
ECMT	European Conference of the Ministers of Transport
ECSC	European Coal and Steel Community
FMD	Foot and Mouth Disease
GDP	Gross Domestic Product
ICT	Information and Communications Technology
ISDN	Integrated Services Digital Network
IT	Information Technology
JIT	Just In Time
MDF	Medium Density Fibreboard
MMSD	Mining, Minerals and Sustainable Development Project of the International Institute for Environment and Development
NASDAQ	National Association of Securities Dealers' Quotation System
NYSE	New York Stock Exchange
OE	Original Equipment
OEM	Original Equipment Manufacturer
OJ	Official Journal (of the European Communities)
OPT	Outward Processing Trade
OSB	Oriented StrandBoard
PBX	Private Branch eXchange
PC	Personal Computer
PVC	Polyvinyl Chloride
R&D	Research and Development
SOHO	Small Office/Home Office
TENS	Trans-European Networks
TV	Television
VAT	Value Added Tax
VOC	Volatile Organic Compounds

Weights and measures

AAGR	Average Annual Growth Rate
CGT	Compensated Gross Tonnes
GW	Gigawatt (10 ⁶ kW)
Ha	Hectare (ten thousand square metres)
hl	Hectolitre (hundred litres)
Km	Kilometre
Kms	Kilometres
MW	Megawatt (10 ³ kW)
PPS	Purchasing Power Standard
RPK	Revenue Passenger Kilometres
TEU	Twenty Foot Equivalent Unit
TOE	Tonne of Oil Equivalent (41,868 kilojoules net calorific value per kilogram)
tU	tonnes of contained Uranium
TW	Terawatt (10 ⁹ kW)

Currencies

EUR	Euro
BEF	Belgian Franc
DKK	Danish Krone
DEM	German Mark
GRD	Greek Drachma
ESP	Spanish Peseta
FRF	French Franc
IEP	Irish Pound
ITL	Italian Lira
LUF	Luxembourg Franc
NLG	Dutch Guilder
ATS	Austrian Schilling
PTE	Portuguese Escudo
FIM	Finnish Markka
SEK	Swedish Krone
GBP	Pound sterling
JPY	Japanese Yen
USD	US Dollar

Symbols

:	not available
-	not applicable

Overview - the EU's business economy

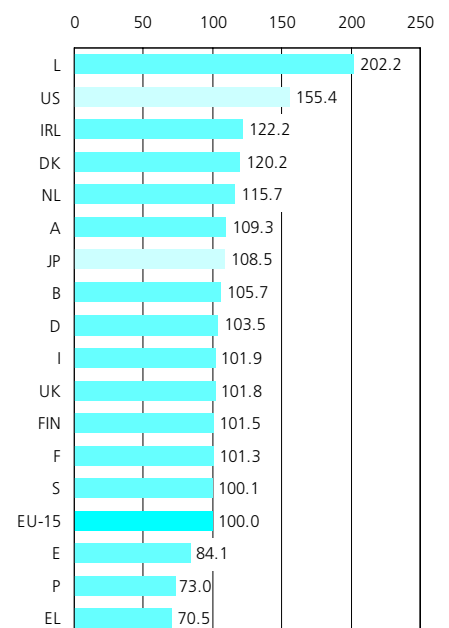
The data presented in this overview brings together information on some key determinants of the EU's competitive performance. It examines factors such as the diffusion of information and communication technologies (ICT), innovation and foreign investment and links these to the structure of the EU's business economy and developments observed for value added, employment and productivity between 1990 and 2000.

One of the most widely used economic indicators is GDP per inhabitant, which measures overall living standards. For the purpose of comparison this ratio is best adjusted to account for different price levels through use of a series expressed in PPS (see figure 1). During the 1990s the gap between living standards in the US and the EU widened. Ireland and Luxembourg were the only Member States to report that GDP per inhabitant was growing as fast as it was in the US between 1991 and 2001. Greece, Portugal, the Netherlands and Finland also reported relatively rapid growth of GDP per inhabitant, whilst Italy, Germany, Sweden, France and Denmark reported rates below the EU average.

Two key factors play an important role in the development of GDP per inhabitant: labour productivity¹ and the employment activity rate, the latter being determined by the size of the labour force and the level of employment (see table 1). During the 1990s the rapid growth of labour productivity was often more pronounced in economies that embraced ICT; with the diffusion of new technologies resulting in productivity gains across the whole economy, not just in ICT-producing sectors. Indeed, in every Member State where ICT expenditure as a percentage of GDP was above the EU average during the period 1995-2000, apparent labour productivity also grew at a faster than average pace. Lower than average levels of ICT expenditure were recorded in France, Spain, Belgium and Germany, accompanied by relatively low apparent labour productivity growth. Data for Austria, Greece and Italy does not however conform to this pattern, as labour productivity grew at a higher than average pace, whilst ICT expenditure as a share of GDP remained below the EU average. A similar analysis performed on the relationship between employment growth and levels of ICT expenditure reveals that in five out of the seven countries where ICT expenditure as a share of GDP was above the EU average, employment also grew at a faster than average pace².

(1) Defined as value added per person employed.
 (2) IRL, NL, P, FIN and UK.

Figure 1
GDP per inhabitant, 2001 (EU-15=100) (1)



(1) At current market prices and PPS; forecasts, except for D and US.
 Source: Eurostat, National Accounts - ESA95 - aggregates (theme2/aggs)

The number of persons employed in the EU's labour force increased at an average rate of 1.3% per annum between 1995 and 2000 (see table 1). The fastest growth was recorded in Ireland and Luxembourg, whilst the number of persons employed in Sweden, Germany, Austria and Greece grew on average by less than 1.0% per annum. Higher employment rates generate on the one hand more revenue for government, whilst at the same time normally removing some of the social security burden, as persons (re-)join the labour force. In 2000, the EU's activity rate (proportion of those employed between the ages of 15 and 64) averaged 63.1%, ranging from 53.7% in Italy and Spain to 76.3% in Denmark (see table SA.15 in the statistical annex to this overview). This ratio rose during the second half of the 1990s in the EU from 59.9% in 1995.

STRUCTURE OF THE EU'S BUSINESS ECONOMY

For the purpose of this publication the term business is used to cover activities classified within NACE Sections C to K, corresponding to industry and (the major part of) services. Industrial activities are grouped into three different Sections: mining and quarrying (C), manufacturing (D), electricity, gas and water supply (E), whilst data for construction (F) is provided separately. The sub-set of services covered in this publication are classified within distributive trades (G), hotels and restaurants (H), transport, storage and communication (I), financial intermediation (J) and real estate, renting and business activities (K)³.

A breakdown of GDP by branch in 2000 (see Table 2 for the breakdown) shows that the two branches generally not covered by this publication, namely, agriculture, hunting and forestry, and public administration, community, social and personal services, accounted together for 23.6% of GDP.

(3) Selected parts of other community, social and personal services (Section O) are also covered in this publication. Agriculture, hunting and forestry; public administration, defence, social security; education; health and social work; private households with employed persons; and extra-territorial organizations are not considered as part of the business enterprise population for this publication (although some of them have market orientated enterprises).

In most developed nations, the share of industry (NACE Sections C to E) in GDP and employment peaked in either the 1960s or 1970s. From the 1970s onwards, there has been a tendency for the tertiary sector of the economy to grow faster than any other branch and this trend quickened during the 1990s. Indeed, the only two branches to report that their share of GDP rose between 1991 and 2000 were both services branches: financial intermediation, real estate, renting and business activities (up 2.6 percentage points); distributive trades, hotels and restaurants, transport, storage and communication (up 0.9 points). These two branches recorded the highest growth rates for value added in constant price terms between 1991 and 2000, gaining on average 3.3% and 2.6% per annum respectively. In the remaining branches of the EU economy, value added increased by between 1.5% and 1.6% per annum, except in the construction sector where average growth of 0.2% per annum was recorded (see figure 2 and table SA.4 of the statistical annex to this overview).

Table 1
Average level of ICT expenditure as a share of GDP and annual average growth rates for labour productivity and employment, 1995-2000 (%)

	ICT expenditure	Labour productivity (1)	Employment
IRL	5.5	5.3	5.7
L	:	5.1	4.2
E	5.1	3.5	2.9
NL	6.0	4.1	2.6
FIN	5.6	4.2	2.3
P	5.6	4.3	1.7
UK	6.5	5.1	1.3
EU-15 (2)	5.3	3.9	1.3
F	5.1	3.1	1.3
B (3)	5.0	3.0	1.1
DK	5.6	4.9	1.0
I	4.4	4.0	1.0
S	7.0	4.2	0.8
D	4.8	3.5	0.7
A	4.7	4.7	0.6
EL	4.7	5.8	0.4

(1) At current market prices and PPS.
 (2) Includes NO and CH for ICT expenditure.
 (3) Includes L for ICT expenditure.
 Source: EITO, Eurostat, National Accounts - ESA95 - aggregates (theme2/aggs) and Eurostat, Labour Force Survey (theme3/lfs)

Table 2
Breakdown of GDP in the EU, 2000 (%)

Agriculture; hunting & forestry (Sections A+B)	2.1
Mining & quarrying; manufacturing; electricity, gas & water supply (Sections C to E)	22.8
Construction (Section F)	5.4
Distributive trades; hotels & restaurants; transport, storage & comm. (Sections G to I)	21.3
Financial intermediation; real estate, renting & business activities (Sections J+K)	26.9
Public administration, community, social & personal services (Sections L to Q)	21.5

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

According to the Labour Force Survey (LFS), there was a net increase of 10.4 million persons in the EU's level of employment between 1995 and 2000. Services (NACE Sections G to Q) accounted for practically all of the net jobs created, although there was also a net increase of 485 thousand in the EU's construction workforce. Services registered a net gain of 11.3 million persons employed, 4.6 million of which were in financial intermediation, real estate, renting and business activities. On the other hand the number of persons employed in agriculture; hunting and forestry fell by 870 thousand and those employed in the industrial branch by 388 thousand (see table 3).

As such, LFS employment data supports the trends observed for GDP, with a continued shift towards the service sector during the second half of the 1990s. It is important to note that rapid structural change has been confined largely to business, information and communication services.

The increasing importance of the service sector may in part be attributed to industrial manufacturers switching from in-house supply to demanding external services from specialist suppliers (for example, management, financial, information and technology services, training, security, catering and cleaning), a phenomenon that is often referred to as out-sourcing.

There are a number of theories that explain why this trend has developed in recent years⁴. Firstly, changes in the structure of the EU economy favour the service sector, as efficient organisation, high-technological know-how, innovation, brand creation and customised services figure amongst sources of competitive advantage. At the same time, the EU's manufacturing sector has been restructured, with high wages and increasingly free trade driving out price sensitive segments of production to

(4) For a more detailed explanation see, External services, structural change and industrial performance, Enterprise Papers, No 3 - 2001, Enterprise Directorate-General of the European Commission.

lower labour cost regions of the world (see for example, chapter 4 on the manufacture of textiles and clothing). Finally, the demand for manufactured goods is affected by physiological limits to further consumption (for example, food). As a result, many EU markets for manufactured goods are saturated, presenting little opportunity for rapid growth. On the other hand, the income elasticity of demand for immaterial sources of well-being is thought to be much higher and so as disposable income rises, consumers tend to devote an increasing share of their expenditure to services.

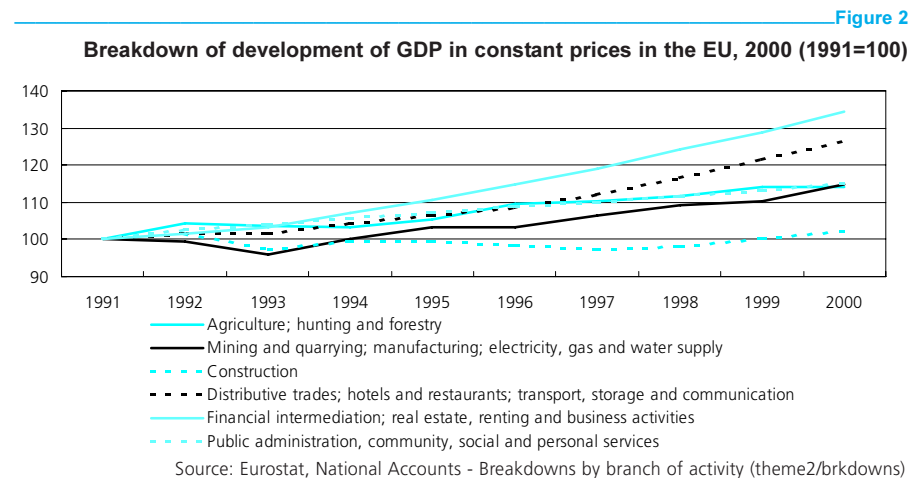


Table 3

Evolution of the labour force in the EU (millions)

	1995	2000	Share (%)		Growth rate, 2000/1995 (%)	Average annual growth rate, 1995-2000 (%)
			1995	2000		
Total	154.4	164.8	100.0	100.0	6.7	1.3
Agriculture; hunting and forestry	8.0	7.1	5.2	4.3	-10.9	-2.3
Mining and quarrying; manufacturing; electricity, gas and water supply	32.6	32.2	21.1	19.6	-1.2	-0.2
Construction	11.5	11.9	7.4	7.2	4.2	0.8
Distributive trades; hotels & restaurants; transport, storage & communication	38.6	41.9	25.0	25.4	8.8	1.7
Financial intermediation; real estate, renting and business activities	18.3	22.9	11.9	13.9	25.2	4.6
Public administration, community, social and personal services	45.3	48.6	29.3	29.5	7.2	1.4

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

GLOBALISATION AND INTANGIBLES

The process of globalisation has had a considerable impact on the location of production, with a marked expansion in the level of economic integration within the EU. Many firms have extended their operations beyond national borders in an attempt to (amongst other things) circumvent trade barriers, increase proximity to customers, reduce costs (labour, transportation or other inputs), guarantee supply of materials and avoid regulation. Globalisation encompasses a wide range of issues, such as the development of trade in goods, international financial flows, various forms of linkages between businesses, cross-border operations and the penetration of national economies. Groups of enterprises are at the core of the globalisation process and may be seen as agents of cross-border transactions, as they control entities situated in different countries with their decisions, information flows and strategies. The qualitative nature of information required to define a group's perimeter can often make it difficult to obtain reliable statistical information (such as the statistical system stands today). One of the key constraints is that global enterprises make their decisions against a worldwide backdrop, whilst these decisions continue to be analysed using national data collections that are truncated by geographical borders.

Data on the levels of foreign direct investment stocks within NACE Sections C to K is provided in table 4. It is important to note that the data for the EU concerns only foreign direct investment with non-Community countries, where manufacturing was the most important sector in terms of FDI stocks of both inward and outward investment. On the other hand, the data for the individual Member States includes both intra-EU and extra-EU stocks. With the inclusion of fellow Member States, service sectors became considerably more attractive for FDI, suggesting that the Internal Market has been successful in encouraging enterprises in the EU to expand into service sectors beyond their national boundaries.

Traditional economic theories are based upon the exchange of tradable, physical goods in a one-to-one relationship. As noted above, this model has progressively been replaced by one where consumer demand for customisation plays an increasing role in a world of saturated commodity markets. As such, intangibles ("non-material factors that contribute to enterprise performance in the production of goods or the provision of services, or that are expected to generate future economic benefits to the entities or individuals that control their deployment"⁵) are thought to play an important role in determining economic performance. The exploitation of property rights, brands, R&D, know-how, skills and supply networks are some of the key drivers of intangible wealth creation. These changes in business structure, conduct and performance have also created significant challenges for national statistical systems.

(5) The Intangible Economy - Impact and Policy Issues, Enterprise Directorate-General of the European Commission.

Table 4
Foreign direct investment, stocks of investment abroad and in the reporting economies, 1999 (million EUR)

	EU-15 (1)	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Abroad																
Mining and quarrying	123,411	:	37	3,209	:	20,520	18,860	:	:	:	1,539	248	149	:	:	98,120
Manufacturing	401,209	:	8,899	103,976	201	16,032	91,251	20,867	51,941	:	111,132	4,844	3,132	26,066	69,255	224,607
Electricity, gas and water supply	48,412	:	9	1,757	:	11,373	46,479	:	12,977	:	633	138	318	:	1,635	17,703
Construction	8,790	:	118	1,187	217	1,429	1,455	:	:	:	1,437	399	134	:	2,920	4,319
Distributive trades	64,093	:	3,706	41,369	98	3,308	10,119	:	7,251	:	23,569	2,559	-689	456	5,489	43,791
Hotels and restaurants	8,205	:	249	577	2	1,054	5,277	:	:	:	421	124	6	:	:	4,774
Transport, storage & comm.	146,995	:	3,703	7,088	1,605	14,454	6,870	:	3,709	:	8,035	69	489	1,239	:	116,833
Financial intermediation	199,669	:	3,407	74,385	:	26,715	57,394	879	62,199	:	80,564	4,142	2,981	2,874	:	94,521
Real estate, renting & business act.	168,102	:	15,825	155,884	1,165	10,919	36,410	:	:	:	20,873	6,399	3,295	217	9,927	60,910
In the reporting economy																
Mining and quarrying	21,290	:	817	544	936	476	307	:	:	:	3,000	257	93	:	:	34,843
Manufacturing	257,435	:	3,534	45,041	6,951	49,827	41,838	85,742	41,838	:	65,547	7,095	5,756	8,248	47,182	93,138
Electricity, gas and water supply	11,263	:	:	518	1	1,177	-229	:	2,194	:	1,412	32	294	:	5,723	15,787
Construction	2,663	:	328	471	646	2,336	186	:	:	:	808	81	400	:	1,401	909
Distributive trades	77,892	:	6,727	24,947	1,425	11,147	12,714	:	8,450	:	31,366	5,290	4,446	3,164	8,526	37,552
Hotels and restaurants	8,153	:	360	644	1,263	1,876	355	:	:	:	1,660	202	491	:	:	6,379
Transport, storage & comm.	24,179	:	8,694	1,555	3,224	2,557	1,345	:	3,077	:	10,133	1,444	623	460	:	75,773
Financial intermediation	147,268	:	4,343	26,898	215	14,389	25,725	3,610	35,707	:	47,872	2,234	4,333	4,392	3,153	76,722
Real estate, renting & business act.	131,468	:	10,201	182,223	:	29,334	65,565	:	:	:	20,908	6,658	5,566	529	7,358	17,262

(1) Extra-EU investment only.

Source: Eurostat, European Union Direct Investments (theme2/bop/fdi)

Table 6 provides information on the characteristics of innovating enterprises. It shows that there were large differences between the Member States in 1996 as regards the share of enterprises engaged in innovation. The differences may in part be explained by activity specialisation, whereby innovation is more likely in research-driven sectors such as electrical machinery and electronics. Another possible reason is the average size of enterprises within each Member State, as in certain activities scale economies result in larger enterprises being more likely to innovate (table 10 provides information on the importance of micro and small sized enterprises across different manufacturing activities). Generally the lowest levels of innovation were recorded in the southern Member States.

Table 5

Selected structural indicators relating to business enterprises, 2000

	Business enterprise R&D expenditure as a share of GDP (%) (1)	Number of patent applications at the EPO per million inhabitants (units)	Venture capital investment as a share of GDP - early stage (%)
EU-15	1.24	152.67	0.08
B	1.47	151.21	0.11
DK	1.25	169.48	0.02
D	1.72	296.78	0.08
EL	0.13	5.18	0.01
E	0.48	22.12	0.03
F	1.37	139.67	0.08
IRL	1.01	87.60	0.11
I	0.56	72.34	0.05
L	:	170.85	:
NL	1.05	217.65	0.09
A	:	154.08	0.03
P	0.17	3.89	0.03
FIN	2.18	320.29	0.10
S	2.86	346.43	0.09
UK	1.25	124.01	0.10
JP	2.15	148.46	:
US	2.00	158.21	0.31

(1) UK, 2001; DK, I, P, FIN and S, 1999; NL, 1998; EL and IRL, 1997.
Source: Eurostat, Structural indicators (theme1/strind)

Table 6

Innovation characteristics of EU enterprises within the manufacturing sector, 1996 (%)

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Innovating enterprises	34	71	69	:	29	43	73	48	42	62	67	26	36	54	59
Innovating enterprises with unsuccessful or not yet completed projects	14	40	34	:	:	38	39	16	24	38	30	8	32	39	29
Innovating enterprises with products new to the market	14	27	24	:	11	20	27	26	21	28	24	7	18	25	19
Innovating enterprises with process innovations	22	51	53	:	25	31	54	41	29	46	49	23	25	38	37
Innovating enterprises with product innovations	31	57	65	:	24	38	66	37	32	56	60	15	29	48	52
Innovating enterprises having applied for a patent	23	27	31	:	:	30	23	20	27	22	33	11	41	36	19

Source: Eurostat, Survey on innovation in EU enterprises (theme9/innovat)

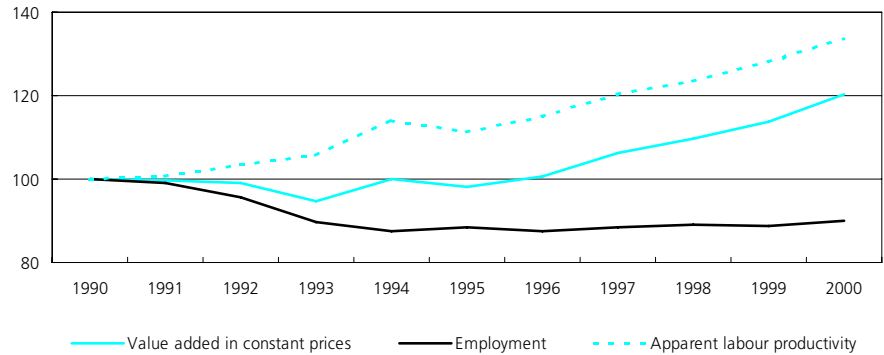
THE EU'S MANUFACTURING SECTOR

Whilst the collection of official statistics relating to some aspects of globalisation and the intangible economy are in their infancy, Structural Business Statistics (SBS) for manufacturing activities have a long established tradition. This section is based upon figures from the SBS database and traces the development of manufacturing value added and employment during the 1990s.

The manufacturing sector (NACE Section D) of the EU economy generated 1,322 billion EUR of value added in 2000. Figure 3 shows that during the first half of the 1990s constant price value added in the EU's manufacturing sector failed to rise above its 1990 level, reaching its cyclical low point in 1993. Manufacturing employment declined at a faster pace between 1990 and 1994 and did not start to grow until 1997, resulting in apparent labour productivity gains. Between 1993 and 2000 EU manufacturing value added in constant prices grew on average by 3.5% per annum.

The structure of the EU's manufacturing sector is provided in table 7; it is based upon the chapter headings that are employed in section 2 of this publication. The fastest growing sector in the second half of the 1990s (as measured by value added in constant prices) was electrical machinery and electronics (NACE Subsection DL), with average growth of 10.2% per annum between 1995 and 2000. Among the remaining sectors, transport equipment (NACE Subsection DM) and chemicals, rubber and plastics (NACE Subsections DG and DH) recorded the highest growth, whilst little or no growth was recorded for textiles, clothing and leather (NACE Subsections DB and DC). Table 8 provides information on the three most important NACE Divisions within each of the Member States; it is based on value added.

Figure 3
Evolution of main indicators for manufacturing in the EU (1990=100)



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

Table 7
Share of manufacturing value added in the EU, 2000 (%)

	NACE	Share
Chemicals, rubber and plastics	Subsections DG and DH	16.2
Electrical machinery and electronics	Subsection DL	13.7
Transport equipment	Subsection DM	12.0
Food, beverages and tobacco (1)	Subsection DA	11.3
Machinery and equipment	Division 29	10.5
Wood, paper, publishing and printing	Subsections DD and DE	10.4
Metal products	Division 28	7.6
Textiles, clothing, leather and footwear	Subsections DB and DC	4.5
Non-metallic mineral products	Division 26	4.4
Metals	Division 27	4.2
Other manufacturing industries (1)	Division 36	2.9
Coke, refined petroleum products and nuclear fuel	Division 23	2.2
Recycling	Division 37	0.1

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

Table 8
Three largest manufacturing sectors, 1999 (1)

	Largest	Second largest	Third largest
EU-15 (2)	Chemicals	Machinery and equipment	Food and beverages
B	Chemicals	Food and beverages	Motor vehicles
DK (3)	Food and beverages	Machinery and equipment	Chemicals
D	Machinery and equipment	Motor vehicles	Chemicals
EL (3)	Food and beverages	Chemicals	Non-metallic mineral products
E	Food and beverages	Metal products	Chemicals
F	Chemicals	Food and beverages	Motor vehicles
IRL (3)	Chemicals	Food and beverages	Publishing and printing
I (4)	Machinery and equipment	Chemicals	Metal products
L (5)	Metals	Rubber and plastics	Non-metallic mineral products
NL (6)	Food and beverages	Chemicals	Publishing and printing
A (7)	Machinery and equipment	Metal products	Coke, refined petroleum & nuclear
P	Food and beverages	Non-metallic mineral products	Textiles
FIN	Radio, TV & communication equip.	Pulp, paper and paper products	Machinery and equipment
S	Motor vehicles	Machinery and equipment	Chemicals
UK (5)	Food and beverages	Chemicals	Machinery and equipment

(1) Based on value added for NACE Divisions.

(2) 2000.

(3) Value added is net of VAT but not of other taxes on products; these are important in the chemicals and food and beverages sectors and are likely to have inflated the importance of these sectors.

(4) 1998.

(5) 1997.

(6) Largest, 1997; second and third largest, 1998.

(7) Third largest, 1998.

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

It has already been suggested that the fastest growing areas of the EU's manufacturing economy are likely to be those driven by marketing, innovation and technology. Looking in more detail at the activity breakdown, the fastest growing sectors in the EU between 1994 and 1999 were office machinery and computers (NACE Group 30.0), aircraft and spacecraft (NACE Group 35.3), motor vehicles and their parts and accessories (NACE Groups 34.1 and 34.3) and pharmaceuticals (NACE Group 24.4)⁶. All of these sectors can be considered as either research-driven with a high degree of technological innovation, or alternatively marketing-driven, with brand image playing an important role in differentiating products. Table 9 provides details of the importance of marketing and technology-driven sectors in each of the Member States.

The manufacturing sectors to report the biggest percentage declines in output in the EU between 1994 and 1999 included leather luggage, handbags and the like (NACE Group 19.2), knitted and crocheted articles (NACE Group 17.7), clocks and watches (NACE Group 33.5) and the tanning and dressing of leather (NACE Group 19.1). All of these industries could be described as traditional or mainstream industries, characterised by a high degree of labour input.

(6) Analysis based on those activities where an EU total is available for both reference years; according to partial data (based on available country information) all three NACE Groups that form part of radio, television and communication equipment (NACE Division 32) also experienced high growth rates.

Table 9
Importance of marketing-driven and technology-driven sectors, 1999 (% of manufacturing) (1)

	EU-15	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Value added																
Marketing-driven industries (2)	19.7	20.7	31.9	16.4	32.2	24.9	20.8	:	18.9	13.3	31.3	:	23.9	14.3	13.8	25.9
Technology-driven industries (3)	23.3	22.0	17.2	25.7	8.8	13.5	29.2	:	15.7	0.6	17.8	:	9.9	25.5	32.9	24.7
Employment																
Marketing-driven industries (2)	20.9	24.9	32.7	18.5	33.1	27.1	22.7	30.2	18.0	20.1	:	20.1	25.5	20.9	16.7	24.1
Technology-driven industries (3)	18.2	16.4	12.1	22.5	7.6	9.0	22.9	27.3	14.4	1.3	:	10.6	5.1	15.4	23.4	18.9

(1) Estimates; DK, EL, IRL, I, A, P and S, 1998; EU-15, L, NL and UK, 1997.

(2) NACE 15+16+19+22+24.5+28.2+28.6+33.5+36.3+36.4+36.5+36.6.

(3) NACE 24.2+24.4+24.6+30+31.2+32+33.1+33.2+33.3+33.4+34.1+35.3.

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

Table 10

Share of micro and small enterprises in total value added, 1999 (%) (1)

	NACE codes	B (2)	DK (3)	D	EL	E (2)	F (4)	IRL (5)	I (2)	L	NL (6)	A (7)	P (8)	FIN	S (9)	UK (10)
Mining & quarrying; manufacturing; electricity, gas & water supply	Sections C to E	:	:	:	:	30.9	22.0	:	38.6	:	:	18.4	30.2	16.3	18.6	17.1
Mining of metal ores	Division 13	:	:	:	:	:	15.0	:	:	:	:	:	:	:	:	:
Other mining and quarrying	Division 14	:	:	:	:	81.2	51.2	:	:	:	63.5	:	:	:	:	:
Coke, refined petroleum & nuclear	Division 23	:	:	:	:	:	2.5	:	11.3	:	:	:	:	:	:	4.8
Non-metallic mineral products	Division 26	22.9	24.6	:	:	32.7	16.6	21.7	42.3	:	32.2	21.9	27.4	20.3	19.5	18.5
Metals	Division 27	3.6	14.8	:	:	12.5	:	:	19.9	:	4.6	2.7	14.8	3.0	4.0	12.8
Metal products	Division 28	47.1	47.6	:	:	63.1	:	:	68.5	:	49.8	34.9	61.3	54.8	50.2	49.5
Machinery and equipment	Division 29	22.1	23.5	:	:	42.2	27.0	23.8	36.5	:	37.5	17.1	45.8	21.5	18.4	25.5
Other manufacturing industries	Division 36	:	:	:	:	:	40.8	:	65.7	:	55.4	45.6	65.7	:	31.7	38.2
Electricity, gas, steam & hot water supply	Division 40	:	:	:	:	4.6	2.2	:	3.5	:	3.8	3.8	11.3	14.8	:	:
Collection, purif. & distrbn. of water	Division 41	11.4	:	:	:	13.1	6.1	:	18.0	:	:	39.5	8.6	29.7	:	:
Food, beverages and tobacco	Subsection DA	27.8	12.7	:	:	32.8	33.8	8.2	45.7	:	17.2	:	29.5	18.3	15.4	7.7
Textiles, clothing, leather and footwear	Subsections DB and DC	30.5	41.7	:	:	56.2	36.3	:	54.7	:	42.5	23.8	35.0	35.5	:	28.7
Wood, paper, publishing and printing	Subsections DD and DE	40.6	34.6	:	:	48.6	39.0	:	49.8	:	34.0	27.6	40.3	12.2	23.4	30.1
Chemicals, rubber and plastics	Subsections DG and DH	9.1	12.8	:	:	20.1	12.1	3.4	26.5	:	12.4	12.3	23.8	16.8	12.4	12.6
Electrical machinery and electronics	Subsection DL	12.2	20.8	:	:	21.2	15.6	3.9	35.4	:	16.2	9.7	12.2	5.1	10.8	16.7
Transport equipment	Subsection DM	5.8	18.8	:	:	6.8	8.4	14.1	10.8	:	18.9	3.7	9.2	16.1	4.6	6.9
Manufacturing	Section D	20.7	24.2	:	:	33.7	23.9	8.7	42.3	:	25.5	19.9	32.6	16.0	17.6	20.0
Electricity, gas and water supply	Section E	:	:	:	:	5.4	2.5	:	4.1	:	3.2	5.5	10.9	16.5	27.4	3.9

(1) Enterprises with between 1 and 49 persons employed. (2) 1998. (3) 1998, except NACE 15+16, 1997. (4) NACE 13, 14 and 15+16, 1998. (5) 1998, except NACE 29, 30+31+32+33 and 34+35, 1997. (6) 1998, except NACE 17+18+19, 20+21+22 and 24+25, 1997. (7) NACE 30+31+32+33, 1998. (8) NACE 36, 1997. (9) NACE 15+16, 1998. (10) 1997.
Source: Eurostat, Structural Business Statistics (theme4/sbs)

Table 11

Development of output prices in the EU (1995=100)

	NACE	1995	1996	1997	1998	1999	2000
Mining and quarrying; manufacturing; electricity, gas and water supply	Sections C to E	100.0	100.4	101.3	100.7	100.4	105.3
Mining of metal ores	Division 13	100.0	87.9	99.6	89.7	86.8	:
Other mining and quarrying	Division 14	100.0	102.4	103.9	105.1	106.2	108.4
Manufacturing	Section D	100.0	101.1	101.8	100.9	101.2	106.5
Food, beverages and tobacco	Subsection DA	100.0	102.1	103.3	103.0	102.2	103.8
Textiles, clothing, leather and footwear	Subsections DB and DC	100.0	101.4	102.4	103.3	103.2	104.6
Wood, paper, publishing and printing	Subsections DD and DE	100.0	99.4	98.8	99.6	99.4	103.0
Coke, refined petroleum products and nuclear fuel	Division 23	100.0	112.3	117.2	101.0	115.0	170.3
Chemicals, rubber and plastics	Subsections DG and DH	100.0	98.8	99.2	97.9	97.3	102.1
Non-metallic mineral products	Division 26	100.0	100.8	101.7	102.7	104.0	106.0
Metals	Division 27	100.0	95.2	95.4	95.4	90.1	98.7
Metal products	Division 28	100.0	101.5	102.0	102.9	103.5	105.1
Machinery and equipment	Division 29	100.0	102.6	104.0	105.1	106.0	107.1
Electrical machinery and electronics	Subsection DL	100.0	99.3	98.2	96.7	95.2	95.1
Transport equipment	Subsection DM	100.0	101.9	102.1	103.1	103.6	103.8
Other manufacturing industries	Division 36	100.0	102.8	103.8	105.0	106.3	107.8
Electricity, gas, steam and hot water supply	Division 40	100.0	98.1	100.1	97.7	93.5	99.8
Collection, purification and distribution of water	Division 41	100.0	104.9	108.8	111.9	114.1	114.7

Source: Eurostat, European Business Trends (theme4/ebt)

Whilst globalisation widens the horizon for production-related decision making, it also increases the speed with which information, technology and ultimately competition can be diffused. One theory put forward to explain this shift is that smaller economies are faster at adapting their manufacturing structure. Taking the shares of each NACE Division in national manufacturing and summing their absolute differences between two periods (1994 and 1999) it is possible to create an indicator that measures adaptation. Ireland reported the most rapid change in the composition of its manufacturing sector, followed by Finland, whilst France, Germany and the United Kingdom were the slowest economies to adapt. This shift may have been encouraged by some of the smaller Member States successfully concentrating on certain high growth manufacturing sectors (for example, chemicals and computers in Ireland, telecommunications equipment in Finland). Alternatively it could have resulted from the fact that some of the more recent countries to join the EU were at an earlier stage in the process of industrialisation and so industrial activities in these countries become relatively more important, whilst the tertiary sector grew in other Member States. Finally, one should also note that exchange rate fluctuations may also contribute to shifts in the structure of output across the Member States.

COUNTRY SPECIALISATION IN MANUFACTURING

Whilst the larger Member States may often be slower at adapting the structure of their manufacturing sectors, this does not prevent them from specialising in key activities. Smaller countries will generally register much higher (and lower) relative specialisation ratios than larger countries, as some manufacturing sectors do not exist in smaller countries (which rely on imports), thus magnifying the relative importance of those that do. In addition, specialisation ratios, per se, provide no information as to whether or not an industry accounts for an important share of manufacturing value added. For this reason the data presented in table 12 has been filtered so that only sectors accounting for more than 0.5% of national manufacturing are included. France, Germany, Ireland, the Netherlands, Finland, Sweden and the United Kingdom were all highly specialised in at least one technology-driven sector, whilst the southern Member States tended to be specialised in labour-intensive activities.

Table 12

Manufacturing specialisation in the Member States, 1999 (1)

B	DK (2)	D	EL (2)	E
Made-up textile articles	Building & repairing of ships	Electricity distribn. & control app.	Cement, lime & plaster	Ceramic tiles & flags
Other first processing of iron & steel	Fish	Machine tools	Textile fibres	Stone
Other textiles	Games & toys	Motor vehicles	Fruit & vegetables	Oils & fats
F	IRL	I (2)	L (3)	NL (2)
Aircraft & spacecraft	Electronic components	Ceramic tiles & flags	Basic iron & steel (ECSC)	Audio-visual household goods
Processing of nuclear fuel	Medical & surgical equipment	Motorcycles & bicycles	Other textiles	Prepared animal feeds
Steam generators	Office machinery & computers	Tanning & dressing of leather	Rubber products	Oils & fats
A	P	FIN	S	UK (3)
Railway rolling stock	Footwear	Pulp, paper & paperboard	Pulp, paper & paperboard	Aircraft & spacecraft
Sawmilling & planing of wood	Knitted & crocheted fabrics	Sawmilling & planing of wood	Sawmilling & planing of wood	Office machinery & computers
Sports goods	Other wood products	Telecommunications equipment	Telecommunications equipment	Refined petroleum products

(1) Three most specialised manufacturing activities per country; based on NACE Groups and their specialisation ratios in terms of value added at factor cost; excluding recycling; only NACE Groups with a share >0.5% of national manufacturing are included; activities are ranked in alphabetical order.

(2) 1998.

(3) 1997.

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

TRADE DEVELOPMENTS

As a result of the globalisation process and the opening up of the Internal Market, the share of output destined for domestic consumption has generally declined at the expense of output for export. This trend has generally spread from manufactured goods to trade in services. Nevertheless, the value of goods exported from the EU to non-Community countries was three times that of service transactions in 2000. Travel, transportation and other business services accounted for three-quarters (74.6%) of the EU's external transactions in services in 2000. The United Kingdom had the largest share of service transactions with both EU and non-Community countries, with just under one-fifth of total credits in 2000 (see table 13) and was particularly specialised in insurance services, financial services and other business services.

Table 13
International trade in services, 2000 (million EUR)

	Credit	Debit
EU-15 (1)	298,196	292,590
B/L	47,425	41,991
DK	22,440	19,932
D	91,158	145,555
EL	20,990	12,257
E	58,227	34,011
F	88,472	67,707
IRL	18,327	31,392
I	60,796	60,806
NL	58,727	57,644
A	32,808	31,761
P	9,168	7,214
FIN	6,819	9,604
S	22,019	25,437
UK	127,402	103,347

(1) Trade with non-Community countries only. Source: Eurostat, International trade in services, foreign direct investment, balance of payments (theme2/bop)

Table 14
EU-15 international trade in services with non-Community countries, 2000 (million EUR)

	Credit	Debit	Net balance
Services, of which	298,196	292,590	5,606
Transportation	76,381	73,332	3,049
Travel	74,658	77,694	-3,036
Communication services	5,571	6,260	-689
Construction services	9,268	6,621	2,646
Insurance services	9,095	3,747	5,347
Financial services	18,692	9,349	9,343
Computer and information services	9,370	6,302	3,068
Other business services	71,696	75,262	-3,566
Personal, cultural and recreational services	3,249	6,584	-3,335
Government services n.e.c.	6,946	6,570	376

Source: Eurostat, International trade in services, foreign direct investment, balance of payments (theme2/bop)

Table 15
Extra and intra-EU trade for manufactured goods (CPA Section D), 2000 (million EUR)

	Share in		Share in		Trade balance	Cover ratio (%)
	Exports	total (%)	Imports	total (%)		
EU-15 (1)	859,793	-	804,889	-	54,904	106.8
B	182,478	8.1	157,827	7.4	24,651	115.6
DK	47,044	2.1	44,716	2.1	2,329	105.2
D	551,932	24.4	447,473	21.0	104,459	123.3
EL	9,987	0.4	26,354	1.2	-16,367	37.9
E	114,812	5.1	143,306	6.7	-28,494	80.1
F	331,792	14.7	323,473	15.2	8,320	102.6
IRL	75,151	3.3	49,714	2.3	25,437	151.2
I	249,456	11.0	214,721	10.1	34,735	116.2
L	8,811	0.4	11,009	0.5	-2,197	80.0
NL	203,654	9.0	186,274	8.7	17,379	109.3
A	65,959	2.9	71,960	3.4	-6,002	91.7
P	25,818	1.1	37,711	1.8	-11,893	68.5
FIN	49,069	2.2	30,658	1.4	18,412	160.1
S	88,313	3.9	67,052	3.1	21,260	131.7
UK	259,156	11.4	317,617	14.9	-58,461	81.6

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

External trade statistics of manufacturing goods are available within the Comext database, and can be compiled according to the Classification of Products by Activity (CPA). Germany accounted for almost one-quarter (24.4%) of the manufactured goods that were exported by Member States in 2000 and recorded the largest trade surplus (104.5 billion EUR) including both intra and extra-EU trade. However, Finland, Ireland and Sweden all recorded higher cover ratios (exports divided by imports) - see table 15. Ireland, Greece, Finland and Portugal reported the quickest change in the structure of their exports between 1990 and 2000, whilst Italy, Spain and Germany had the slowest adaptation rates.

Table 16 shows that external trade of electrical machinery and electronic products (CPA Subsection DL) with non-Community countries grew at a rapid pace between 1990 and 2000, by which time these products accounted for 21.3% of the EU's manufactured exports and 30.8% of its imports. Using the chapter breakdowns from section 2 of this publication, the other product groups to report that exports were growing at a faster pace than the manufacturing average were coke, refined petroleum products and nuclear fuel (CPA Division 23), chemicals, rubber and plastics (CPA Subsections DG and DH) and transport equipment (CPA Subsection DM). Electrical machinery and electronic products also registered the fastest growth rates for imports, followed by metal products (CPA Division 28), non-metallic mineral products (CPA Division 26), other manufactured goods (CPA Division 36) and transport equipment.

The US accounted for 24.7% of the EU's manufactured exports in 2000, which marked a 3.6 percentage point increase on 1990. Poland, China, the Czech Republic and Hungary all moved into the top ten export destinations for EU manufactured goods between 1990 and 2000, whilst the relative share of Turkey (already in the top ten in 1990) also increased.

In 1990 approximately half of the EU's imports of manufactured goods came from just three countries; the US, Japan and Switzerland. By 2000 their share had fallen to below 40%, as China took over from Switzerland as the third most important origin of imports. Chinese imports had accounted for 3.3% of total EU imports from non-Community countries in 1990, a share that rose to 8.5% by 2000. Other countries to report noticeable increases in their relative share of EU manufactured imports during the course of the 1990s included the Czech Republic, Hungary and Poland, as well as Indonesia, Malaysia and South Korea.

Table 16

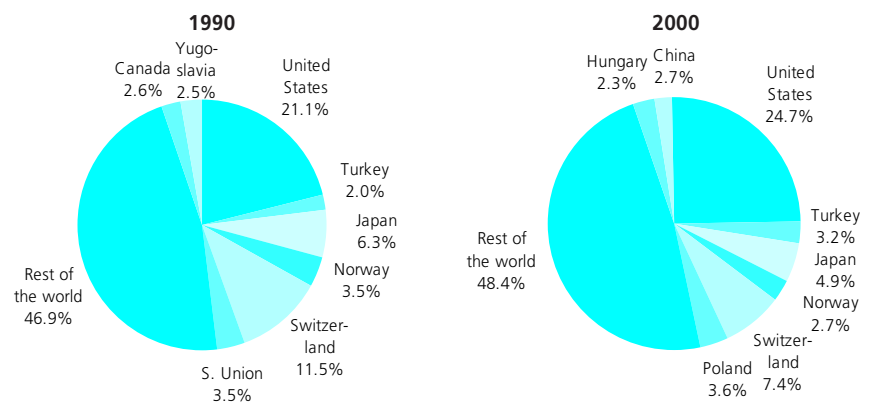
EU-15 external trade flows with non-Community countries (share of manufacturing total, %)

CPA	Exports		Imports	
	1990	2000	1990	2000
Electrical machinery and electronics				
Subsection DL	13.8	21.3	23.1	30.8
Transport equipment				
Subsection DM	16.0	17.5	12.1	13.3
Chemicals, rubber and plastics				
Subsections DG and DH	15.0	16.6	11.7	11.3
Machinery and equipment				
Division 29	18.5	14.5	8.5	8.2
Textiles, clothing, leather and footwear				
Subsections DB and DC	7.7	6.1	12.1	10.5
Food, beverages and tobacco				
Subsection DA	7.5	5.4	7.4	4.7
Metals				
Division 27	6.0	4.3	8.5	6.8
Wood, paper, publishing and printing				
Subsections DD and DE	3.9	3.7	5.0	3.7
Other manufacturing industries				
Division 36	4.0	3.4	4.0	4.5
Metal products				
Division 28	3.2	2.8	1.9	2.2
Coke, refined petroleum & nuclear				
Division 23	2.0	2.4	4.8	2.8
Non-metallic mineral products				
Division 26	2.3	1.9	1.0	1.1

Source: Eurostat, Comext

Figure 4

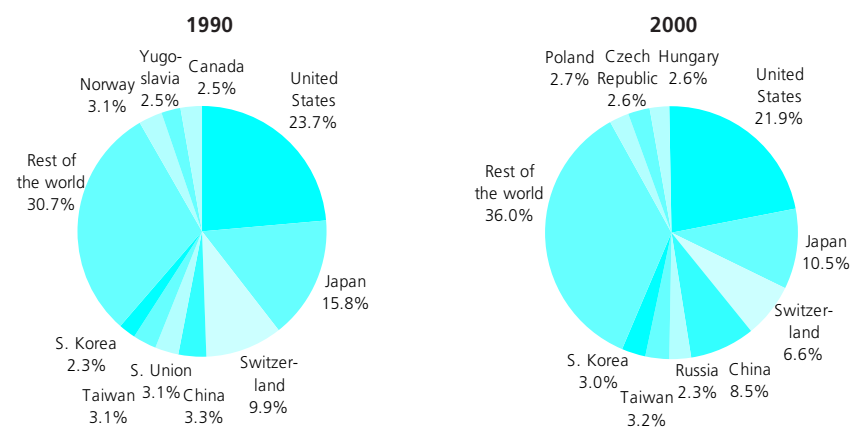
Destination of EU manufacturing exports (CPA Section D)



Source: Eurostat, Comext

Figure 5

Origin of EU manufacturing imports (CPA Section D)



Source: Eurostat, Comext

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 of a horizontal nature and may prove relevant for a number of chapters

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

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
BEF/LUF	42.4257	42.2233	41.5932	40.4713	39.6565	38.5519	39.2986	40.5332	40.6207	40.3399	40.3399	40.3399
DKK	7.85652	7.90859	7.80925	7.59359	7.54328	7.32804	7.35934	7.48361	7.49930	7.43556	7.45382	7.45207
DEM	2.05209	2.05076	2.02031	1.93639	1.92453	1.87375	1.90954	1.96438	1.96913	1.95583	1.95583	1.95583
GRD	201.412	225.216	247.026	268.568	288.026	302.989	305.546	309.355	330.731	325.820	336.678	340.750
ESP	129.411	128.469	132.526	149.124	158.918	163.000	160.748	165.887	167.184	166.386	166.386	166.386
FRF	6.91412	6.97332	6.84839	6.63368	6.58262	6.52506	6.49300	6.61260	6.60141	6.55957	6.55957	6.55957
IEP	0.767768	0.767809	0.760718	0.799952	0.793618	0.815525	0.793448	0.747516	0.786245	0.787564	0.787564	0.787564
ITL	1,522.0	1,533.2	1,595.5	1,841.2	1,915.1	2,130.1	1,959.0	1,929.3	1,943.7	1,936.3	1,936.3	1,936.3
NLG	2.31212	2.31098	2.27482	2.17521	2.15827	2.09891	2.13973	2.21081	2.21967	2.20371	2.20371	2.20371
ATS	14.4399	14.4309	14.2169	13.6238	13.5396	13.1824	13.4345	13.8240	13.8545	13.7603	13.7603	13.7603
PTE	181.109	178.614	174.714	188.370	196.896	196.105	195.761	198.589	201.695	200.482	200.482	200.482
FIM	4.85496	5.00211	5.80703	6.69628	6.19077	5.70855	5.82817	5.88064	5.98251	5.94573	5.94573	5.94573
SEK	7.52051	7.47927	7.53295	9.12151	9.16308	9.33192	8.51472	8.65117	8.91593	8.80752	8.44519	9.25511
GBP	0.713851	0.701012	0.737650	0.779988	0.775903	0.828789	0.813798	0.692304	0.676434	0.658735	0.609478	0.621874
JPY	183.6600	166.4930	164.2230	130.1480	121.3220	123.0120	138.0840	137.0770	146.4150	121.3170	99.4748	108.6820
USD	1.273430	1.239160	1.298100	1.171000	1.189520	1.308010	1.269750	1.134040	1.121090	1.065780	0.921937	0.895630

Source: Eurostat, Monetary and other financial statistics (theme2/mny)

Table SA.2
Population, as of 1 January (thousands)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000 (1)
EU-15	363,763	365,435	367,073	368,994	370,433	371,589	372,670	373,717	374,584	375,346	376,455
B	9,948	9,987	10,022	10,068	10,101	10,131	10,143	10,170	10,192	10,214	10,239
DK	5,135	5,146	5,162	5,181	5,197	5,216	5,251	5,275	5,295	5,314	5,330
D	79,113	79,753	80,275	80,975	81,338	81,539	81,817	82,012	82,057	82,037	82,163
EL	10,121	10,200	10,294	10,349	10,410	10,443	10,465	10,487	10,511	10,522	10,543
E	38,826	38,875	38,965	39,051	39,121	39,177	39,242	39,299	39,348	39,394	39,442
F	56,577	56,893	57,218	57,530	57,779	58,020	58,258	58,492	58,728	58,977	59,226
IRL	3,507	3,521	3,547	3,569	3,583	3,598	3,620	3,652	3,694	3,735	3,777
I	56,694	56,744	56,757	56,960	57,138	57,269	57,333	57,461	57,563	57,613	57,680
L	379	384	390	395	401	407	413	418	424	429	436
NL	14,893	15,010	15,129	15,239	15,342	15,424	15,494	15,567	15,654	15,760	15,864
A	7,690	7,769	7,868	7,962	8,015	8,040	8,055	8,068	8,075	8,083	8,103
P	9,920	9,877	9,865	9,869	9,892	9,912	9,921	9,934	9,957	9,979	9,998
FIN	4,974	4,998	5,029	5,055	5,078	5,099	5,117	5,132	5,147	5,160	5,171
S	8,527	8,591	8,644	8,692	8,745	8,816	8,837	8,844	8,848	8,854	8,861
UK	57,459	57,685	57,907	58,099	58,293	58,500	58,704	58,905	59,090	59,391	59,623

(1) E, F, IRL and L, estimates.

Source: Eurostat, Population and social conditions - demography (theme3/demo)

Table SA.3

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

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001 (1)
EU-15 (2)	:	:	1.3	-0.4	2.8	2.4	1.6	2.5	2.9	2.6	3.3	2.7
B	2.9	1.8	1.6	-1.5	2.8	2.6	1.2	3.6	2.2	3.0	4.0	3.0
DK	1.0	1.1	0.6	0.0	5.5	2.8	2.5	3.0	2.8	2.1	3.2	2.1
D	:	:	2.2	-1.1	2.3	1.7	0.8	1.4	2.0	1.8	3.0	2.2
EL	0.0	3.1	0.7	-1.6	2.0	2.1	2.4	3.5	3.0	3.4	4.3	4.4
E	:	:	:	:	:	2.9	2.4	4.0	4.3	4.1	4.1	3.2
F	2.6	1.0	1.5	-0.9	2.1	1.7	1.1	1.9	3.4	2.9	3.1	2.9
IRL	:	1.9	3.3	2.7	5.8	10.0	7.8	10.8	8.6	10.8	11.5	7.5
I	2.0	1.4	0.8	-0.9	2.2	2.9	1.1	2.0	1.8	1.6	2.9	2.5
L	:	:	:	:	:	:	3.6	9.1	5.9	5.7	9.5	5.6
NL	4.1	2.5	1.7	0.9	2.6	2.9	3.0	3.8	4.3	3.7	3.5	3.4
A	4.7	3.3	2.3	0.4	2.6	1.6	2.0	1.6	3.5	2.8	3.0	2.5
P	4.0	4.4	1.1	-2.0	1.0	4.3	3.7	3.8	3.8	3.3	3.3	2.6
FIN	0.0	-6.3	-3.3	-1.1	4.0	3.8	4.0	6.3	5.3	4.0	5.7	4.0
S	:	:	:	:	4.1	3.7	1.1	2.1	3.6	4.1	3.6	2.7
UK	0.8	-1.4	0.2	2.5	4.7	2.9	2.6	3.4	3.0	2.1	2.9	2.7

(1) Forecasts.

(2) 1992 to 1995, estimates.

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

Table SA.4

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

	1992	1993	1994	1995	1996	1997	1998	1999	2000
Total	1.3	-0.4	3.0	2.4	1.6	2.5	2.9	2.5	3.5
Agriculture, hunting, forestry and fishing	4.3	-0.6	-0.4	2.1	4.4	0.7	1.1	2.1	0.1
Industry	-0.6	-3.5	4.3	3.0	0.0	3.0	2.8	0.8	4.2
Construction	1.5	-4.1	2.2	-0.2	-1.3	-1.1	0.8	2.3	2.0
Distributive trades; hotels and restaurants; transport, storage & communication	1.4	0.1	2.6	2.3	1.5	3.4	3.9	4.4	4.1
Financial intermediation; real estate, renting and business activities	1.5	1.6	3.8	3.4	3.7	3.7	4.1	3.7	4.5
Public administration; education; health; other community, social and personal services; private households with employees	2.6	1.3	1.6	1.5	1.7	1.0	1.5	1.2	1.6

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

Table SA.5

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

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
EU-15 (1)	11.1	10.2	9.8	8.3	8.5	8.9	7.5	6.3	4.9	4.7	5.4	5.0
B	10.0	9.3	8.7	7.2	7.8	7.5	6.5	5.8	4.8	4.8	5.6	5.1
DK	10.7	9.2	8.9	7.3	7.8	8.3	7.2	6.3	4.9	4.9	5.6	5.1
D	8.7	8.5	7.9	6.5	6.9	6.9	6.2	5.6	4.6	4.5	5.3	4.8
EL	:	:	24.1	23.3	20.7	17.0	14.5	9.9	8.5	6.3	6.1	5.3
E	14.6	12.3	11.7	10.2	10.0	11.3	8.7	6.4	4.8	4.7	5.5	5.1
F	9.9	9.0	8.6	6.8	7.2	7.5	6.3	5.6	4.6	4.6	5.4	4.9
IRL	10.1	9.3	9.3	7.7	7.9	8.3	7.3	6.3	4.8	4.7	5.5	5.0
I	12.1	13.1	13.3	11.2	10.5	12.2	9.4	6.9	4.9	4.7	5.6	5.2
L	8.6	8.1	7.9	6.9	7.2	7.2	6.3	5.6	4.7	4.7	5.5	4.9
NL	8.9	8.7	8.1	6.4	6.9	6.9	6.2	5.6	4.6	4.6	5.4	5.0
A	8.7	8.6	8.3	6.7	7.0	7.1	6.3	5.7	4.7	4.7	5.6	5.1
P	15.1	14.2	11.7	11.2	10.5	11.5	8.6	6.4	4.9	4.8	5.6	5.2
FIN	:	11.3	12.0	8.8	9.1	8.8	7.1	6.0	4.8	4.7	5.5	5.0
S	13.2	10.8	10.0	8.5	9.7	10.2	8.0	6.6	5.0	5.0	5.4	5.1
UK	11.0	9.9	9.1	7.6	8.2	8.3	7.9	7.1	5.6	5.0	5.3	5.0

(1) Excluding EL and FIN, 1990; excluding EL, 1991.

Source: Eurostat, Monetary and other financial statistics (theme2/mny)

Table SA.6

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

	1990 (1)	1991 (1)	1992 (1)	1993 (1)	1994 (1)	1995 (1)	1996 (2)	1997 (2)	1998	1999	2000	2001 (3)
EU-15	5.3	5.2	4.0	3.4	2.8	2.8	2.4	1.7	1.3	1.2	2.1	2.4
B	:	:	2.3	2.5	2.4	1.3	1.8	1.5	0.9	1.1	2.7	2.4
DK	2.5	2.2	1.9	0.9	1.8	2.0	2.1	1.9	1.3	2.1	2.7	2.3
D	:	:	:	:	:	:	1.2	1.5	0.6	0.6	2.1	2.4
EL	:	:	:	:	:	:	7.9	5.4	4.5	2.1	2.9	3.7
E	:	:	:	4.9	4.6	4.6	3.6	1.9	1.8	2.2	3.5	3.7
F	:	3.4	2.4	2.2	1.7	1.8	2.1	1.3	0.7	0.6	1.8	1.8
IRL	:	:	:	:	:	:	2.2	1.2	2.1	2.5	5.3	4.0
I	6.2	6.2	5.0	4.5	4.2	5.4	4.0	1.9	2.0	1.7	2.6	2.7
L	:	:	:	:	:	:	1.2	1.4	1.0	1.0	3.8	2.4
NL	2.4	3.2	2.8	1.6	2.1	1.4	1.4	1.9	1.8	2.0	2.3	5.1
A	2.8	3.1	3.5	3.2	2.7	1.6	1.8	1.2	0.8	0.5	2.0	2.3
P	13.3	11.4	8.9	5.9	5.0	4.0	2.9	1.9	2.2	2.2	2.8	4.4
FIN	5.8	4.5	3.3	3.3	1.6	0.4	1.1	1.2	1.4	1.3	3.0	2.7
S	10.2	8.7	1.3	4.8	2.9	2.7	0.8	1.8	1.0	0.6	1.3	2.7
UK	7.0	7.5	4.2	2.5	2.0	2.7	2.5	1.8	1.6	1.3	0.8	1.2

(1) EU-15, B, DK, E, F, I, P, FIN, S and UK, estimates.

(2) EU-15 and IRL, estimates.

(3) EU-15, F, L and NL, provisional.

Source: Eurostat, Harmonized indices of consumer prices (theme2/price)

Table SA.7

Share in total mean consumption expenditure by households, 1999 (%)

	EU-15 (1)	B	DK	D	EL	E	F (1)	IRL	I	L	NL	A	P (1)	FIN	S	UK
Food and non-alcoholic beverages	16.1	13.3	13.1	11.1	16.6	18.3	16.2	:	19.0	10.1	10.5	13.4	21.2	14.2	15.4	10.5
Alcoholic beverages, tobacco and narcotics	2.8	2.3	4.2	2.8	3.5	2.7	2.7	:	1.9	2.0	2.1	2.6	2.8	2.9	2.9	3.0
Clothing and footwear	6.9	5.4	5.5	5.7	8.6	7.4	5.6	:	7.5	5.9	6.0	6.6	6.3	4.6	5.2	5.5
Housing, water, electricity, gas and other fuels	24.6	26.2	28.4	31.2	21.9	27.5	23.2	:	24.7	27.4	26.7	23.9	19.9	28.1	26.8	28.3
Furnishings, household equipment & maintenance	7.0	6.5	6.4	7.4	7.5	5.0	7.6	:	7.6	8.2	7.2	7.2	6.7	4.5	5.0	7.3
Health	3.1	4.7	2.4	3.6	6.3	2.5	5.2	:	4.4	2.4	1.1	2.4	4.6	3.7	3.0	1.1
Transport	13.1	12.5	14.1	13.3	11.2	12.5	14.5	:	13.7	15.4	10.3	14.4	15.7	17.0	13.4	13.6
Communication	2.0	2.2	2.1	2.5	3.3	2.0	2.0	:	2.5	2.1	2.2	2.6	2.0	2.8	2.6	2.3
Recreation and culture	9.4	10.7	11.2	11.9	4.5	6.2	7.6	:	6.3	8.7	10.4	12.3	3.7	10.7	14.6	13.4
Education	0.7	0.5	0.4	0.5	2.4	1.4	0.5	:	0.8	0.1	1.2	0.3	1.3	0.2	0.1	1.3
Restaurants and hotels	6.4	5.7	4.1	4.9	8.8	9.3	6.9	:	4.6	9.6	7.0	5.4	9.2	4.1	3.8	7.9
Miscellaneous goods and services	7.9	10.0	8.1	5.0	5.5	5.1	8.1	:	7.1	8.0	15.3	8.9	6.5	7.1	7.2	5.8

(1) 1994.

Source: Eurostat, Household Budget Survey (theme3/hbs)

Table SA.8

Consumer confidence (balance)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
EU-15 (1)	-9.6	-16.2	-19.3	-25.7	-13.5	-8.0	-14.3	-9.7	-3.9	-2.9	1.0	-4.3
B	0.8	-6.5	-13.3	-24.7	-10.3	-8.6	-13.1	-12.8	1.7	2.6	13.5	0.6
DK	-6.8	-4.0	-2.4	-2.6	11.3	14.3	8.0	14.0	10.3	4.3	11.3	9.2
D	-1.7	-10.8	-15.4	-25.3	-10.9	-6.0	-19.9	-18.0	-5.1	-1.6	2.9	-3.3
EL	-26.2	-33.3	-37.0	-31.1	-29.6	-37.3	-27.3	-29.9	-34.8	-27.0	-15.3	-26.6
E	-10.7	-13.4	-25.9	-30.9	-16.3	-12.8	-9.4	-2.9	0.1	1.7	2.3	-4.0
F	-15.3	-28.2	-27.3	-29.9	-18.6	-13.8	-29.8	-21.5	-11.6	-8.7	-2.8	-11.1
IRL	-9.9	-23.8	-25.7	-20.8	-10.3	-4.6	-0.2	11.7	12.4	14.0	12.5	-1.6
I	-9.8	-15.4	-21.9	-31.9	-13.1	-5.3	-12.0	-14.1	-7.7	-9.9	-7.6	-2.8
L	:	:	:	:	:	:	:	:	:	:	:	:
NL	6.2	-5.3	-4.5	-15.6	-2.3	7.2	7.9	19.5	23.2	19.3	24.4	3.8
A	:	:	:	:	:	:	-12.7	-9.2	-1.7	4.7	5.9	3.0
P	-6.4	-3.8	-13.7	-33.2	-30.9	-22.8	-25.1	-17.4	-14.8	-13.8	-17.9	-24.2
FIN	:	:	:	:	:	:	12.0	18.3	18.2	17.4	19.7	11.9
S	:	:	:	:	:	:	-4.8	4.4	10.0	12.4	21.8	5.0
UK	-20.8	-17.3	-17.0	-17.8	-15.8	-10.4	-5.5	3.2	-1.8	-3.6	-3.8	-4.6

(1) Average of available data.

Source: Eurostat, European and national short term indicators (theme1/euroind)

Table SA.9

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

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999 (1)	2000 (1)	2001 (2)
EU-15 (3)	:	21.1	20.8	19.7	19.7	19.8	19.9	20.0	20.6	21.1	21.3	21.6
B	21.4	20.1	20.2	19.9	19.3	19.9	19.9	20.5	20.9	21.0	20.7	20.9
DK	18.7	17.9	17.4	16.8	17.1	18.6	18.9	20.3	21.3	21.2	22.6	22.4
D	:	22.9	23.4	22.6	23.0	22.4	22.1	21.9	22.1	22.6	22.5	22.5
EL	:	:	:	:	:	18.6	19.7	21.5	22.6	23.4	24.6	26.0
E	24.4	24.2	22.9	21.0	21.0	22.0	21.9	22.1	23.2	24.3	24.6	24.9
F	21.1	20.5	19.9	18.8	18.7	18.8	18.6	18.2	18.9	19.5	20.0	20.7
IRL	19.3	17.6	17.1	15.8	16.7	17.2	18.6	19.8	21.0	21.6	20.8	20.7
I	20.8	20.7	20.2	18.2	17.8	18.3	18.8	18.8	19.3	19.8	20.5	20.7
L	:	:	:	:	:	21.7	21.4	22.4	21.7	24.6	21.8	21.8
NL	21.7	21.3	21.1	20.2	20.1	20.3	20.9	21.5	21.5	22.3	22.4	22.5
A	22.9	23.6	23.2	22.9	23.4	23.3	23.3	23.4	23.4	23.1	23.6	23.6
P	22.3	22.0	22.8	22.0	22.3	22.4	23.0	25.4	26.6	27.5	28.0	28.5
FIN	25.9	22.5	19.4	16.3	15.3	16.3	17.0	17.9	18.6	18.4	18.3	18.4
S	:	:	:	14.4	14.7	15.5	16.1	15.6	16.3	16.9	17.1	17.6
UK	18.1	16.8	16.7	16.3	16.3	16.3	16.7	17.2	19.0	18.7	19.1	19.2

(1) EU-15 and EL, estimates.

(2) Estimates.

(3) Average of available data.

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

Table SA.10

Business enterprise expenditure on R&D as a percentage of GDP (%)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
EU-15 (1)	1.27	1.24	1.22	1.22	1.20	1.19	1.18	1.19	1.19	1.25	1.24	:
B (2)	:	1.08	1.16	1.23	1.22	1.23	1.30	1.34	1.35	1.42	1.47	:
DK (3)	0.90	0.96	0.98	1.02	:	1.05	1.13	1.19	1.32	1.25	:	:
D (4)	1.80	1.76	1.66	1.58	1.51	1.50	1.49	1.54	1.57	1.69	1.72	:
EL	:	0.09	:	0.13	:	0.14	0.12	0.13	:	:	:	:
E (5)	0.47	0.47	0.44	0.42	0.38	0.39	0.40	0.40	0.47	0.46	0.48	:
F (6)	1.43	1.46	1.49	1.48	1.45	1.41	1.41	1.39	1.35	1.38	1.37	:
IRL (1)	0.50	0.59	0.67	0.80	0.91	0.96	1.01	1.01	:	:	:	:
I (7)	0.75	0.68	0.66	0.61	0.56	0.53	0.54	0.52	0.52	0.56	:	:
L	:	:	:	:	:	:	:	:	:	:	:	:
NL	1.09	0.98	0.93	0.95	1.01	1.04	1.06	1.11	1.05	:	:	:
A	:	:	:	0.82	:	:	:	:	:	:	:	:
P (8)	0.14	:	0.13	:	:	0.12	:	0.14	:	0.17	:	:
FIN	1.18	1.16	1.21	1.27	1.42	1.45	1.68	1.79	1.94	2.18	:	:
S (9)	:	1.91	:	2.23	:	2.57	:	2.75	2.85	2.86	:	:
UK	1.50	1.39	1.40	1.42	1.36	1.30	1.25	1.20	1.21	1.27	1.26	1.25

(1) Estimates.

(2) 1992, estimate.

(3) 1990, 1992, 1996 and 1999, estimates.

(4) 1990, 1996 and 1998 to 2000, estimates.

(5) 1996, estimate; 2000, provisional.

(6) 2000, estimate.

(7) 1999, estimate.

(8) 1990 and 1992, estimates.

(9) 1991 and 1998, estimates.

Source: Eurostat, Research and Development - expenditure and personnel (theme9/rd_ex_p)

Table SA.11

Industrial confidence (balance)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
EU-15 (1)	-3.4	-13.2	-18.4	-25.4	-5.4	-0.9	-14.2	-3.7	-3.0	-8.4	3.7	-9.4
B	-3.2	-15.0	-20.4	-28.8	-6.3	-9.1	-17.8	-2.9	-7.8	-8.6	1.9	-14.0
DK	-3.9	-7.8	-7.3	-9.5	12.5	5.4	-8.7	5.5	-0.8	-12.9	5.7	-1.7
D	8.4	0.7	-17.3	-33.3	-14.8	-5.9	-21.2	-10.1	-5.0	-14.4	-2.3	-14.8
EL	-1.8	-6.6	-3.7	-6.0	-0.1	3.8	-2.4	3.6	4.3	1.3	8.8	4.3
E	-13.5	-21.8	-24.8	-34.8	-8.7	-3.3	-14.4	-1.4	1.4	-3.1	3.2	-4.2
F	-4.8	-21.0	-21.2	-34.4	-3.3	-2.3	-17.5	-5.3	5.3	-2.2	11.8	-4.2
IRL	-0.3	-8.8	-3.9	-12.8	2.5	7.1	-1.1	3.3	3.2	5.0	9.8	-7.7
I	-0.7	-12.6	-15.4	-17.6	1.3	6.4	-11.5	-0.3	0.3	-4.0	11.7	-2.8
L	-2.9	-24.1	-27.7	-25.0	-7.7	9.7	-22.0	4.2	6.7	-11.0	5.3	-15.5
NL	-0.2	-4.4	-6.3	-10.3	-0.9	1.5	-2.4	2.5	1.7	-0.4	4.1	-3.5
A	4.6	-8.8	-17.4	-27.2	-7.5	-12.2	-23.9	-9.5	-8.6	-13.8	-2.8	-13.3
P	-4.9	-7.3	-11.8	-24.8	-3.9	-3.9	-9.6	0.4	2.2	-4.3	2.1	-5.8
FIN	:	:	:	-4.5	18.2	7.8	-11.3	11.2	2.0	-3.8	17.4	-6.8
S	:	:	:	:	:	:	-15.9	-0.9	3.1	-7.1	10.8	-18.7
UK	-17.8	-31.8	-23.6	-10.9	1.8	2.6	-5.1	-1.4	-15.5	-14.3	-6.6	-15.6

(1) Average of available data.

Source: Eurostat, European and national short term indicators (theme1/euroind)

Table SA.12

Capacity utilisation rates for total industry (%)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
EU-15 (1)	84.9	82.9	81.1	78.1	79.3	82.8	81.0	81.6	83.1	81.6	83.4	82.7
B	81.1	79.4	77.4	74.8	77.6	80.9	79.5	81.4	82.7	80.9	84.0	82.3
DK	82.3	81.0	79.7	77.7	81.8	83.4	81.7	83.3	85.5	82.2	82.5	82.8
D	89.2	88.2	84.8	78.8	80.2	84.6	82.2	83.2	85.5	84.0	85.9	85.1
EL	77.0	77.2	78.3	76.0	74.5	76.6	75.6	74.4	75.8	75.7	78.1	77.6
E	80.0	77.6	76.6	72.8	74.5	78.4	77.1	78.3	80.3	79.7	80.6	79.6
F	88.7	86.0	84.3	81.4	80.4	85.4	83.5	82.3	83.8	85.3	87.5	87.6
IRL	76.7	75.5	77.1	73.6	74.9	79.9	77.6	75.9	76.6	75.9	78.6	78.4
I	79.9	77.3	76.3	74.4	75.2	78.1	76.5	76.4	78.5	76.0	78.8	78.9
L	83.3	82.1	79.8	80.1	81.3	82.9	79.0	82.4	88.0	84.9	87.8	88.7
NL	86.0	84.6	83.5	81.0	82.4	84.4	83.9	84.4	85.3	84.0	84.7	84.6
A	:	:	:	:	:	:	80.2	82.0	83.7	81.9	84.5	83.1
P	80.6	79.1	77.4	73.9	77.3	79.7	78.9	80.9	81.4	80.8	81.2	81.7
FIN	:	:	:	82.3	86.9	87.7	83.2	87.2	88.9	86.1	86.8	85.7
S	:	:	:	:	:	:	85.0	85.8	85.0	85.8	87.5	83.6
UK	83.9	79.2	78.5	80.0	82.8	84.4	82.5	83.8	83.7	79.4	81.3	79.7

(1) Average of available data.

Source: Eurostat, European and national short term indicators (theme1/euroind)

Table SA.13

Trade balance of goods at constant prices (million EUR) (1)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
EU-15	:	:	-34,709	11,946	21,293	28,225	43,040	70,137	44,985	12,874	-53,541
B/L	:	1,674	2,879	5,039	5,740	7,297	6,848	6,909	11,326	10,919	10,636
DK	3,922	4,135	5,738	6,672	6,397	5,093	6,077	4,741	3,450	6,309	7,862
D	54,485	15,405	21,563	35,171	42,970	48,814	54,737	62,097	68,556	65,836	61,762
EL	-7,994	-8,160	-8,939	-9,015	-9,556	-11,092	-12,278	-13,647	-12,364	-16,901	-21,935
E	-23,271	-24,924	-23,304	-12,764	-12,426	-14,046	-12,818	-11,838	-18,391	-28,585	-35,642
F	-10,344	-7,602	1,857	6,349	6,719	8,417	11,784	23,728	23,437	18,791	1,717
IRL	3,142	3,391	5,434	6,927	7,844	10,359	12,391	16,472	20,809	22,733	27,698
I	924	-155	2,414	28,236	29,865	33,680	47,796	41,412	31,854	22,051	11,773
NL	:	:	9,523	14,482	15,739	16,862	16,007	20,663	18,873	19,170	21,046
A	:	:	-7,900	-7,706	-8,924	-5,087	-5,734	-3,761	-3,268	-3,376	-2,984
P	-5,343	-6,350	-7,274	-6,806	-6,788	-6,860	-7,120	-8,709	-10,852	-12,951	-15,319
FIN	:	:	2,915	5,342	6,339	9,443	8,856	10,136	11,157	11,453	14,896
S	:	:	5,216	6,442	8,059	12,301	14,660	16,067	15,180	15,806	16,460
UK	-26,349	-14,670	-17,765	-17,257	-13,959	-13,975	-16,862	-17,827	-32,247	-41,783	-49,846

(1) EU-15, trade with non-Community countries; Member States, trade with all partners (intra-EU and extra-EU).
Source: Eurostat, Balance of payments (theme2/bop)

Table SA.14

Trade balance of services at constant prices (million EUR) (1)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
EU-15	:	:	13,840	12,904	11,852	12,017	12,837	16,183	10,207	5,785	5,606
B/L	:	1,381	2,065	2,591	3,015	1,806	2,297	3,272	3,630	4,689	5,434
DK	1,407	2,240	1,775	1,397	447	544	1,020	293	-502	1,564	2,508
D	-14,582	-18,208	-24,366	-28,878	-34,509	-35,012	-34,866	-36,445	-41,002	-48,669	-54,397
EL	4,349	4,887	4,963	6,898	7,892	6,580	7,012	9,253	6,073	6,852	8,733
E	9,224	10,292	9,598	10,002	12,515	14,224	16,100	17,636	19,532	21,524	24,216
F	11,798	12,864	13,573	13,749	15,622	13,712	12,821	16,176	16,837	17,930	20,765
IRL	-980	-945	-2,354	-2,526	-3,463	-4,808	-6,048	-7,945	-11,859	-10,688	-13,065
I	-1,592	-641	-2,688	706	1,594	1,301	1,599	1,772	3,582	1,104	-10
NL	:	:	206	587	1,162	1,690	3,054	3,737	3,272	2,341	1,083
A	:	:	9,053	8,471	8,346	3,527	3,586	870	2,107	1,647	1,047
P	1,088	937	817	1,198	1,064	1,234	1,118	1,292	1,716	1,645	1,953
FIN	:	:	-1,896	-1,700	-1,189	-1,618	-987	-1,056	-930	-1,574	-2,785
S	:	:	-2,191	-657	-838	-1,136	-1,421	-2,179	-1,952	-2,197	-3,419
UK	5,194	4,766	6,632	6,885	5,587	8,440	11,793	18,096	18,725	17,701	24,055

(1) EU-15, trade with non-Community countries; Member States, trade with all partners (intra-EU and extra-EU).
Source: Eurostat, Balance of payments (theme2/bop)

Table SA.15

Labour force characteristics, 2000

	EU-15	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Number of persons employed (thousands)																
Total	158,372	4,120	2,716	36,324	3,946	14,450	23,388	1,672	20,930	181	7,860	3,683	4,898	2,367	4,125	27,711
Male	90,923	2,378	1,451	20,423	2,457	9,060	12,904	990	13,223	110	4,492	2,061	2,686	1,244	2,150	15,294
Female	67,448	1,742	1,266	15,901	1,489	5,390	10,484	682	7,708	71	3,367	1,622	2,211	1,123	1,976	12,418
Activity rate (% share of persons employed aged 15-64)																
Total	63.1	61.3	76.3	65.0	55.4	53.7	60.5	66.2	53.7	62.2	73.0	67.2	72.1	68.4	72.5	71.1
Male	72.4	70.3	80.5	71.9	69.0	67.3	66.9	78.1	67.8	74.2	82.3	74.7	80.7	71.1	74.4	77.7
Female	53.8	52.2	72.0	57.8	41.8	40.1	54.2	54.1	39.5	49.7	63.5	59.6	63.9	65.6	70.6	64.4
Full-time and part-time work (% share of persons employed)																
Part-time	18.0	20.7	21.7	19.4	4.6	8.2	16.9	16.8	8.8	11.3	41.2	17.0	10.7	12.2	22.8	24.9
Full-time	82.0	79.3	78.3	80.6	95.4	91.8	83.1	83.2	91.2	88.7	58.8	83.0	89.3	87.8	77.2	75.1
Educational attainment (% share of persons employed) (1)																
Lower secondary education	35.0	31.7	16.1	13.9	44.1	53.9	30.4	41.7	45.1	32.8	27.1	18.1	76.8	22.0	19.7	14.2
Upper secondary education	41.6	34.1	55.1	57.7	34.5	17.7	43.8	29.0	41.8	44.8	43.9	64.5	12.1	41.0	48.2	54.1
Higher education degree	23.4	34.2	28.7	28.4	21.4	28.4	25.8	29.3	13.2	22.3	29.0	17.4	11.2	37.0	32.1	31.7
Unemployment rate (% share of labour force aged 15-64)																
Total	8.4	6.6	4.5	7.9	11.1	14.0	10.2	4.3	10.8	2.3	2.7	4.7	3.9	11.1	5.5	5.6
Male	7.2	5.3	4.0	7.6	7.3	9.7	8.6	4.3	8.3	1.8	2.2	4.8	3.1	10.4	5.9	6.1
Female	9.9	8.3	5.0	8.3	16.7	20.4	12.2	4.2	14.9	3.1	3.5	4.6	4.8	12.0	5.0	4.9

(1) EU-15 and IRL, 1997.
Source: Eurostat, Labour Force Survey (theme3/lfs)

Table SA.16

Labour cost indicators, 1999 (1)

	EU-15	B	DK	D (2)	EL	E	F	IRL	I	L (3)	NL	A	P	FIN	S	UK
Industry and services (NACE Sections C to K)																
Hourly labour cost (EUR)	21.5	26.2	27.0	26.8	:	15.3	23.8	16.2	18.8	22.7	21.7	27.2	7.0	20.8	25.8	19.3
Direct cost (%)	:	68.3	90.4	74.7	:	74.0	67.1	84.0	65.5	84.1	75.6	70.4	76.2	75.9	67.4	87.3
Direct remuneration (%)	:	57.5	75.9	63.2	:	73.8	57.8	73.8	60.7	71.8	65.9	61.2	69.9	64.5	60.4	74.8
Indirect cost (%)	:	31.7	9.6	25.3	:	26.0	32.9	16.0	34.5	15.9	24.4	29.6	23.8	24.1	32.6	12.7
Social security (%)	:	29.9	6.4	23.1	:	24.4	28.6	13.4	32.7	14.5	22.1	25.3	20.4	21.8	29.8	12.6
Industry (NACE Sections C to E)																
Hourly labour cost (EUR)	:	27.4	25.4	28.4	9.5	16.2	23.7	15.6	17.9	22.8	24.4	25.1	6.2	20.9	25.6	19.2
Direct cost (%)	:	68.3	92.2	74.6	69.8	73.3	66.7	83.7	65.0	:	74.5	70.4	75.0	75.5	67.2	86.5
Direct remuneration (%)	:	56.4	77.7	63.1	57.6	73.2	57.4	73.4	59.3	:	64.7	61.2	68.8	64.2	:	73.7
Indirect cost (%)	:	31.8	7.8	25.4	30.2	26.7	33.3	16.3	35.0	:	25.6	29.6	25.1	24.5	32.8	13.5
Social security (%)	:	29.8	6.3	23.6	27.1	25.4	29.2	13.4	32.8	:	23.2	25.3	20.9	22.2	30.0	13.5
Services (NACE Sections G to K)																
Hourly labour cost (EUR)	:	:	:	25.4	:	14.8	:	:	21.2	24.7	20.1	:	8.3	20.6	36.3	:
Direct cost (%)	:	:	:	75.1	:	74.4	:	:	66.4	83.5	76.2	:	77.6	:	67.5	:
Direct remuneration (%)	:	:	:	63.8	:	74.0	:	:	63.5	71.4	66.9	:	71.1	:	60.5	:
Indirect cost (%)	:	:	:	24.9	:	25.7	:	:	33.7	16.5	23.8	:	22.4	:	32.5	:
Social security (%)	:	:	:	22.0	:	23.8	:	:	32.5	14.3	21.4	:	19.9	:	29.7	:

(1) Direct costs are mainly direct remuneration, payments to employees saving schemes, payments for days not worked and benefits in kind; direct remuneration are wages and salaries (in cash and in kind), irregular bonuses (before deduction of taxes and social security contributions payable by employees) and gratuities; indirect costs include social security expenses the employer must pay, vocational training expenditure, taxes, etc.; for hourly labour cost - EL, F and P, 1998; for the breakdown of costs - EL and P, 1998; I, 1997; B, DK, E, F, IRL, NL and UK, 1996.

(2) Excluding NACE Sections H, I, and K.

(3) Excluding NACE Sections I and K and Division 67.

Source: Eurostat, Statistics in Focus, EU labour costs, 1999 (Theme 3 - 3/2001)

Table SA.17

Average hours worked per week, 2001 (hours) (1)

	EU-15	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Total (NACE Sections A to Q)	38.4	37.5	36.1	37.1	43.2	40.0	36.8	37.7	39.1	38.4	31.8	38.3	39.7	38.4	36.6	37.7
Agriculture, hunting & forestry	44.3	43.1	42.3	46.0	45.1	45.5	44.9	52.8	42.2	50.9	38.1	48.8	36.2	46.9	38.2	45.8
Fishing	44.9	:	:	:	50.5	51.9	55.4	:	43.8	:	:	:	53.7	:	:	57.8
Mining and quarrying	39.7	38.6	:	40.3	41.4	40.1	39.0	42.0	:	:	35.5	38.0	42.1	:	37.6	50.8
Manufacturing	39.4	38.9	37.3	37.5	43.6	40.8	37.8	39.5	40.2	39.6	35.5	38.5	40.7	39.3	38.3	42.0
Electricity, gas & water supply	38.0	38.7	39.9	38.4	39.8	39.8	35.9	39.1	39.1	39.7	35.9	38.9	38.8	38.8	39.2	41.0
Construction	40.8	40.5	39.7	40.2	43.1	41.1	39.4	42.1	41.6	40.5	38.7	39.4	41.8	41.5	40.1	44.1
Distributive trades	39.9	39.6	34.0	35.9	45.9	41.5	37.8	35.4	42.1	39.2	30.5	36.4	42.7	37.4	37.2	34.4
Hotels and restaurants	41.9	42.5	31.8	40.0	50.0	43.8	41.1	34.3	42.4	45.6	25.1	39.6	48.6	36.6	36.0	30.3
Transport, storage & communication	39.6	40.1	38.7	39.6	46.8	42.3	37.2	40.2	40.2	39.5	34.7	39.8	42.4	39.7	37.1	43.1
Financial intermediation	38.1	38.3	37.5	37.8	40.4	39.5	37.2	37.8	38.6	39.5	35.0	36.8	37.2	38.4	37.5	38.7
Real estate, renting & business activities	38.2	38.3	37.4	36.9	43.2	38.1	37.8	38.1	39.2	38.0	33.5	36.1	39.0	37.2	37.2	38.9
Public admin. & defence; compulsory social security	36.7	35.6	37.1	37.0	39.6	37.9	36.8	37.2	35.8	37.1	34.3	38.5	37.3	37.5	37.4	38.3
Education	30.6	30.0	34.9	33.3	29.2	33.1	31.1	29.3	27.7	31.4	30.1	37.5	33.1	35.0	36.5	33.5
Health and social work	35.8	34.5	33.5	34.1	39.4	37.3	35.2	32.8	36.5	35.6	25.6	35.9	37.8	36.8	33.4	33.0
Other community, social, personal service activities	36.7	38.1	32.2	35.1	41.3	37.9	34.7	33.8	38.1	38.5	29.6	36.3	39.3	35.3	33.3	33.6
Private households with employed persons	27.1	21.1	25.2	19.5	37.1	27.6	25.4	27.8	30.9	23.7	:	24.6	28.4	:	:	23.9
Extra-territorial organizations and bodies	39.2	39.7	:	38.0	:	:	38.8	:	38.8	38.5	:	40.3	:	:	:	43.9

(1) DK, D, EL, L, NL, P, S and UK, 2000.

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

Table SA.18

Unemployment rate (% share of labour force aged 15-64)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
EU-15	:	:	:	:	:	:	11.0	10.9	10.3	9.5	8.4	9.4
B	7.3	7.0	6.7	8.1	9.7	9.4	9.5	9.0	9.3	8.7	6.6	6.2
DK	8.5	9.2	9.2	10.9	8.1	7.0	6.9	5.4	5.0	5.2	4.5	:
D	4.9	5.3	6.4	7.7	8.8	8.2	8.9	9.9	9.9	8.9	8.0	:
EL	7.2	7.8	8.1	8.8	9.1	9.3	9.9	9.8	11.0	12.0	11.3	:
E	16.4	16.1	17.9	22.4	24.5	22.9	22.4	21.0	19.0	15.8	14.1	13.0
F	9.4	9.2	10.3	11.4	12.7	11.9	12.5	12.7	12.2	12.1	10.3	8.4
IRL	14.4	16.1	15.3	15.9	14.8	12.2	11.9	10.4	7.8	5.8	4.3	3.7
I	9.9	10.2	9.6	10.4	11.5	11.9	12.3	12.5	12.3	11.8	11.0	9.7
L	1.9	1.2	1.8	2.4	3.6	3.0	3.5	2.3	2.9	2.2	2.3	:
NL	7.7	7.3	5.6	6.3	7.2	7.2	6.5	5.6	4.4	3.6	2.7	:
A	:	:	:	:	:	4.4	5.3	5.2	5.5	4.7	4.7	4.0
P	4.8	4.1	4.1	5.5	6.9	7.4	7.7	6.9	4.9	4.9	4.1	:
FIN	:	:	:	:	:	17.2	15.7	15.1	13.3	11.8	11.2	10.4
S	:	:	:	:	:	:	9.7	10.5	9.1	7.7	5.5	:
UK	7.0	8.6	9.9	10.4	9.8	8.8	8.3	7.2	6.3	6.1	5.6	:

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

Tourism



Tourism has rapidly developed in the second half of the 20th Century, supported by a dramatic improvement in means of communications and a growing internationalisation of the world economy. A general reduction in hours spent in the workplace in industrialised economies and higher disposable incomes have also contributed to the growth in leisure travel¹.

(1) Changes in Leisure Time: the Impact on Tourism, World Tourism Organisation, 1999.

On the supply side, tourism relies on a vast network of enterprises from a variety of sectors, which can be summarised as the provision of accommodation, food and drink, transport facilities and services and entertainment. Tourism has hence a pervasive impact on economies, redistributing resources, as well as being an important factor of economic development, at a regional, European and global level.

Tourism can be defined as the activities serving persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure or business purposes. It is a concept involving a wide range of activities that is best viewed as a market rather than a sector. European data collection relating to tourism statistics is governed by Council Directive 95/57/EC of 23 November 1995. This chapter covers activities which make up a significant part of the tourism market: hotels and restaurants (NACE Division 55), recreation, zoological and amusement parks (NACE Classes 92.33 and 92.53) and travel agencies (NACE Group 63.3), although these activities also provide services for purposes other than tourism.

NACE

- 55: hotels and restaurants;
- 55.1: hotels;
- 55.2: camping sites and other provision of short-stay accommodation;
- 55.3: restaurants;
- 55.4: bars;
- 55.5: canteens and catering;
- 63.3: activities of travel agencies and tour operators; tourist assistance activities n.e.c.;
- 92.33: fair and amusement park activities;
- 92.53: botanical and zoological gardens and nature reserves activities.

Box 16.1: growth in tourism

The growth of tourism can be seen in the evolution of the number of international tourism trips made every year in the world. It should be noted that the following figures on tourism demand exclude domestic tourism, as well as same-day visitors, but that intra-European tourism is considered as international. Between 1985 and 2000, the number of international tourist arrivals grew at an average annual rate of 5.2% worldwide, rising from 327 million to 699 million, according to the World Tourism Organisation. Europe (using a geographical definition, which includes Eastern European countries) maintained its position as the market leader, despite a declining market share; 57.7% of international tourists chose Europe as their destination in 2000, down from 64.8% in 1985. The EU made up the largest part of the European market, accounting for 283 million arrivals or 40.5% of the world total.

France was the country welcoming the largest number of international tourists in 2000 (see table 16.1), as 75.5 million international arrivals were recorded, equivalent to 10.8% of the world total. Within the EU, Spain followed with 48.2 million arrivals and was ranked third in the world after the US, ahead of Italy, the fourth most visited destination in the world with 41.2 million arrivals.

These three EU countries were also amongst the world's top tourism earners in 2000, although the US headed this ranking (see table 16.2). Within the EU, international tourism receipts were highest in Spain (33.6 billion EUR), closely followed by France (32.4 billion EUR) and Italy (29.7 billion EUR), representing together almost one-fifth of the world's total tourism receipts. It is interesting to note that smaller countries such as Austria and Greece were also amongst the top ten tourism earners worldwide, with 12.4 billion EUR and 10.0 billion EUR of receipts respectively.

Table 16.1
Top 10 tourism destinations, 2000

	International tourist arrivals (millions)	World market share (%)
F	75.5	10.8
US	50.9	7.3
E	48.2	6.9
I	41.2	5.9
CN	31.2	4.5
UK	25.2	3.6
RU	21.2	3.0
MX	20.6	3.0
CA	20.4	2.9
D	19.0	2.7

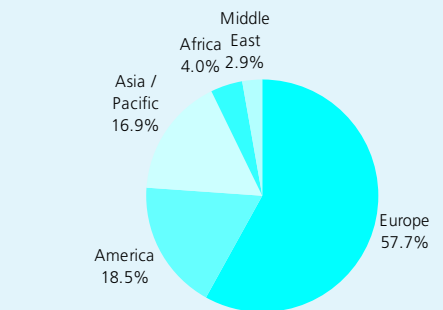
Source: World Tourism Organisation

Table 16.2
Top 10 tourism earners, 2000

	International tourism receipts (billion EUR)	World market share (%)
US	92.4	17.9
E	33.6	6.5
F	32.4	6.3
I	29.7	5.8
UK	21.2	4.1
D	19.3	3.7
CN	17.6	3.4
A	12.4	2.4
CA	11.7	2.3
EL	10.0	1.9

Source: World Tourism Organisation

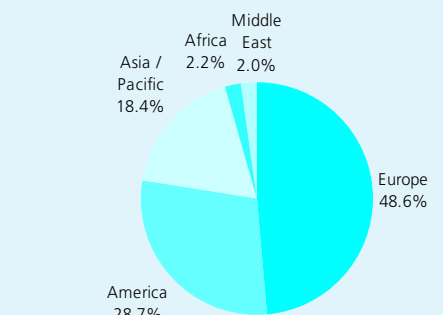
Figure 16.1
Market share of international tourist arrivals, 2000 (1)



(1) Estimates.

Source: World Tourism Organisation

Figure 16.2
Market share of receipts from international tourism, excluding transport, 2000 (1)



(1) Estimates.

Source: World Tourism Organisation

STRUCTURAL PROFILE

The weight of hotels and restaurants (NACE Section H) in national economies is significant, especially in the Mediterranean countries, but less so in Germany and the Nordic countries. Estimates based on National Accounts data indicate that total value added generated by this branch of the economy was equal to 210 billion EUR in the EU in 2000². The United Kingdom contributed the highest share (41.1 billion EUR), ahead of Italy (37.9 billion EUR),

Spain (1998) with 37.1 billion EUR and France (1999) with 34.0 billion EUR, whilst the German figure was 24.5 billion EUR. It must be noted that these figures exclude travel agencies (where value added was equal to 14.6 billion EUR in 1999, see sub-chapter 16.4) and recreation and amusement parks (no official data available).

According to SBS data, the breakdown of the hotels and restaurants sector between accommodation and the provision of food and drinks is weighted in favour of the latter. The provision of food and drinks (see sub-chapter 16.2) covered by NACE Groups 55.3 to 55.5 accounted for 64.7% of the value added of NACE Section H in 1999³. Accommodation services (see sub-chapter 16.1) represented only 35.3% of the total, although they accounted for a higher share in countries popular as summer or winter holiday destinations, such as Italy (40.5%), Spain (40.7%) and Austria (56.7%).

(2) F, IRL, L, NL, A and P, 1999; E, 1998; S, not available.

(3) E, I, L and NL, 1998; IRL, 1997 and excluding NACE 55.2; D and EL, not available.

Box 16.1: growth in tourism (continued)

Germany was the world's second largest tourism spender after the US in 2000. International tourism expenditure of German tourists reached 51.6 billion EUR. British tourists followed with international tourism expenditure equal to 39.7 billion EUR. Here again, the presence of smaller EU countries amongst the top spenders is interesting to highlight: with Dutch tourists spending 12.8 billion EUR and tourists from Belgium/Luxembourg spending 9.5 billion EUR (1999).

As a general rule, tourists from a given world region stay inside that region when taking their holidays. This was the case in 1999 for 67.8% of Middle Eastern tourists up to 86.3% of Europeans (see table 16.4). Europe was the destination for more than one-fifth of American tourists (20.5%) and more than one-quarter of southern Asians (25.1%).

More generally, the concentration of tourist destinations has decreased over the last thirty years as many new tourist destinations have developed. Whilst the five most popular destinations attracted 43% of the world's tourists in 1970, and 65% for the top ten destinations, these shares fell to 35.4% and 50.6% respectively in 2000.

Table 16.3

Top 10 tourism spenders, 2000

	International tourism expenditure	World market share (%)
US	70.5	13.7
D	51.6	10.0
UK	39.7	7.7
JP	34.2	6.6
F	18.7	3.6
I	16.8	3.2
CA	13.4	2.6
NL	12.8	2.5
CN (1)	10.2	:
B/L (1)	9.5	:

(1) 1999.

Source: World Tourism Organisation

Table 16.4

International tourist arrivals by region of departure, 1999 (thousands)

from	World	Africa	America	East Asia / Pacific	Europe	Middle East	South Asia	Other
to								
World	650,435	14,996	122,744	98,262	380,299	10,077	6,285	17,771
Africa	26,469	11,024	1,081	597	10,130	789	128	2,719
Americas	122,217	400	87,709	8,944	21,849	286	381	2,647
East Asia / Pacific	97,566	453	7,152	75,009	11,060	375	1,419	2,099
Europe	380,186	2,375	25,178	12,024	328,145	1,556	1,578	9,330
Middle East	18,219	594	1,099	996	6,456	6,837	1,410	827
South Asia	5,777	150	525	691	2,658	234	1,369	149

Source: World Tourism Organisation

Table 16.5

Hotels and restaurants (NACE Division 55)

Value added in the EU, 2000

	Value added (billion EUR)	Share of services value added (%)	Share of total value added (%)
B	3.7	3.3	1.6
DK	2.6	3.5	1.7
D	24.5	2.7	1.3
EL	7.9	13.5	7.1
E (1)	37.1	16.3	7.5
F (2)	34.0	5.7	2.7
IRL (2)	2.2	6.6	2.8
I	37.9	7.0	3.5
L (2)	0.4	3.5	2.2
NL (2)	6.8	4.1	2.0
A (2)	7.4	8.7	4.0
P (2)	2.8	7.6	3.0
FIN	1.5	3.0	1.3
S	:	:	:
UK	41.1	5.9	3.0

(1) 1998.

(2) 1999.

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

Table 16.6

Hotels and restaurants (NACE Division 55)

Turnover (billion EUR)

	1995	1996	1997	1998	1999	2000
B	6.4	6.4	6.2	6.6	7.4	:
DK	:	:	:	:	4.4	:
D	43.4	41.6	41.4	39.5	:	:
EL	:	:	:	:	:	:
E	:	:	:	30.8	:	:
F	:	38.6	39.2	42.1	45.6	:
IRL	:	:	:	:	:	:
I	30.4	33.2	37.7	40.6	:	:
L	0.7	0.7	0.7	0.7	0.7	:
NL	10.3	:	11.0	11.6	:	:
A	8.6	8.4	8.3	8.8	9.2	:
P	3.4	5.9	5.9	5.9	8.0	:
FIN	3.3	3.4	3.4	3.5	3.7	3.7
S	5.2	5.9	5.9	6.2	6.7	:
UK	48.8	53.1	66.2	70.9	67.0	:

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

FOREIGN DIRECT INVESTMENT

The stock of FDI of the EU Member States in non-Community countries for NACE Section H rose from 4.7 billion EUR in 1995 to 8.2 billion EUR in 1999. Most of this investment (63.0%) was located within the US, valued at 5.2 billion EUR in 1999, which was up from 2.2 billion EUR in 1995.

Conversely, the stock of foreign direct investment from non-Community countries in the EU was also valued at 8.2 billion EUR in 1999, up from 3.5 billion EUR in 1995. The US was the origin of 46.7% of this total (3.8 billion EUR).

Table 16.7

**Hotels and restaurants (NACE Division 55)
Foreign direct investment, 1999 (million EUR)**

	In the reporting economy	(% of investment abroad)				
		Abroad	Intra	Extra	JP	US (1)
EU-15	8,153	8,205	:	100.0	1.0	63.0
B	:	:	:	:	:	:
DK	360	249	89.6	10.8	:	:
D	644	577	75.9	24.1	0.0	9.7
EL	1,263	2	50.0	50.0	:	:
E	1,876	1,054	:	:	:	:
F	355	5,277	40.5	59.5	0.0	41.4
IRL	:	:	:	:	:	:
I	:	:	:	:	:	:
L	:	:	:	:	:	:
NL	1,660	421	81.2	18.8	0.0	1.4
A	202	124	11.3	88.7	:	:
P	491	6	0.0	116.7	0.0	0.0
FIN (2)	77	:	:	:	:	:
S	:	:	:	:	:	:
UK	6,379	4,774	17.9	82.1	:	59.4

(1) D and NL, 1997.

(2) 1997.

Source: Eurostat, European Union Direct Investments (theme2/bop/fdi)

LABOUR AND PRODUCTIVITY

According to the LFS there were some 6.4 million persons in employment in the hotels and restaurants sector (NACE Section H) in the EU in 2000, the highest numbers being employed in Germany (1.2 million) and the United Kingdom (1.1 million). These countries did not figure amongst the most popular tourist destinations (see above), which may be explained by the importance of domestic or non-tourism related demand.

Work patterns found within the tourism sector are generally different from those found in other activities. The jobs available can often be characterised as being more flexible, and there may also be a high seasonal component to them. Only 71.9% of the total number of persons in employment in hotels and restaurants in the EU in 2000 worked full-time, which was amongst the lowest shares of all activities and can be contrasted with 80.1% average for services (NACE Sections G to K). Differences amongst Member States were wide-ranging: with the Netherlands (32.8%) and the United Kingdom (49.4%) recording the lowest proportion of full-time employment, whilst more than 90.0% of the persons employed in Greece, Luxembourg and Portugal in hotels and restaurants were working full-time.

Women accounted for 53.4% of the labour force in hotels and restaurants in 2000, ten percentage points more than the average for services (43.5% for NACE Sections G to K). The share of women in total employment varied from 42.4% in Luxembourg and 43.1% in Greece to 65.0% in Austria and 72.3% in Finland. As regards the qualification of the workforce, only 7.5% of those persons employed in hotels and restaurants had completed a higher education (1997), with shares below 3.0% in 2000 in Italy, whilst Finland (17.8%) and Ireland (18.0%, 1997) recorded figures that were well above average.

SBS report average personnel costs per employee in hotels and restaurants generally lower than in other service sectors. In 1999, they were under 20.0 thousand EUR per employee in most countries⁴, ranging from 8.2 thousand EUR in Portugal to 23.6 thousand EUR in France. Flexible working patterns and a high presence of unskilled manpower may explain these levels. This ratio may also be influenced by the importance of part-time and seasonal work.

Wage adjusted labour productivity was over 120% in a majority of Member States in 1999⁵, with a maximum recorded in the Netherlands (146.9%) and the minima in France (118.4%) and Italy (115.4%).

(4) E, I, L and NL, 1998; D, EL and IRL, not available.

(5) E, I, L and NL, 1998;

D, EL IRL and UK, not available.

Table 16.8

Hotels and restaurants (NACE Division 55)
Labour force characteristics (% of total employment)

	Female		Part-time		Self-employed		Higher level of education	
	1995	2000	1995	2000	1995	2000	1995	2000 (1)
EU-15	52.4	53.4	23.8	28.1	24.5	21.2	7.1	7.5
B	52.7	52.3	20.7	48.4	40.8	38.3	10.1	10.4
DK	67.5	59.6	40.7	42.7	8.3	9.9	16.1	7.6
D	56.7	58.7	20.7	27.8	23.0	21.2	12.0	9.2
EL	39.7	43.1	5.1	6.0	36.2	33.4	4.6	6.8
E	41.9	47.4	11.0	13.5	28.1	25.3	6.3	9.9
F	49.0	45.9	19.6	24.2	23.8	20.7	6.3	11.0
IRL	56.4	59.7	24.6	37.4	21.6	14.3	15.0	18.0
I	45.0	46.6	10.3	14.1	35.4	32.7	2.2	2.8
L	52.8	42.4	7.3	8.4	31.0	24.3	:	:
NL	52.1	54.9	60.2	67.2	19.4	11.4	:	8.2
A	63.8	65.0	17.0	20.1	19.6	16.7	1.8	5.8
P	51.4	61.3	5.0	5.8	33.0	27.5	:	:
FIN	72.3	72.3	24.2	29.9	18.1	13.3	9.9	17.8
S	56.5	53.3	34.5	34.0	17.7	20.3	:	14.4
UK	61.7	58.6	46.5	50.6	14.2	9.6	8.2	13.6

(1) EU-15 and IRL, 1997.

Source: Eurostat, Labour Force Survey

Table 16.9

Hotels and restaurants (NACE Division 55)
Labour productivity and personnel costs, 1999

	Apparent labour productivity (thousand EUR per person employed)	Average personnel costs (thousand EUR per employee)	Wage adjusted labour productivity (%)
B	17.8	14.5	122.7
DK	20.5	14.9	137.0
D	:	:	:
EL	:	:	:
E (1)	14.0	11.3	124.1
F	28.0	23.6	118.4
IRL	:	:	:
I (1)	20.9	18.1	115.4
L (1)	25.6	19.8	129.4
NL (1)	20.7	14.1	146.9
A	22.1	17.7	125.1
P	9.8	8.2	120.2
FIN	26.6	20.7	128.6
S	26.1	21.6	120.8
UK (2)	:	10.4	:

(1) 1998.

(2) 1997.

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

16.1: ACCOMMODATION SERVICES

Hotels and other provision of short-stay accommodation are covered by two NACE Groups: 55.1 includes the provision of short-stay lodging in hotels, motels and inns, excluding the rental of long-stay accommodation and timeshare operations; whilst Group 55.2 covers camping sites and other provision of short-stay accommodation, including self-catering holiday chalets or cottages.

Accommodation services range from small family-run businesses to well-known multinational franchises, and from youth hostels with basic amenities to luxurious multi-starred hotels. In common, they all provide accommodation to persons travelling for a short period of time outside of their normal environment.

STRUCTURAL PROFILE

There were 197.9 thousand hotels and similar establishments in the EU in 2000, with a capacity of some 9.3 million bed-places (see table 16.10). The United Kingdom alone accounted for more than one-quarter of all the establishments (50.5 thousand) and Germany almost one-fifth (38.6 thousand).

A typical European establishment can lodge 47 persons⁶, although in Ireland (25 bed places) and the United Kingdom (23 bed places) the average size of establishments was considerably lower. In contrast, the average number of bed places per establishment approached or exceeded 100 in the Nordic countries (Sweden, 99; Finland, 116; and Denmark, 133) as well as the Iberian Peninsula (Spain, 81; and Portugal, 125).

(6) This indicator may be biased as different thresholds exist for establishments to be considered in statistics; for example, DK, 40 bed-places.

The hotel sector has experienced in recent years a general trend towards a gradual increase in accommodation capacity in absolute terms as well as in terms of the average size of each establishment. Between 1995 and 2000, the total number of bed places in the EU increased by 8.0% and the average per establishment rose from 45.3 to 47.0. In a majority of countries, this could be explained by a growth in tourism supply tending towards larger hotels, with growth in the number of bed places being faster than growth in the number of establishments. In other countries, these trends could, in part, be attributed to a reorganisation of supply, whereby smaller, marginal or less efficient establishments ceased to exist⁷. This is borne out when studying the data for Italy, Luxembourg and Austria, where there was a reduction in the number of establishments, whilst the number of bed places decreased at a slower rate or continued to rise.

(7) For more details, Tourism in Europe, Eurostat, 2000.

Table 16.10

Main indicators for hotels and similar establishments, 2000 (thousands)

	B	DK (1)	D	EL (2)	E (3)	F	IRL	I (4)	L	NL	A	P (4)	FIN	S	UK (5)
Number of establishments	2.0	0.5	38.6	8.3	16.3	19.3	5.4	33.2	0.3	2.8	15.9	1.8	1.0	1.9	50.5
Number of bedrooms	55	32	877	320	677	668	60	956	8	:	308	95	55	96	553
Number of bedplaces	119	62	1,590	608	1,316	1,178	139	1,834	14	173	588	223	117	188	1,155
Arrivals of residents	2,048	1,642	70,828	5,619	32,187	62,878	2,773	36,497	17	7,801	5,956	4,272	5,415	10,575	37,240
Arrivals of non-residents	5,163	1,347	16,719	7,229	27,205	35,226	3,884	26,530	546	7,738	13,240	4,911	1,751	2,465	17,019
Nights spent, residents	4,045	4,599	163,429	14,381	83,350	110,343	6,786	132,774	68	14,027	18,031	9,693	9,786	16,586	93,000
Nights spent, non-residents	10,184	4,611	34,641	45,490	143,930	74,188	16,894	94,310	1,139	15,895	53,617	24,102	3,562	4,679	53,722

(1) Number of establishments, bedrooms and bedplaces refer to hotels with at least 40 bedplaces only.

(2) Arrivals and nights spent, 1999.

(3) Provisional data.

(4) Number of bedrooms and arrivals, 1999.

(5) Number of bedrooms, 1998; arrivals, 1999; nights spent by residents, 1999.

Source: Eurostat, Tourism (theme4/tour)

Box 16.2: leading hotel chains

Table 16.11

Main hotel chains in the world by number of rooms, 2000 (units)

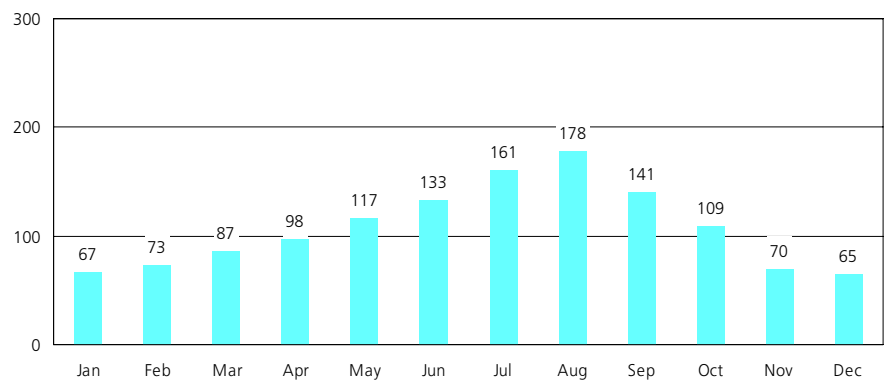
	Brands	Number of rooms	Number of sites	Average number of rooms per site
Cendant Corp.	US AmeriHost Inn, Days Inn, Ramada, Super 8, H. Johnson, Travelodge, Knights Inn	541,313	6,455	83.9
Bass Hotels & Resorts	UK Holiday Inn, Crowne Plaza, Inter-Continental	490,531	3,096	158.4
Marriott International	US Marriott, Renaissance, Courtyard, Residence Inn, Fairfield Inn	390,469	2,099	186.0
Accor	F Sofitel, Novotel, Mercure, Ibis, Etap Hôtel, Formule 1, Motel 6	389,437	3,488	111.7
Choice Hotels International	US Comfort Inn, Econo Lodge, Quality Inn, Clarion	350,351	4,392	79.8
Hilton Hotels Corp.	US Hilton, Conrad, Hampton Inn, Embassy Suites, Homewood Suites, Doubletree	317,823	1,895	167.7
Best Western International	US Best Western	307,737	4,065	75.7
Starwood Hotels & Resorts Worldwide	US Sheraton, Four Points, Westin, W Hotels	227,042	738	307.6
Carlson Hospitality Worldwide	US Regent, Radisson, Country Inn	129,234	716	180.5
Hyatt	US Hyatt	86,711	201	431.4
Sol Melià	E Melià Hotels, Sol Hotels	82,656	338	244.5
Hilton International	UK Hilton, Conrad	64,647	223	289.9
Wyndham International	US Wyndham	62,262	242	257.3
Compass Group	UK Le Meridien, Forte Posthouse, Forte Heritage	59,928	453	132.3
Société du Louvre	F Concorde, Campanile, Première Classe, Bleu Marine, Clarine	53,083	868	61.2

Source: Hotels Magazine, July 2001

One of the major problems facing the hotel industry is seasonality of demand, as shown in figure 16.3. In 2000, the peak months for the number of nights spent were between July and September in every EU country, with the maximum generally reached in August. A first surge in demand could be observed around Easter (March or April) in some countries (particularly the Benelux countries and the United Kingdom), whilst Austria, Finland and Sweden also displayed a peak in February or March (probably linked to the winter ski season). The long-term trend towards multiple holidays and the growth of the "short break" market may help in smoothing the seasonality of demand for tourist accommodation.

Figure 16.3

Number of nights spent in hotels and similar establishments in the EU, 2000 (millions) (1)



(1) EL, F, IRL, 1999; I, P, FIN, UK, provisional data; IRL, excluding nights spent by residents. Source: Eurostat, Tourism (theme4/tour)

Most of the clients of European hotels are persons living in the country itself. Non-residents represented on average only 37.4% of the persons checking in to hotels and similar establishments in the EU in 2000⁸, although they accounted for a much larger share of the total number in smaller countries like Austria (69.0%), Belgium (71.6%) and Luxembourg (96.9%). These countries, together with Ireland, Greece and Portugal, were the only ones where arrivals of non-residents outnumbered those of residents. In contrast, less than one-fifth of the persons arriving in hotels in Germany (19.1%) and Sweden (18.9%) were people visiting from a foreign country.

Non-residents, however, tended to stay somewhat longer than residents: an average of 3.4 nights against 2.4 nights for residents (see table 16.12). In some countries, the length of stay varies noticeably according to the residence criteria. This was for example the case in those Mediterranean countries that are popular international destinations for summer holidays, such as Greece, Spain and Portugal. The average length of stay of non-residents in those countries was more than twice as long as for residents, and was the highest amongst the Member States: 6.3 nights in Greece (1999), 5.3 in Spain and 4.8 in Portugal (1999).

Besides hotels and similar establishments, the EU's tourism infrastructure also has nearly 310 thousand⁹ other types of collective accommodation establishments (see table 16.13), with a total capacity of 12.3 million bed places in 2000¹⁰. This category of accommodation includes camping sites, holiday dwellings, youth hostels and collective dormitories for tourists. There were 22.6 thousandtourist campsites in the EU in 2000¹¹, of which over one-third were located in France (35.4%).

Table 16.12
Arrivals and nights spent according to residence status, 2000

	Share of non-residents in total arrivals (%)	Average number of nights spent per arrival	
		Residents	Non-residents
EU-15	37.4	2.4	3.4
B	71.6	2.0	2.0
DK	45.1	2.8	3.4
D	19.1	2.3	2.1
EL (1)	56.3	2.6	6.3
E	45.8	2.6	5.3
F	35.9	1.8	2.1
IRL	58.3	2.4	4.3
I (1)	42.1	3.5	3.4
L	96.9	3.9	2.1
NL	49.8	1.8	2.1
A	69.0	3.0	4.0
P (1)	53.5	2.2	4.8
FIN	24.4	1.8	2.0
S	18.9	1.6	1.9
UK (1)	31.4	2.5	3.3

(1) 1999.

Source: Eurostat, Tourism (theme4/tour)

(8) L, I, P and UK, 1999; E, provisional data.

(9) EL, 1999; UK, 1998.

(10) EL and P, 1999; UK, 1998.

(11) EL, 1999; I, provisional data, 1999; UK, 1998.

Technology has had a great impact on the tourism business, and the accommodation sector is no exception. Significant process and product innovations have occurred in areas such as operations management (for example, specific software applications used for purchasing, sales and catering management systems), client interfaces (in-room services, room check-out, etc.), business services and entertainment (video-conferencing, interactive TV communication systems) and reservation systems (e-commerce). Bookings through the Internet are expected to become much more significant in the future as hotels further increase their presence on the Internet and on-line reservation sites become more appealing to travellers. A recent Eurobarometer survey¹² showed, for example, that 37.6% of Internet users in the EU had prepared a tourism trip on-line during 2000.

LABOUR AND PRODUCTIVITY

According to SBS data approximately 1.5 million persons were working in the sector of accommodation services in the EU in 1999¹³. The United Kingdom alone numbered some 300 thousand employees (a figure that excludes working proprietors and family workers), which was as high as the total number of persons employed in Germany. Popular tourist destinations such as France, Spain and Italy all had more than 200 thousand persons employed in this sector. It is also interesting to note the high relative importance of this sector in Austria, where some 105 thousand persons were employed.

Wage adjusted labour productivity in accommodation services was generally higher than in other service activities, ranging in 1999 between 130.0% in Austria and 167.9% in Portugal¹⁴. This may be explained, in part, by the relatively low level of average personnel costs, that were under 25.0 thousand EUR per employee in most countries, with particularly low values recorded in the United Kingdom (12.3 thousand EUR) and Portugal (10.7 thousand EUR).

(12) Measuring Information Society, Eurobarometer 53, European Commission, 2000.
 (13) FIN, 2000; D, E, I, L and NL, 1998; UK, 1997; UK, number of employees; EL and IRL, not available.
 (14) E, I, L and NL, 1998;
 D, EL, IRL and UK, not available.

Table 16.13

Main indicators for collective accommodation establishments other than hotels, 2000 (thousands)

	Number of establishments (1)	of which, tourist campsites (1)	Number of bed places (2)
B	1.6	0.6	513.6
DK	0.6	0.4	319.8
D	17.0	2.4	1,488.7
EL	:	0.3	93.9
E (3)	173.4	1.2	1,306.5
F	9.1	8.0	2,970.3
IRL	2.5	0.1	58.0
I	81.9	2.4	2,046.3
L	0.3	0.1	50.3
NL	3.6	2.1	965.6
A	5.6	0.5	346.2
P	0.3	0.2	268.5
FIN	0.5	0.3	33.5
S	1.6	1.0	66.9
UK	11.2	2.9	1,759.7

(1) EL, 1999; UK, 1998; I, provisional 1999 data for tourist campsites.

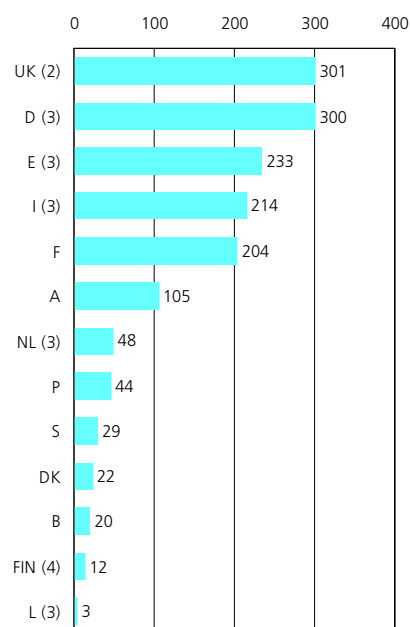
(2) EL and P, 1999; UK, 1998.

(3) Provisional.

Source: Eurostat, Tourism (theme4/tour)

Figure 16.4

Hotels; camping sites, other provision of short-stay accommodation (NACE Groups 55.1 and 55.2) Number of persons employed, 1999 (thousands) (1)



(1) EL and IRL, not available.

(2) Number of employees, 1997.

(3) 1998.

(4) 2000.

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

Box 16.3: breakdown of hotel revenue

Whilst being the core service offered by hotels, room rental represents only a fraction of their revenue. A recent hotel industry study by Horwath Consulting in 1999 revealed that about half of the revenue of the largest European¹⁵ hotels was accounted for by room rental (51.3%), the worldwide average being 56.3%. Food and beverages accounted for as much as 41.3% of hotel revenues in Europe against a worldwide average of 34.6% (see table 16.14).

(15) EU-15 (excluding EL, L and P); Croatia, Hungary, Norway, Russia and Switzerland.

Table 16.14**Composition of hotel revenue, 1999 (%)**

	Room	Food and beverages	Telephone	Other
World	56.3	34.6	2.0	7.1
Europe	51.3	41.3	1.6	5.8
North America	64.8	27.9	2.1	5.2
Australia and New Zealand	47.1	28.3	1.7	22.9
Africa and the Middle East	51.4	38.4	3.5	6.7
South America	62.3	27.3	3.9	6.5
Asia	50.5	38.7	2.5	8.3

Source: Horwath Worldwide Hotel Industry Study, IH&RA

16.2: RESTAURANTS, BARS AND CATERING

The activities of the sale of meals and drinks for consumption are classified under NACE Groups 55.3 (restaurants), 55.4 (bars) and 55.5 (canteens and catering).

Restaurants and bars are present in virtually every local community where, in addition to their economic weight, they also play a significant social role. In the same way as accommodation services, this sector is also very diverse as businesses can be very different in size, from small, family-run outlets to multinational franchises, or from local bars, snack outlets and fast-food chains to high-class establishments specialising in haute cuisine.

All of these activities are covered by the statistics presented in this sub-chapter, in so far as their principal activity is the provision of drinks and meals. Enterprises offering food and drink as a complement to their core business are not included in the statistics. Most notable amongst these exclusions are hotels, cinemas, recreation parks, railways or ferries where, in some cases, the sale of food and drinks may represent an important proportion of revenues (see the previous sub-chapter).

STRUCTURAL PROFILE

Restaurants, bars and catering together form the largest tourism activity, although, unlike for example hotels, they are not exclusively serving tourists but also local customers. The total turnover of this sector reached 195.2 billion EUR in 1999¹⁶. Most Member States reported that between 60% and 70% of the value added generated in the hotels and restaurants sector (NACE Section H) was accounted for by restaurants, bars and catering, with an average of 64.7% in 1999¹⁷.

LABOUR AND PRODUCTIVITY

Employment in restaurants, bars and catering enterprises exceeded 4.4 million persons in the EU in 1999¹⁸. Levels were particularly high in the United Kingdom, where 975.9 thousand employees were recorded, and also in Germany (775.9 thousand persons employed) and Spain (709.5 thousand persons employed).

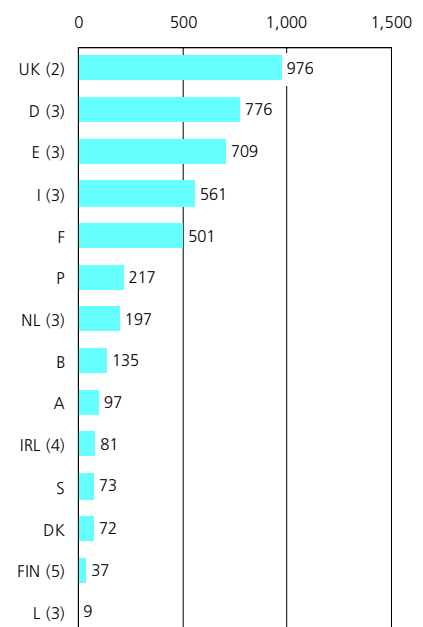
(16) D, E, I and NL, 1998; IRL, 1997; EL, not available.

(17) E, I, L and NL, 1998; IRL, 1997 and excluding NACE 55.2; D and EL, not available.

(18) FIN, 2000; D, E, I, L and NL, 1998; IRL and UK, 1997; UK, number of employees.

Figure 16.5

Restaurants; bars; canteens and catering (NACE Groups 55.3 to 55.5) Number of persons employed, 1999 (thousands) (1)



(1) EL, not available.

(2) Number of employees, 1997.

(3) 1998.

(4) 1997.

(5) 2000.

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

The low average qualification level of the workforce and the importance of part-time work may explain the relatively low average personnel costs faced by enterprises in this sector. They were generally under 20 thousand EUR per employee¹⁹, ranging from a minimum of 7.5 thousand EUR in Portugal to a maximum of 23.0 thousand EUR in France. Despite this, wage adjusted labour productivity was not particularly high compared to other service activities. In 1999, it was below 125% in all countries²⁰, except for Denmark (133.7%) and the Netherlands (143.1%), with the minimum value of 102.4% recorded in Italy. It is important to note that these labour productivity figures are adjusted to take account of the large number of self-employed persons in total employment, a ratio that was above 15% in the majority of Member States in 1999²¹ and rose to 53.2% in Italy.

(19) E, I, L and NL, 1998; UK, 1997; D, EL and IRL, not available.

(20) E, I, L and NL, 1998; D, EL, IRL and UK, not available.

(21) E, I, L and NL, 1998; IRL, 1997; D, EL and UK, not available.

Catering activities have greatly benefited from the trend of enterprises out-sourcing activities that are not part of their core business. Enterprises, schools and public administrations that used to run their own restaurant facilities for their personnel or students have increasingly sub-contracted this type of activity to specialised, independent enterprises. From this point of view, catering enterprises could perhaps be better viewed as business services' enterprises, alongside cleaning service and security service enterprises.

The world market for catering services is led by the French group Sodexho Alliance, with turnover of almost 10.2 billion EUR in 2000, ahead of the Compass Group (UK) and Aramark (US). Estimates from Sodexho Alliance show that the education and health market segments each accounted for one-quarter of their catering service activities, whilst the remainder was largely shared between enterprises and public-sector canteens.

16.3: RECREATION PARKS

The recreation parks sector includes theme parks, other amusement parks and water parks, holiday camps, zoological gardens and safari parks. NACE Class 92.33 covers fairs and amusement parks, whilst NACE Class 92.53 covers botanical and zoological gardens and nature reserve activities.

Although an important part of the tourism industry, this sector lacks comprehensive, statistical coverage, and very few official EU-wide statistics exist at the present time. This sub-chapter is therefore based on estimates from professional trade associations and consultants and as such figures should be considered with caution. Readers are advised not to compare these data directly with those found in other sub-chapters.

Box 16.4: main activity indicators

According to a survey carried out in ten Member States²² for the IAAPA²³, approximately 55% of the population visited at least one amusement facility in 2000 (see table 16.15), with amusement parks (32% of the total) and zoos (28%) the most popular attractions. Another survey by IAAPA estimated that the average European amusement park welcomed 511 thousand visitors in 1997 (350 thousand fewer than in the US).

Europeans spent an average of 9.80 EUR for their visits to amusement parks in 2000: 5.00 EUR for the entrance ticket, 3.10 EUR on food and drinks and 1.70 EUR on other items (see figure 16.6). According to IAAPA, entrance fees accounted for a higher share of parks' revenues in the EU than in the US, and there was a lower level of expenditure on ancillary products in EU theme parks.

Based on the most recent estimates, more than 110 million visitors went to amusement and theme parks in the EU. The largest recreation park in the EU is Disneyland Paris, with more than 12.2 million visitors in 2001 and turnover of 1.0 billion EUR.

Most amusement parks are idle throughout the winter. The average amusement and theme park in the EU was open 24 weeks a year in 1997. However, the increasing popularity of indoor and water-based attractions has increased the scope for extending the season. One recent feature of the tourism sector is increased demand for short breaks during the off-season. This trend coincides with the wishes of park operators to increase their utilisation rates. In addition, many recreation parks are turning to the corporate sector to boost demand during off-peak periods.

IAAPA estimate that 40 to 50 thousand persons worked in recreation parks in the EU in 1997. Employment in recreation parks usually has an important seasonal component, and temporary staff may outnumber permanent staff by a ratio of around 4 to 1.

As regards zoos and aquaria, almost 81 million persons visited the 238 facilities belonging to members of EAZA in 1997. Total attendance, including free tickets and multiple visits by annual ticket holders, was estimated at approximately 100 million visitors. It must be noted that EAZA members originate from EU Member States, as well as most Central and Eastern European countries, Russia, Turkey and Israel.

(22) B, DK, D, E, F, I, NL, FIN, S and UK.

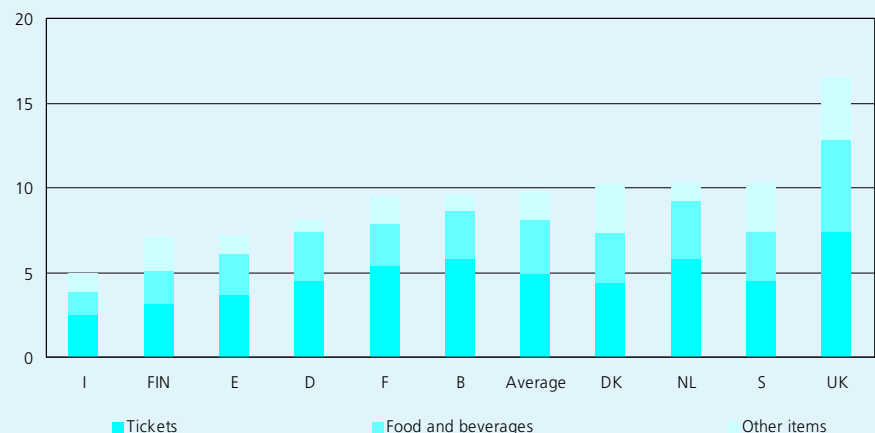
(23) European Amusement Industry Consumer Survey, IAAPA, 2001.

Table 16.15**Proportion of the population visiting amusement park facilities, 2000 (%) (1)**

	Total	Amusement parks	Zoos	Water parks	Other similar attractions
Average	55	32	28	21	26
B	45	32	18	16	16
DK	67	53	33	25	22
D	64	28	40	31	34
E	49	39	27	27	21
F	43	28	19	11	18
I	50	27	11	18	27
NL	56	46	43	25	31
FIN	49	48	39	31	38
S	57	44	26	7	19
UK	64	35	23	14	27

(1) Persons aged 15 or over; EL, IRL, L, A and P, not available.

Source: European Amusement Industry Consumer Survey, IAAPA, 2001

Figure 16.6**Average expenditure per visitor at amusement facilities, 2000 (1)**

(1) Persons aged 15 or over; EL, IRL, L, A and P, not available.

Source: European Amusement Industry Consumer Survey, IAAPA, 2001

16.4: TRAVEL AGENCIES

Travel services are defined as firms engaged in arranging transport, accommodation and catering on behalf of travellers. The activity is covered by NACE Group 63.3 that encompasses furnishing travel information, advice and planning, arranging made-to-measure tours, accommodation and transportation for travellers and tourists, furnishing tickets, the sale of packaged tours and the activities of tour operators and of tourist guides.

Travel agencies are specialised in bookings to medium and long-haul destinations, whereas domestic holidays and the bulk of rail and road transport bookings tend to by-pass them. As a consequence, one of the key variables affecting demand for travel services is the evolution of air transport. The gradual liberalisation of domestic and intra-regional air transport markets is expected to put further downward pressure on airfares, and hence stimulate demand for services from travel agents.

STRUCTURAL PROFILE

Travel agencies generated 14.6 billion EUR of value added in 1999²⁴. The largest sectors were those of Germany (4.5 billion EUR) and the United Kingdom (4.4 billion EUR), the biggest tourist spenders in the EU (see the overview for more details). Amongst the smaller Member States, travel agencies were relatively important in the Netherlands (595.9 million EUR) and Sweden (463.8 million EUR).

Information technologies (IT) are expected to drastically change the face of this sector. IT is now almost universally present in the daily operations of a travel agent, for both front-desk and back-office operations (from data exchange to ticketing and payments). There is heavy reliance on computer reservation systems, which can be easily linked to the Internet to allow people to make their own travel purchases directly from their home PC.

(24) E, I, L and NL, 1998; IRL, 1997; EL, not available.

In Europe, the travel industry is expected to be one of the fastest growing sectors for on-line sales over the next few years. The key drivers of growth are expected to be on-line flight reservation systems, as well as purchases for business travellers, travelling regularly and at short notice.

In addition, travel agencies (including on-line ones) are facing increasing competition from airlines and tour operators, attracted by the opportunity to make direct sales and thus eliminate agents' commissions. Already several airlines companies, led by discount operators, offer the opportunity to book a flight from their Internet site. This is sometimes further facilitated by the absence of tickets (e-ticketing), that eliminates the problem of mailing the ticket, as only the reservation confirmation number is required to check-in for the flight. Tour operators are embarking along a similar path by complementing their paper catalogues with web sites offering tourists the opportunity to gather information, visit and eventually book their stay on-line.

Business travel specialists are pre-empting the threat of direct distribution by increasing the range of services they provide to corporate clients. Leading operators have re-positioned themselves as travel "management" companies, able to advise clients on their business travel policy by interpreting travel patterns and monitoring travel costs.

Box 16.5: number of travel agents and tour operators

Table 16.16

Number of travel agents and tour operators (1)

	1996	2000
B	2,600	:
DK	597	600
D	18,700	21,500
EL	4,700	:
E	2,830	3,813
F (2)	2,840	5,500
I	6,000	8,500
IRL	395	:
L	39	:
NL	1,100	923
A	2,700	2,540
P	614	744
FIN	430	613
S	600	700
UK	7,259	9,400

(1) Estimates.
 (2) Number of points of sale in 2000.
 Source: ECTAA

LABOUR AND PRODUCTIVITY

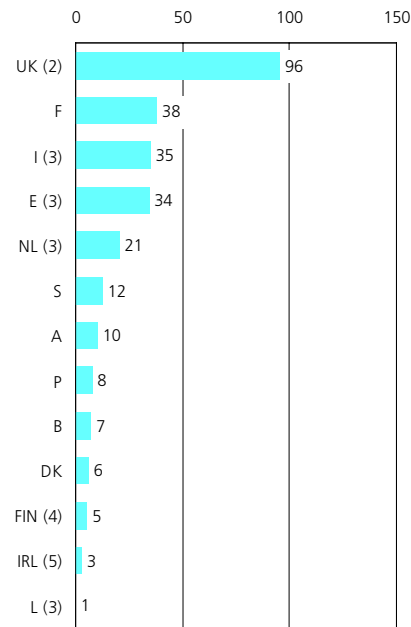
Employment in travel agencies in the EU, excluding Germany and Greece, reached 276.7 thousand persons in 1999²⁵. According to the ECTAA, Germany numbered some 77 thousand persons employed in this sector.

Average personnel costs tend to be somewhat lower in travel agencies when compared to other service activities, but generally higher than in other tourism related activities covered in this chapter. In most countries for which data is available average personnel costs were situated between 20 thousand EUR and 30 thousand EUR per employee. Figures were somewhat lower in Portugal (at 13.9 thousand EUR per employee), whilst they reached a high of 33.0 thousand EUR per employee in France.

Wage adjusted labour productivity was highest in Luxembourg (140.5%), average personnel costs reaching 32.7 thousand EUR per employee in that country²⁶. In most other countries, wage adjusted labour productivity was above 115%, with Belgium (111.0%) and Austria (104.4%) the exceptions.

(25) FIN, 2000; E, I, L and NL, 1998; IRL and UK, 1997; UK, number of employees; D and EL, not available.
(26) E, I, L and NL, 1998; D, EL, IRL and UK, not available.

Figure 16.7
Activities of travel agencies and tour operators; tourist assistance activities n.e.c. (NACE Group 63.3)
Number of persons employed, 1999 (thousands) (1)



(1) D and EL, not available.
(2) Number of employees, 1997.
(3) 1998.
(4) 2000.
(5) 1997.
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms)

Table 16.17

Hotels; camping sites, other provision of short-stay accommodation (NACE Groups 55.1 and 55.2)
Main indicators in the EU, 1999 (1)

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Number of enterprises (units) (2)	2,292	1,595	41,136	:	15,667	45,779	:	39,765	382	4,855	16,124	3,772	1,413	3,039	15,069
Turnover (million EUR) (3)	1,594	1,187	13,191	:	9,914	15,755	:	12,181	207	3,176	4,885	1,543	1,109	2,140	16,497
Purchases of goods and services (million EUR) (2)	795	678	3,629	:	4,623	8,716	:	5,962	86	592	2,230	785	682	1,223	7,444
Value added (million EUR)	756	557	:	:	5,361	6,806	:	6,556	104	1,585	2,525	797	436	965	8,624
Personnel costs (million EUR)	475	358	:	:	3,142	4,650	:	3,105	61	903	1,571	450	293	681	4,432
Number of persons employed (thousands) (4)	20.1	22.3	300.3	:	233.3	203.7	:	214.3	3.2	48.5	104.6	44.5	12.4	28.6	300.6
Gross investment in tangible goods (million EUR) (2)	294	69	1,108	:	2,131	2,044	:	1,667	:	265	492	337	90	320	2,326
Gross operating rate (%)	17.6	16.7	:	:	22.4	13.7	:	28.3	22.4	21.5	19.5	22.5	13.1	13.3	25.4
App. labour productivity (thous. EUR/pers. emp.)	37.6	25.0	:	:	23.0	33.4	:	30.6	32.9	32.7	24.1	17.9	32.9	33.8	:
Wage adjusted labour productivity (%)	136.4	147.5	:	:	160.9	133.2	:	150.0	154.2	161.8	130.0	167.9	143.3	135.5	:

(1) D, E, I and NL, 1998; L, 1998, except for turnover. (2) D, 1997. (3) FIN, 2000. (4) FIN, 2000; UK, number of employees, 1997.
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms)

Table 16.18

Restaurants; bars; canteens and catering (NACE Groups 55.3 to 55.5)
Main indicators in the EU, 1999 (1)

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Number of enterprises (units) (2)	39,031	11,718	154,060	:	236,306	157,373	11,271	196,300	2,024	34,125	21,772	55,893	9,123	17,057	99,284
Turnover (million EUR) (3)	5,825	3,199	26,299	:	20,894	29,870	3,410	28,408	540	8,421	4,295	6,444	2,623	4,529	50,469
Purchases of goods and services (million EUR) (2)	3,771	1,943	10,783	:	13,200	16,819	2,352	19,708	310	3,007	2,238	4,744	1,751	2,923	28,967
Value added (million EUR)	2,008	1,370	:	:	7,804	12,911	1,067	9,645	214	3,489	1,927	1,766	907	1,694	20,255
Personnel costs (million EUR)	1,044	895	:	:	4,549	9,612	:	4,404	137	2,010	1,204	1,295	650	1,282	12,283
Number of persons employed (thousands) (4)	134.9	71.8	775.9	:	709.5	501.2	81.1	560.8	9.2	197.0	96.9	216.6	37.4	73.2	975.9
Gross investment in tangible goods (million EUR) (2)	512	157	924	:	1,263	2,378	169	1,551	:	442	200	435	97	292	4,951
Gross operating rate (%)	16.5	14.8	:	:	15.6	11.0	:	18.4	14.5	17.6	16.8	7.3	9.9	9.1	15.8
App. labour productivity (thous. EUR/pers. emp.)	14.9	19.1	:	:	11.0	25.8	13.2	17.2	23.1	17.7	19.9	8.2	24.4	23.2	:
Wage adjusted labour productivity (%)	124.4	133.7	:	:	112.1	112.1	:	102.4	120.5	143.1	119.9	108.0	123.0	114.5	:

(1) D, E, I, L and NL, 1998; IRL, 1997. (2) D, 1997. (3) FIN, 2000. (4) FIN, 2000; UK, number of employees, 1997.
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms)

Table 16.19

Activities of travel agencies and tour operators; tourist assistance activities n.e.c. (NACE Group 63.3)
Main indicators in the EU, 1999 (1)

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Number of enterprises (units)	1,064	578	11,345	:	5,208	4,166	291	7,564	116	2,180	1,223	934	685	2,023	6,507
Turnover (million EUR) (2)	3,750	2,207	12,961	:	8,557	10,004	1,016	9,973	382	3,749	3,280	1,744	1,043	3,962	50,123
Purchases of goods and services (million EUR)	3,503	1,992	:	:	7,676	8,648	949	8,941	361	2,674	2,968	1,612	1,040	3,546	45,783
Value added (million EUR)	245	227	4,498	:	921	1,484	67	1,081	28	596	313	137	165	464	4,404
Personnel costs (million EUR)	188	173	:	:	603	1,254	:	685	19	419	270	106	132	365	2,674
Number of persons employed (thousands) (3)	7.4	6.2	:	:	34.2	38.2	2.9	35.0	0.6	20.6	10.3	7.8	5.3	12.4	95.8
Gross investment in tangible goods (million EUR)	37	15	:	:	96	122	7	88	:	76	46	31	14	57	541
Gross operating rate (%)	1.5	2.4	:	:	3.7	2.3	:	4.0	2.3	5.4	1.3	1.8	2.8	2.5	3.5
App. labour productivity (thous. EUR/pers. emp.)	33.2	36.8	:	:	26.9	38.9	22.8	30.9	46.0	28.9	30.5	17.5	31.6	37.3	:
Wage adjusted labour productivity (%)	111.0	128.6	:	:	138.9	117.8	:	116.3	140.5	137.3	104.4	125.5	118.0	115.8	:

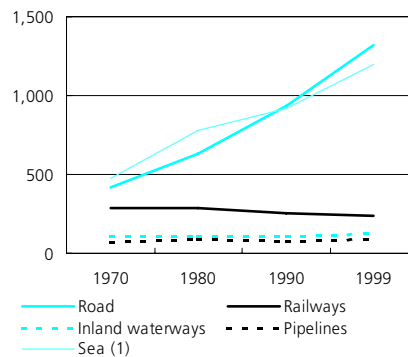
(1) E and I, 1998; L and NL, 1998, except for turnover; IRL, 1997. (2) FIN, 2000. (3) FIN, 2000; UK, number of employees, 1997.
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms)

Transport services

Transport services are at the centre of physical flows and, as a consequence, the overall competitiveness of an economy is greatly affected by the quality and efficiency of its transport system. Similarly, there is a close inter-relationship between transport activities and general economic activity, a link that has grown stronger in recent years as enterprises have increasingly adopted more flexible production systems, whereby transport services have become an integral and essential part of the production process. This is for example the case with just-in-time (JIT) production systems, where input deliveries are made in close co-ordination with production schedules, leading to more frequent deliveries of smaller quantities of materials.

In addition, the movement of freight and passengers has also been affected by the relocation of business away from city centres, towards major transport arteries. From an international perspective, the completion of the Internal Market and the globalisation of world markets have also contributed to increase demand for international freight transport. As for passenger transport, urban spread has boosted the demand for commuter services, whereas leisure transport has benefited from a continuous increase in personal mobility and reductions in the cost of certain forms of transport, notably airborne.

Figure 17.1
Evolution of goods transported in the EU
(billion tonne-kilometres)



(1) Intra-EU traffic only.

Source: Eurostat; ECMT; UIC in European Union Transport and Energy in Figures, Directorate-General of the European Commission for Energy and Transport, 2001



In NACE, transport services are broken down into: land transport (NACE Division 60), which includes railways, urban transport, road and road freight 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.

Travel agencies (NACE Group 63.3) are covered in chapter 16 that deals with tourism and transport by pipelines (NACE Group 60.3) features in chapter 1 on energy. Both of these Groups have been excluded from the analysis in the present chapter whenever possible: for example, for most sections using SBS data, as well as statistics on the volume of transport; but this is not the case for more aggregated data sets such as National Accounts and the LFS.

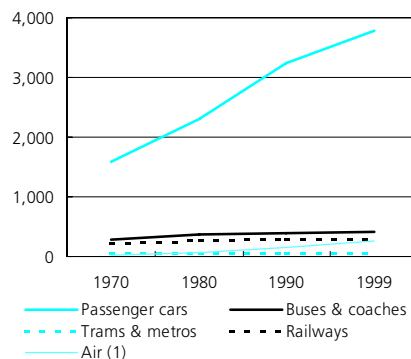
NACE

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.

All of these factors are reflected in the strong and consistent growth witnessed by the transport services sector of the economy over the past 30 years. Combining road, rail, inland waterways, pipelines and sea transport, there were 2,959 billion tonne-kilometres of freight moved within the EU in 1999¹, corresponding to an average increase of 2.8% per annum since 1970 (see figure 17.1). Passenger transport by car, bus, rail and air totalled 4,790 billion passenger-kilometres within the EU in 1999², rising at an average rate of 2.8% per annum since 1970 (see figure 17.2).

(1) Number of tonnes multiplied by the number of kilometres.
 (2) Number of passengers multiplied by the number of kilometres; air travel concerns intra-EU flights only.

Figure 17.2
Evolution of passenger transport in the EU (billion passenger-kilometres)



(1) Intra-EU traffic only.
 Source: Eurostat; ECMT; UITP; UIC; AEA; IACA in European Union Transport and Energy in Figures, Directorate-General of the European Commission for Energy and Transport, 2001

STRUCTURAL PROFILE

On the basis of National Accounts data, it is estimated that transport services generated approximately 4% of total value added in the EU in 1997³, a share that ranged between 3% in Greece and France to more than 6% in Denmark and Belgium.

SBS data indicate that the total value added generated by the transport services sector (including pipelines and travel agencies) was equal to 235 billion EUR in the EU in 1999⁴. On average, land transport accounted for some 54% of the total, whilst air transport generated 13% and water transport only 4%. Auxiliary transport services generated the remaining 29% of transport services value added.

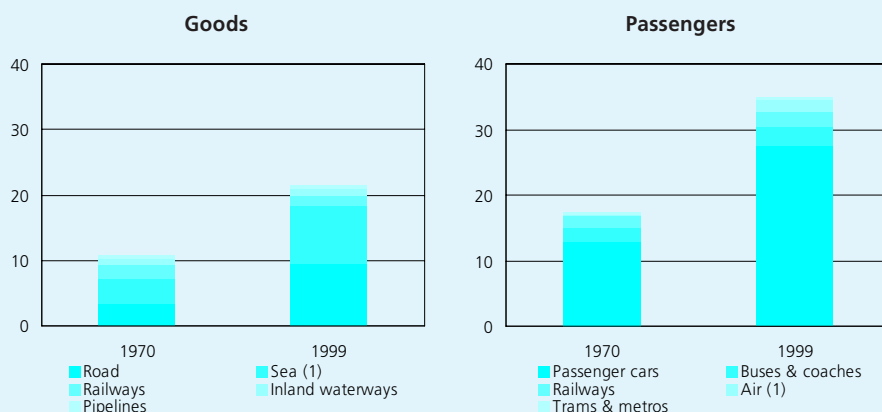
(3) Panorama of Transport, Eurostat, 2001.
 (4) For the whole of this paragraph: E, I, L and NL, 1998; IRL, 1997; E, excluding NACE Groups 60.2, 60.3, 61.2 and Division 63; L, excluding NACE Division 61; NL, excluding NACE Groups 60.1, 60.3 and Division 62; EL, not available.

Box 17.1: average daily distance travelled

The equivalent of one tonne of freight was moved over 21.5 kilometres for each EU citizen every day of 1999 (against 10.7 kms in 1970). This figure can be broken down as follows: 9.6 kms by road (3.3 kms in 1970), 8.7 kms by sea (3.8 kms), 1.7 kms by rail (2.3 kms), 875 m by inland waterways (837 m) and 649 m by pipelines (531 m).

Similarly each European citizen travelled an average of 34.9 kms per day in 1999 using land transport (up from 17.4 kms in 1970): 27.6 kms by car (12.8 kms), 2.9 kms by bus (2.3 kms), 2.1 kms by rail (1.7 kms) and 372 m by tram or metro (314 m). Intra-EU air transport accounted for an additional 1.9 kms per person per day, equivalent to 692 kms per person per year (94 kms in 1970).

Figure 17.3
Average daily distance travelled by freight and passengers in the EU (kilometres per inhabitant)



(1) Intra-EU traffic only.
 Source: Eurostat; ECMT; UITP; UIC; AEA; IACA in European Union Transport and Energy in Figures, Directorate-General of the European Commission for Energy and Transport, 2001

Table 17.1

Transport and storage (NACE Divisions 60 to 63, excluding group 63.3) Turnover (billion EUR)

	1995	1996	1997	1998	1999	2000
B	: 20.6	: 22.0	: 24.1	: 24.6	: :	: :
DK	: :	: :	: :	: 22.8	: :	: :
D	: :	: 110.2	: 114.6	: 121.2	: :	: :
EL	: :	: :	: :	: :	: :	: :
E	: :	: :	: :	: :	: :	: :
F	: 85.0	: 92.6	: 98.3	: 103.5	: :	: :
IRL	: 3.6	: 4.2	: :	: :	: :	: :
I	: 63.7	: 65.4	: 76.0	: :	: :	: :
L	: :	: :	: :	: :	: :	: :
NL	: :	: :	: :	: 29.8	: :	: :
A	: 13.5	: :	: 14.8	: 15.7	: 16.5	: :
P	: 6.9	: 8.1	: 8.3	: 8.2	: :	: :
FIN	: 10.3	: :	: 11.6	: 12.1	: 12.7	: :
S	: 22.4	: 25.5	: 25.2	: 26.9	: :	: :
UK	: 76.6	: :	: :	: 116.9	: :	: :

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

In terms of traffic, the main area of growth with respect to the transport of freight has been road transport, which increased on average by 4.1% per annum between 1970 and 1999, rising from 416 billion tonne-kilometres to 1,318 billion tonne-kilometres by 1999. In 1990, the road became the most used mode of freight transport within the EU, overtaking intra-EU sea transport. Intra-EU sea transport has however also experienced strong growth, rising on average by 3.3% per annum during the last three decades, resulting in a total volume of 1,195 billion tonne-kilometres transported in 1999. Rail transport remained the third largest mode of freight transport, although losing ground both in relative and absolute terms, with transported volumes falling from 283 billion tonne-kilometres in 1970 to 237 billion tonne-kilometres by 1999.

Turning to passenger transport, the evolution of traffic over the last thirty years shows that intra-EU air transport experienced by far the highest rates of growth, rising by 7.5% per annum on average between 1970 and 1999. As such, the volume of air passenger traffic rose from 32 billion passenger-kilometres in 1970 to 260 billion passenger-kilometres by 1999. Air transport is quickly gaining ground on railways in terms of the volume of passengers carried within the EU and, if current trends continue, it will soon surpass rail and become the third most important mode of passenger transport after passenger cars and buses. Nevertheless, the car remains by far the most important mode of passenger transport in the EU, with 3,784 billion passenger-kilometres travelled in 1999.

FOREIGN DIRECT INVESTMENT

Excluding auxiliary transport services, EU transport services enterprises (NACE Divisions 60 to 62) have multiplied more than five-fold their stock of foreign investment abroad during the second half of the 1990s. Stocks rose from 3.6 billion EUR to 19.0 billion EUR between 1995 and 1999. The US was by far the largest partner, accounting for 49.1% of the EU's FDI abroad in 1999 (9.3 billion EUR), up from 32.0% in 1995.

FDI stocks by non-Community countries in the EU were much lower, equal to 3.1 billion EUR in 1999, and showed a considerably slower pace of development when compared to 1995 when they were equal to 1.3 billion EUR. The US accounted for 41.8% of FDI stocks in the EU in 1999.

LABOUR AND PRODUCTIVITY

According to the LFS⁵ there were 6.8 million persons employed in transport services in the EU in 2000, of which 4.0 million (58.7%) worked in land transport, 417 thousand in air transport and 239 thousand in water transport. Services auxiliary to transport activities employed a further 2.2 million persons, or 31.6% of the transport services total. Land transport occupied more than one-half of the persons employed in transport services in all countries except for Germany, where auxiliary transport services accounted for a much higher share (48.1% or 666 thousand persons employed), with employment levels similar to those for land transport (608 thousand). In contrast, water transport was generally the smallest activity within transport services, with the notable exceptions of Denmark and Greece, where it accounted respectively for 11% and 13% of those employed in transport services.

(5) All of the LFS data in these two paragraphs on the labour force includes travel agencies and pipelines.

Table 17.2

Transport and storage (NACE Divisions 60 to 63) Labour force characteristics (% of total employment)

	Female		Part-time		Self-employed		Higher level of education	
	1995	2000	1995	2000	1995	2000	1995	2000 (1)
EU-15	18.1	20.4	7.1	9.2	14.7	13.9	11.1	11.0
B	12.9	17.4	4.1	7.3	9.0	5.0	15.1	18.3
DK	23.8	24.7	8.4	11.2	10.4	7.2	18.6	11.9
D	22.1	23.5	7.0	10.5	8.6	9.6	14.6	13.2
EL	12.2	15.0	1.8	1.4	31.6	31.3	12.1	9.2
E	11.4	13.5	2.5	4.4	32.7	27.2	12.9	16.3
F	19.1	21.1	7.3	7.6	6.6	6.2	10.5	13.9
IRL	18.4	23.7	:	9.1	22.5	21.3	13.9	14.3
I	9.8	15.2	3.5	4.4	22.2	22.5	3.8	4.1
L	15.4	18.5	:	5.7	:	:	9.2	9.9
NL	20.6	21.9	20.7	24.2	5.9	7.0	:	11.4
A	19.7	21.6	6.5	8.3	6.0	4.9	3.4	10.2
P	16.2	15.9	:	:	16.9	14.9	8.8	6.5
FIN	21.2	22.7	7.2	8.5	19.6	18.1	8.3	19.4
S	22.8	22.5	13.9	14.9	16.4	12.4	19.3	14.9
UK	20.6	23.5	9.3	12.5	15.9	14.2	9.8	15.9

(1) L, 1999; EU-15 and IRL, 1997.
Source: Eurostat, Labour Force Survey

Transport services are a mainstay of male employment within the service sector. Women accounted for just 20.4% of those persons employed in the EU's transport services sector in 2000, a proportion that varied between 12.3% for land transport and 36.5% for air transport. These figures were considerably lower than the average for services (NACE Sections G to K), where women accounted for 43.5% of those employed.

The education level of the transport services workforce was generally lower than in the other service activities. Only 12.9% of those persons employed in the EU's transport services sector in 2000 had completed a higher education degree⁶, compared to a services average of 22.4%. At a more disaggregated level of detail, air transport and water transport had a more highly educated workforce, whilst the land transport workforce had a large proportion (42.7%) who had at most completed lower secondary education.

The incidence of part-time work within the EU's transport services sector was, in keeping with many male-dominated activities, relatively low. Only 9.2% of those employed in transport services in 2000 worked on a part-time basis, compared to a services average of 19.9%.

(6) IRL, L and P, not available.

Table 17.3

**Transport and storage (NACE Divisions 60 to 63)
Labour productivity and personnel costs, 1999**

	Apparent labour productivity (thousand EUR per person employed)	Average personnel costs (thousand EUR per employee)	Wage adjusted labour productivity (%)
B	49.2	39.0	126.1
DK	68.5	37.9	180.5
D	35.8	31.2	114.9
EL	:	:	:
E	:	:	:
F	44.3	35.0	126.5
IRL (1)	36.3	:	:
I (2)	40.6	33.2	122.4
L	:	:	:
NL	:	:	:
A	44.7	33.9	132.1
P	24.4	18.3	133.2
FIN	43.9	32.0	137.3
S	40.9	34.2	119.7
UK (1)	:	27.1	:

(1) 1997.

(2) 1998.

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

17.1: RAILWAY TRANSPORT

This sub-chapter includes information on the transport of passengers and freight by railways (NACE Group 60.1). This sub-chapter also provides separately some information on the rail infrastructure (station facilities); in NACE the activities related to the operation of the railway infrastructure are classified as part of auxiliary transport activities.

This sub-chapter 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).

The rapid development of road (offering greater flexibility) and air transport (especially over longer distances) seriously affected the railways from the 1960s onwards. Nevertheless, in recent years, congested road networks and greater environmental awareness have led to a re-alignment of EU transport policy. One of the main priorities has been the creation of Trans-European Networks (TENs) which constitute the cornerstone of transport infrastructure policy. As regards passenger transport, the focus of TENs is to extend the high-speed rail network and increase the market share of rail in the passenger transport market. The network to be developed also seeks to optimise the co-ordination of rail services with other means of transport, integrating the rail network with urban/suburban rail networks, airports and even private means of transport. For the freight sector, co-ordination is also being pursued to create flexibility and ease of transfer from other means of transport.

Box 17.2: future transport policy

The White Paper, European Transport Policy for 2010, presented by the European Commission in September 2001⁷ provides further evidence of the promotion of the rail transport sector. It proposes a set of measures designed to shift the balance between modes of transport by 2010 by revitalising the railways and encouraging inter-modality. In the context of the TENs, the Commission is proposing to concentrate on the missing links (in particular the trans-European high-speed passenger rail network, including airport connections) and infrastructure with potential for transferring freight from the roads to the railways (in particular a high-capacity rail link across the Pyrenees).

(7) Available at: http://europa.eu.int/comm/energy_transport/en/lb_en.html.

STRUCTURAL PROFILE

The EU's rail network encompassed 153.8 thousand kilometres of track in 2000, of which 44.4% were electrified. Railways accounted for 6.1% of passenger transport⁸ and 13.4% of inland freight transport⁹ in the EU in 1999. Rail has lost significant ground relative to other transport modes during the past 30 years, with its share of passenger transport falling from 10.1% in 1970. As regards freight transport, rail's share declined from 32.6% in 1970.

In absolute terms, the volume of rail passenger traffic in the EU stagnated at around 275 billion passenger-kilometres between 1987 and 1997, before picking up towards the end of the 1990s to reach 292 billion passenger-kilometres by 1999 (see table 17.4). Growth at the end of this period can be linked to the development of high-speed rail connections (see table 17.5).

(8) Share in passengers transported by car, buses and coaches, trams and metros, railways and air transport.

(9) Share in total freight transported by road, railways, inland waterways and pipelines.

Table 17.4

Passengers transported by rail (billion passenger-kilometres) (1)

	1970	1980	1990	1999
EU-15	216.6	252.8	270.4	291.9
B	7.6	7.0	6.5	7.4
DK	3.6	4.5	5.1	5.4
D	56.9	63.0	62.1	72.8
EL	1.5	1.5	2.0	1.6
E	15.0	14.8	16.7	19.2
F	41.0	54.7	63.8	66.5
IRL	0.8	1.0	1.2	1.4
I	34.9	42.9	44.7	41.0
L	0.2	0.2	0.2	0.3
NL	8.0	8.9	11.1	14.3
A	6.4	7.6	8.7	8.1
P	3.5	6.1	5.7	4.3
FIN	2.2	3.2	3.3	3.4
S	4.6	7.0	6.0	7.4
UK	30.6	30.4	33.4	38.8

(1) Including non-UIC railways.

Source: Eurostat; ECMT; UIC in European Union Transport and Energy in Figures, Directorate-General of the European Commission for Energy and Transport, 2001

Box 17.3: high speed rail transport

Table 17.5

Passengers transported by high speed rail (billion passenger-kilometres)

	1990	1995	1996	1997	1998	1999	2000
B	0.0	0.0	0.0	0.6	0.8	0.8	0.9
D	0.0	8.7	8.9	10.1	10.2	11.6	13.9
E	0.0	1.2	1.1	1.3	1.5	1.7	1.8
F	14.9	21.4	24.8	27.6	30.6	32.2	34.7
I	0.3	1.1	1.3	2.4	3.6	4.5	5.1
NL	0.0	0.0	0.0	0.0	0.1	0.1	0.1
FIN	0.0	0.0	0.0	0.1	0.1	0.1	0.1
S	0.0	0.5	1.1	1.3	1.6	1.8	2.1
UK	0.0	:	:	:	:	:	:

Source: UIC

Each EU citizen travelled on average 777 kms by train in 1999. France (1,129 kms), Denmark (1,015 kms) and Austria (1,001 kms) recorded the highest railway traffic per capita, as opposed to Ireland (374 kms) and Greece (152 kms).

As regards rail freight, there was a downward trend in the volume of freight transported during the 1990s, falling to 237 billion tonne-kilometres in 1999 from 255 billion tonne-kilometres in 1990 (see table 17.6). Rail freight transport declined on average by 1.2% per annum between 1980 and 1990, a trend that continued in the early 1990s, although there was growth of 16% in the volume of freight transported between 1993 and 1999.

Table 17.6

Freight transported by rail (billion tonne-kilometres) (1)

	1970	1980	1990	1999
EU-15	282.8	287.3	255.5	237.2
B	7.9	8.0	8.4	7.4
DK	1.9	1.6	1.7	1.9
D	113.0	121.3	101.7	71.4
EL	0.7	0.8	0.6	0.3
E	9.7	11.3	11.6	11.6
F	67.6	66.4	50.7	53.4
IRL	0.5	0.6	0.6	0.5
I	18.1	18.4	19.5	21.6
L	0.8	0.7	0.6	0.7
NL	3.7	3.4	3.1	3.5
A	10.0	11.2	12.3	15.6
P	0.8	1.0	1.5	2.2
FIN	6.3	8.3	8.4	9.8
S	17.3	16.6	19.1	18.9
UK	24.5	17.6	15.8	18.4

(1) Including non-UIC railways.
Source: Eurostat; ECMT; UIC in European Union Transport and Energy in Figures, Directorate-General of the European Commission for Energy and Transport, 2001

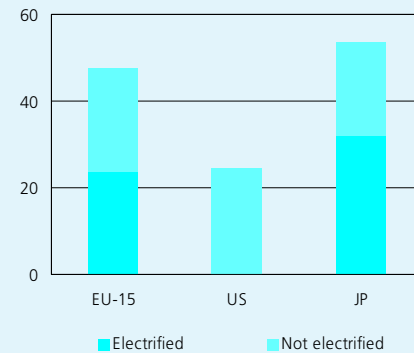
Box 17.4: international comparison

The US railway system is heavily dominated by freight traffic that is moved over a large geographical area as there are long distances between population centres. In contrast, passenger usage of the US railway network was comparatively low compared to the EU. The Japanese rail sector, in contrast, was dominated by passenger traffic, largely as a result of high population density in many parts of the country and extreme road traffic congestion.

The density of railway track was comparable in the EU and Japan, with around 50 metres of track per square kilometre in 2000 (see figure 17.4), roughly double that found in the US (24.6 m). The EU and Japan had higher proportions of electric track, with approximately 50% and 60% of track electrified, compared to practically none in the US.

Figure 17.4

Density of railway tracks, 2000 (metres per kilometre²)



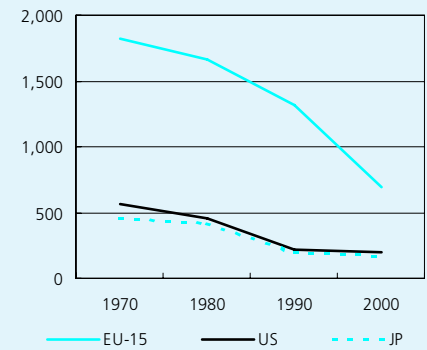
Source: UIC

Box 17.5: rapid decline in employment

There were slightly less than 700 thousand persons employed in the EU's railway sector in 2000. Employment in the EU's railway sector declined continuously during the 1980s and 1990s and the number of persons employed more than halved over this period (see figure 17.5).

Figure 17.5

Employment in railways (thousands)



Source: UIC

17.2: ROAD TRANSPORT

Other land transport activities (NACE Group 60.2) cover road freight transport, as well as 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 companies. This sub-chapter also contains information on the private use of passenger cars, which is not covered by NACE.

Road transport has greatly benefited over the past thirty years from increased demand for mobility and flexibility from private individuals and enterprises for passenger travel and freight transport alike which provides door-to-door deliveries over short or long distances, often without the need for transshipment.

STRUCTURAL PROFILE

Road transport activities generated more than 89 billion EUR of value added in the EU in 1999¹⁰. Freight transport by road (NACE Class 60.24) was the largest Class within the road transport sector in every country for which data are available, accounting for approximately two-thirds of value added, against one-third for passenger road transport services. Denmark was the main exception to this trend, as road passenger transport services accounted for 43% of the value added generated in the road transport sector.

The number of registered road vehicles has increased at a rapid rate in the past thirty years. There were some 173 million cars and 20 million freight vehicles on the EU's roads in 1999, whilst there were 520 thousand buses and coaches. Growth was largely confined to passenger cars and freight vehicles, whose numbers multiplied by 2.8 and 2.7 between 1970 and 1999, whilst the number of buses and coaches reported a slower evolution (1.6 times as many in 1999) - see table 17.7.

(10) I, L and NL, 1998; IRL, 1997; F and IRL, excluding NACE Classes 60.21 to 60.23; EL and E, not available.

There is great diversity across the EU when comparing the number of passenger cars in circulation to the size of the road network. Ireland displayed the lowest ratio with just 12 cars per kilometre of road in 1998 (see table 17.8). At the opposite end of the spectrum, Italy had 100 cars for each kilometre of road (almost twice the EU average).

The motorisation rate provides a comparison of the number of cars in relation to the population of a given country. The EU averaged 460 cars per thousand inhabitants in 1999. The highest rates were recorded in Luxembourg (610) and Italy (544), whilst the lowest rates were found in Portugal (330) and Greece (275).

Table 17.7

Number of road transport vehicles in the EU

	1970	1980	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Passenger cars (millions)	62.5	103.2	143.2	146.9	150.3	153.2	156.4	158.6	161.9	165.3	169.0	173.0
Buses and coaches (thousands)	331.6	443.6	484.3	478.9	481.0	482.6	487.7	486.9	500.4	505.4	510.9	520.1
Freight vehicles (millions)	7.4	10.6	15.7	16.2	16.9	17.1	17.4	17.9	18.4	18.9	19.4	20.1
Powered two-wheelers (millions)	:	:	:	:	20.8	21.1	21.2	21.2	21.9	22.3	23.2	24.1

Source: Eurostat; European Union Transport and Energy in Figures, Directorate-General of the European Commission for Energy and Transport, 2001

Restricting the analysis to inland transport (as no detailed recent data by Member State is available for sea transport), there were wide disparities in the use of road freight transport across the Member States. Road accounted, on average, for 74.7% of the EU's inland freight transported in 1999¹¹ (see figure 17.6), its share ranging from 39.8% in Austria to 98.3% in Greece. This ratio is affected by criteria such as the quality of the transport infrastructure, climatic and geographical conditions or the density of the population, as well as cost. It should also be stressed that the exclusion of sea transport has a significant effect on the results presented for several countries (such as Greece, Finland or Ireland), where short sea shipping accounted for more than two-thirds of total freight transported in 1996.

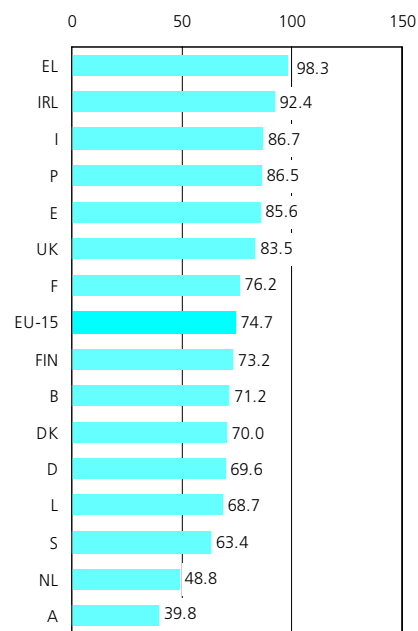
In relative terms, the car represented 81.0% of the EU's total inland passenger traffic in 1999¹². There was little variation around this average, except in Greece, where powered two-wheelers (11.4% of passenger traffic) and buses and coaches (19.7%) were more popular than in the other Member States. Italy and Portugal also reported a higher than average use of powered two-wheelers, 7.5% and 6.3% of passenger traffic, compared to the EU average of 3.0%. Buses and coaches accounted for 8.6% of the EU's inland passenger traffic in 1999, more than the share of railways (6.2%). Besides Greece, Ireland (15.3%), Austria (13.7%) and Denmark (13.4%) also reported higher shares for passenger transport by bus or coach.

(11) Share in total freight transported by road, railways, inland waterways and pipelines.

(12) Share in total passenger transport by passenger cars, powered two-wheelers, buses and coaches, trams and metros and railways.

The EU's road transport infrastructure had an estimated 3.3 million kilometres of road network in 1998. Motorways totalled 49.3 thousand kms, a 60% increase on 1980 and 207% increase on 1970. Partly as a consequence of their high population density and their geographical situation, Belgium and the Netherlands had the highest density of roads. In Belgium there were 4.8 thousand kilometres of road per thousand square kilometre of land (of which 55 kms were motorways), whilst in the Netherlands there were 2.7 thousand kilometres of road per thousand square kilometre of land (including 58 kms of motorways) - see figure 17.8. In comparison, sparsely populated countries such as Sweden and Finland had just 307 kilometres and 230 kilometres of road per thousand square kilometres of land, of which 3 kms or less were motorways.

Figure 17.6
Share of road transport in total inland transport of freight, 1999 (%) (1)



(1) Excluding sea transport.

Source: Eurostat; ECMT; UIC in European Union Transport and Energy in Figures, Directorate-General of the European Commission for Energy and Transport, 2001

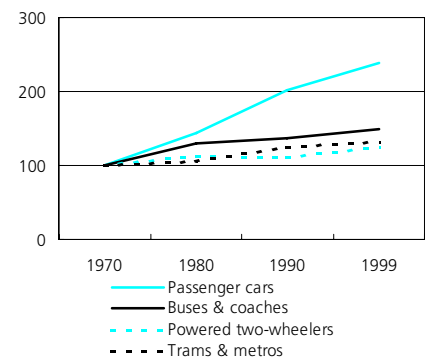
Table 17.8

Motorisation ratios (units)

	Number of cars per 1,000 inhabitants, 1999	Number of cars per kilometre of road, 1998
EU-15	460.1	52.1
B	449.9	30.8
DK	341.4	25.5
D	515.2	63.0
EL	275.3	67.8
E	423.7	98.3
F	465.3	27.3
IRL	346.1	12.0
I	544.4	100.1
L	609.7	46.4
NL	398.4	51.9
A	494.3	36.6
P	330.4	44.9
FIN	406.5	26.0
S	440.3	27.5
UK	413.8	60.4

Source: Eurostat; UN in European Union Transport and Energy in Figures, Directorate-General of the European Commission for Energy and Transport, 2001

Figure 17.7
Evolution of land passenger transport in the EU (1970=100, based on the number of passenger-kilometres)



Source: Eurostat; ECMT; UIC; UITP in European Union Transport and Energy in Figures, Directorate-General of the European Commission for Energy and Transport, 2001

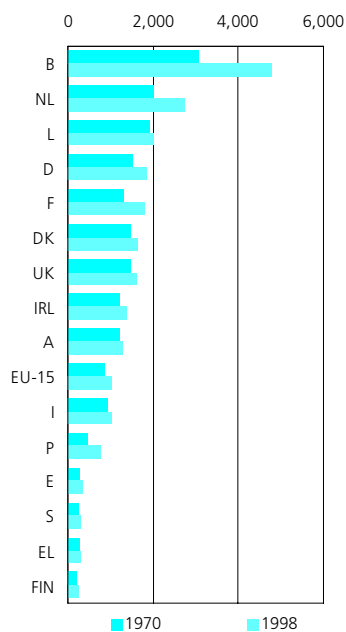
Table 17.9

Inland transport of passengers and freight, 1999

	Passenger transport (billion passenger-kilometres)					Freight transport (billion tonne-kilometres)			
	Passenger cars	Powered two-wheelers	Buses & coaches	Trams & metros	Railways	Road	Pipelines	Railways	Inland waterways
EU-15	3,784.3	141.9	403.3	51.1	291.9	1,318.2	89.2	237.2	120.4
B	98.4	1.4	12.2	0.8	7.4	37.5	1.6	7.4	6.2
DK	66.5	0.7	11.2	0.0	5.4	16.0	4.9	1.9	0.0
D	749.5	16.4	68.0	14.5	72.8	341.7	15.0	71.4	62.7
EL	73.0	12.5	21.5	0.8	1.6	17.7	0.0	0.3	0.0
E	325.2	14.2	50.0	5.1	19.2	111.0	7.0	11.6	0.0
F	699.6	12.3	40.7	10.4	66.5	260.3	21.3	53.4	6.8
IRL	31.0	0.3	5.9	0.0	1.4	6.1	0.0	0.5	0.0
I	661.4	65.0	90.2	5.4	41.0	232.8	14.1	21.6	0.2
L	5.0	0.1	0.9	0.0	0.3	2.3	0.0	0.7	0.3
NL	152.0	3.6	15.1	1.4	14.3	48.6	6.0	3.5	41.4
A	69.0	1.6	12.9	2.7	8.1	16.8	7.6	15.6	2.2
P	81.6	6.6	11.5	0.6	4.3	14.1	0.0	2.2	0.0
FIN	54.9	0.9	7.6	0.5	3.4	27.6	0.0	9.8	0.3
S	84.2	1.3	10.6	1.5	7.4	32.8	0.0	18.9	0.0
UK	633.0	5.0	45.0	7.5	38.8	152.9	11.6	18.4	0.2

Source: Eurostat; ECMT; UIC; UITP in European Union Transport and Energy in Figures, Directorate-General of the European Commission for Energy and Transport, 2001

Figure 17.8

Road density, 1998 (thousand kilometres per thousand kilometres²) (1)

(1) All types of road, including motorways.

Source: Eurostat; UN in European Union Transport and Energy in Figures, Directorate-General of the European Commission for Energy and Transport, 2001

LABOUR AND PRODUCTIVITY

EU employment in the road transport sector exceeded 2.2 million persons in 1999¹³, with road freight transport contributing the majority of the workforce (1.6 million persons). Whilst the largest employers in road freight transport were Germany (384.2 thousand persons employed, 1998) and France (305.1 thousand persons employed, 1999), it is interesting to note the relatively high number of persons employed in the Netherlands (108.3 thousand in 1998). Road freight transport appeared as a less labour intensive activity than passenger transport, as its contribution to road transport value added was generally higher than its contribution to employment.

Self-employment was an important phenomenon within the road freight transport sector¹⁴, for example, accounting for 49% of the workforce in Italy. There were also high shares of self-employment in the road freight sector in Ireland (25%) and Finland (21%). In contrast, employees accounted for more than 90% of the workforce in Luxembourg, France and Portugal.

(13) For the whole of this paragraph: I, L and NL, 1998; IRL and UK, 1997; F, IRL and NL, excluding NACE Classes 60.21 to 60.23; UK, number of employees; EL and E, not available.

(14) For the whole of this paragraph: D, I, L and NL, 1998; IRL, 1997; EL, E and UK, not available.

Wage adjusted labour productivity was generally lower for the road transport sector than for transport services in general¹⁵, reflecting the higher productivity recorded in air and maritime transport. This ratio ranged between 112% in Italy and 141% in Denmark and was higher for the road freight transport sector in every country reporting data.

Average personnel costs in road transport enterprises for most Member States were within a narrow range in 1999¹⁶, usually between 28 thousand EUR per employee in Finland and Austria and 34 thousand EUR per employee in Belgium. However, the United Kingdom (25.7 thousand EUR) and Portugal (15.1 thousand EUR) were outside of this range.

(15) I and L, 1998;

EL, D, E, F, IRL, NL and UK, not available.

(16) I and L, 1998; UK, 1997;

EL, D, E, F, IRL and NL, not available.

17.3: WATER TRANSPORT

This sub-chapter 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 the water transport infrastructure (navigable waterways, harbours, piers); in NACE these activities related to the operation of the infrastructure are classified as part of auxiliary transport activities.

The water transport sector is the smallest transport services sector at the NACE Division level. It generated 11.5 billion EUR of value added in the EU in 1999¹⁷ and generally accounted for less than 5% of transport services value added. However, this was not the case in Denmark (17.0%) or Finland (12.9%), where water transport was of greater importance (note there is no data available for Greece).

Sea and coastal transport (NACE Group 61.1) was by far the largest sub-sector, accounting for more than 85% of the value added generated in the water transport sector in the majority of countries. Inland waterways were of relatively more importance in Germany (19%), Italy (25%, 1998), Belgium (41%), the Netherlands (45%) and, in particular, Austria (a country with no coastline), where they accounted for 88% of water transport value added.

There were 29.5 thousand kilometres of inland waterways in use in the EU in 1998¹⁸ (see table 17.10), equivalent to 9 metres per square kilometre. The highest density was found in the Netherlands with some 122 metres of inland waterway per square kilometre, followed by Belgium with 51 metres and Germany with 20 metres.

(17) E, I, L and NL, 1998; IRL, 1997; E, excluding NACE Group 61.2; L, excluding NACE Group 61.1; EL, not available.

(18) Navigable canals, rivers and lakes regularly used for transport.

Four major axis exist when looking at the European inland waterway's network. The Basle-Rotterdam axis with the Rhine as its backbone is the most important in the EU. The Main-Danube axis, extending from Bamberg (D) on the Main to Kelheim (D) on the Danube, and connected to the first by the Rhine-Main-Danube canal is the second most important. The third major axis (East-West) is formed by the Elbe, Weser and Ems, whilst the fourth (North-South) serves regions of Belgium, the Netherlands and France that are not connected to the Rhine, notably through the Meuse, Scheldt, Lys and Sambre.

Inland shipping is specialised in the transport of large quantities of bulk products, such as sand, ores, coal, chemicals and oil. According to the latest available figures¹⁹, the largest volumes of freight transported are cement and building materials (34% of all tonne-kilometres transported in 1996), petroleum (19%) and coal and other solid mineral fuels (19%).

(19) European Union Transport and Energy in Figures, Directorate-General of the European Commission for Energy and Transport, 2001.

Table 17.10

Length of inland waterways in use (kilometres) (1)

	1970	1980	1990	1996	1997	1998
EU-15	32,338	30,620	29,637	29,436	29,815	29,500
B	1,553	1,510	1,513	1,531	1,540	1,569
DK	0	0	0	0	0	0
D	6,808	6,697	6,669	7,339	7,339	7,300
EL	6	6	6	6	6	6
E	70	70	70	70	70	70
F	7,433	6,568	6,197	5,678	6,051	5,732
IRL	0	0	0	0	0	0
I	2,337	2,337	1,366	1,466	1,463	1,477
L	37	37	37	37	37	37
NL	5,599	4,843	5,046	5,046	5,046	5,046
A	350	350	351	351	351	351
P	124	124	124	124	124	124
FIN	6,000	6,057	6,237	6,245	6,245	6,245
S	390	390	390	390	390	390
UK	1,631	1,631	1,631	1,153	1,153	1,153

(1) Navigable canals, rivers and lakes regularly used for transport.

Source: Eurostat; UN; national statistics in European Union Transport and Energy in Figures, Directorate-General of the European Commission for Energy and Transport, 2001

The total volume of freight transported in the EU was 120 billion tonne-kilometres in 1999, one-half the amount for rail and one-tenth of that for road transport, equivalent to a 6.8% share of total inland freight transported²⁰. The country displaying the highest specialisation in inland water freight transport was the Netherlands, where over two-fifths of freight was transported by inland waterways, some 41 billion tonne-kilometres in 1999 (see table 17.11 and figure 17.9). Germany (12.8%), Belgium (11.8%) and Luxembourg (10.3%) were the only other countries where more than 10% of freight was transported using this mode of transport.

Growth in inland waterways shipping has been fairly limited when compared to the growth rates registered by other means of transportation, with the volume of transported freight rising on average by 0.1% per annum during the 1980's, accelerating to 1.2% per annum between 1990 and 1999

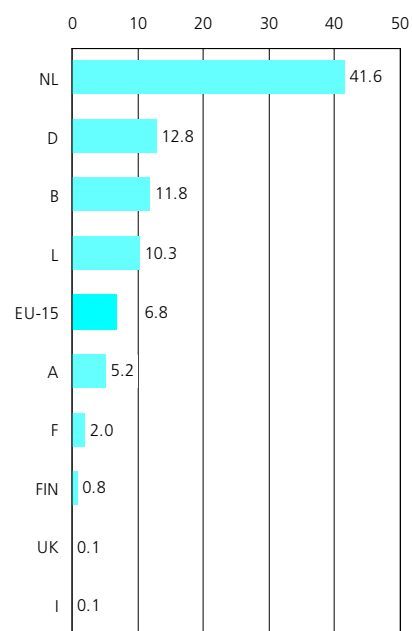
(20) Share in total freight transported by road, railways, inland waterways and pipelines.

Table 17.11
Freight transported by inland waterways
(billion tonne-kilometres)

	1970	1980	1990	1999
EU-15	103.5	106.9	107.9	120.4
B	6.7	5.9	5.4	6.2
DK	0.0	0.0	0.0	0.0
D	51.2	53.6	56.7	62.7
EL	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0
F	12.2	10.9	7.2	6.8
IRL	0.0	0.0	0.0	0.0
I	0.4	0.2	0.1	0.2
L	0.3	0.3	0.3	0.3
NL	30.6	33.5	35.7	41.4
A	1.3	1.6	1.7	2.2
P	0.0	0.0	0.0	0.0
FIN	0.5	0.7	0.4	0.3
S	0.0	0.0	0.0	0.0
UK	0.3	0.4	0.3	0.2

Source: ECMT; national statistics in European Union Transport and Energy in Figures, Directorate-General of the European Commission for Energy and Transport, 2001

Figure 17.9
Share of inland waterways
in total freight transport, 1999 (%) (1)



(1) Excluding sea transport.
Source: Eurostat; ECMT; UIC in European Union Transport and Energy in Figures, Directorate-General of the European Commission for Energy and Transport, 2001

Table 17.12
EU merchant fleet, 2000 (1)

	Total fleet controlled		National flag		Foreign flag	
	Number of ships (units)	Tonnage (million DWT)	Number of ships (units)	Tonnage (million DWT)	Number of ships (units)	Tonnage (million DWT)
EU-15	8,703	247.4	3,282	79.8	5,421	167.6
B	128	7.3	1	0.0	127	7.3
DK (2)	613	15.3	357	6.7	256	8.7
D	1,900	29.2	468	7.5	1,432	21.7
EL	3,167	131.7	745	40.8	2,422	90.9
E	232	3.6	123	1.6	109	2.0
F	210	5.5	122	2.5	88	3.0
IRL	41	0.2	30	0.1	11	0.0
I	570	12.8	439	8.4	131	4.4
L	2	0.0	2	0.0	0	0.0
NL	597	5.0	444	2.8	153	2.2
A	50	0.8	22	0.1	28	0.7
P	52	1.1	38	0.5	14	0.6
FIN	132	2.1	98	1.0	34	1.1
S	377	14.6	165	1.5	212	13.0
UK	632	18.2	228	6.2	404	12.0

(1) Ships of 1,000 GRT and over, as of 1 January 2000.

(2) Including international registers like the Danish International Ship Register; including vessels registered at territorial dependencies.
Source: ISL in European Union Transport and Energy in Figures, Directorate-General of the European Commission for Energy and Transport, 2001

Turning to sea transport, the EU's merchant fleet numbered 3,282 vessels in 2000. This was equivalent to 79.8 million dead-weight-tonnes (DWT). It should be noted that these figures refer only to ships registered in EU countries, whilst more than 60% of the fleet controlled by owners from EU countries fly a third country flag (see table 17.12). It is estimated that the real tonnage of EU-controlled ships reached 247 million DWT in 2000, equivalent to 35% of the world fleet. In 2000, 47% of total tonnage of EU-flagged ships was accounted for by oil tankers, 22% by bulk carriers, 17% by container ships and 10% by general cargo ships; the rest was spread between chemical tankers, ore/bulk/oil tankers and liquid gas tankers.

A distinction can be made between deep-sea transport, that refers to shipping on long sea routes, and short-sea shipping, that covers transport services of passengers and freight between national or European ports. Short-sea shipping was the second most important freight transport mode in the EU in 1999; intra-EU traffic reached an estimated 1,195 billion tonne-kilometres, a level only slightly below that recorded for road transport. The volume of freight transported by short-sea shipping rose on average by 1.7% per annum between 1980 and 1990, and by 3.0% per annum between 1990 and 1999.

The busiest sea-port in the EU in 1999 was Rotterdam (NL) with 299 million tonnes of general cargo loaded and unloaded, practically three times the volume of the next largest port, Antwerp (B) - see table 17.13. Rotterdam was also the largest port in terms of container transport, with 6.3 million TEUs²¹ in 1999, ahead of Hamburg (D) (3.7 million) and Antwerp (3.6 million) - see table 17.14. One of the main trends in recent years has been a switch to containers away from conventional general cargo transportation. This is reflected in the growth rate of general cargo traffic in the top twenty EU sea-ports which increased at an average rate of 1.6% per annum between 1990 and 1999, whilst container traffic grew by 9.0% per annum.

The busiest inland EU port in 1998 was also Rotterdam with 106 million tonnes of freight loaded and unloaded for river and sea-river traffic, followed by Duisburg (D), Liège (B) and Paris (F) - see table 17.15.

(21) Twenty Foot Equivalent Unit (TEU): a measurement of carrying capacity on a containership, referring to a common container size of 20ft in length.

Table 17.14.
Top twenty ports in the EU ranked by container traffic (thousand TEU)

		1990	1995	1998	1999
Rotterdam	NL	3,667	4,787	6,012	6,343
Hamburg	D	1,969	2,890	3,547	3,738
Antwerpen	B	1,549	2,329	3,266	3,614
Felixstowe	UK	1,436	1,924	2,500	2,697
Gioia Tauro	I	0	16	2,126	2,259
Bremen/B'haven	D	1,198	1,524	1,812	2,181
Algeciras	E	553	1,155	1,826	1,833
Le Havre	F	858	970	1,319	1,378
Barcelona	E	448	689	1,095	1,235
Genova	I	310	615	1,266	1,234
Valencia	E	387	672	1,005	1,153
Piraeus	EL	426	600	933	965
Southampton	UK	345	681	846	921
Zeebrugge	B	342	528	776	850
La Spezia	I	450	965	732	843
Marseille	F	482	498	660	664
Göteborg	S	352	458	520	624
Liverpool	UK	239	406	487	515
Helsinki	FIN	246	296	346	321
København	DK	165	178	171	180

Source: Ports of Rotterdam, Hamburg and Liverpool; ISL in European Union Transport and Energy in Figures, Directorate-General of the European Commission for Energy and Transport, 2001

Table 17.13.
Top twenty sea ports in the EU ranked by traffic (million tonnes)

		1970	1980	1990	1999
Rotterdam	NL	226.0	276.0	288.0	299.1
Antwerpen	B	78.0	82.0	102.0	115.7
Marseille	F	74.0	103.0	90.0	90.3
Hamburg	D	47.0	63.0	61.0	81.0
Le Havre	F	58.0	77.0	54.0	63.9
Amsterdam	NL	21.0	34.0	47.0	55.7
London	UK	64.0	48.0	58.0	52.4
Tees & Hartlep.	UK	23.0	38.0	40.0	49.3
Genova	I	53.0	51.0	44.0	45.9
Forth ports	UK	25.0	29.0	25.4	45.4
Trieste	I	27.0	38.0	34.0	44.8
Algeciras	E	8.0	22.0	25.0	41.9
Wilhelmshaven	D	22.0	32.0	16.0	39.8
Dunkerque	F	25.0	41.0	37.0	38.3
Bremen/B'haven	D	23.0	25.0	28.0	36.0
Zeebrugge	B	8.0	12.0	30.0	35.4
Southampton	UK	28.0	25.0	29.0	33.3
Milford Haven	UK	41.0	39.0	32.0	32.2
Göteborg	S	20.0	22.0	26.0	30.4
Liverpool	UK	31.0	13.0	23.0	28.9

Source: ISL in European Union Transport and Energy in Figures, Directorate-General of the European Commission for Energy and Transport, 2001

Table 17.15.
Top twenty inland ports in the EU ranked by freight loaded and unloaded (million tonnes)

		1995	1998	1999
Rotterdam	NL	154.8	154.8	106.4
Duisburg	D	48.4	49.7	47.6
Liège	B	14.9	18.3	19.8
Paris	F	20.3	18.1	19.7
Strasbourg	F	9.7	9.4	9.5
Köln	D	6.8	8.6	8.7
Mannheim	D	7.7	8.6	7.7
Ludwigshafen	D	8.2	7.5	7.2
Karlsruhe	D	10.3	6.2	5.5
Heilbronn	D	4.9	5.4	5.3
Ports Rhénans Alsace	F	4.3	5.0	4.9
Neuss	D	4.9	5.6	4.6
NV Zeekanaal, Brabant	B	8.5	8.7	3.8
Bruxelles	B	5.1	3.4	3.6
Dortmund	D	5.4	5.5	3.4
Frankfurt am Main	D	3.6	3.9	3.4
Saarlouis / Dillingen	D	2.5	3.5	3.2
Kehl	D	3.1	3.1	3.0
Krefeld	D	3.4	2.8	2.9
Magdeburg	D	2.4	2.8	2.8

Source: European Federation of Inland Ports in European Union Transport and Energy in Figures, Directorate-General of the European Commission for Energy and Transport, 2001

LABOUR AND PRODUCTIVITY

EU employment in the water transport sector was 140.8 thousand persons in 1999²². Self-employment was not very widespread in sea transport: unpaid working proprietors and family workers represented generally less than five percent of total employment in 1999, except in Belgium (26%). Within inland water transport, however, this was a relatively frequent working practice which accounted for more than 15% of employment in most countries, especially in Germany (19%), Denmark (23%), France (32%) and Belgium (41%).

The LFS shows that the water transport workforce was largely composed of men, who represented 81.4% of those employed in 2000, a share that was much higher than the services (NACE Sections G to K) average of 56.5%.

(22) For the whole of this paragraph: E, I, L and NL, 1998; IRL and UK, 1997; E, excluding NACE Group 61.2; L, excluding NACE Group 61.1; UK, number of employees; EL, not available.

Average personnel costs within the water transport sector were generally above 40 thousand EUR per employee in 1999²³. The highest average personnel costs were recorded in Austria (60.0 thousand EUR per employee) and Belgium (62.1 thousand EUR).

Wage adjusted labour productivity in water transport services were also as a general rule higher than the average for transport services. In several countries for which data was available, wage adjusted labour productivity in 1999 was higher than 200%²⁴, and even approached or exceeded 300% in Germany (298%) and Denmark (331%).

P&O Stena Line was the largest employer amongst ferry operators, with some 9,452 employees in 2000 (see table 17.16). Three of the four largest operators originated from Nordic countries and three Greek ferry companies also figured in the top ten.

(23) E, I, L and NL, 1998; UK, 1997; E, excluding NACE Group 61.2; L, excluding NACE Group 61.1; EL and IRL, not available.

(24) E, I, L and NL, 1998; E, excluding NACE Group 61.2; L, excluding NACE Group 61.1; EL, IRL and UK, not available.

Table 17.16
Number of employees for selected EU ferry operators, 2000

P&O Stena Line	UK	9,452
Scandlines A/S	DK	2,760
Viking Line	FIN	2,702
DFDS Seaways	DK	1,780
Irish Ferries	IRL	1,435
Minoan Lines	EL	1,371
Superfast Ferries	EL	1,214
Hoverspeed	UK	1,005
Strintzis Lines	EL	936
TT Line	D	900

Source: ShipPax in European Union Transport and Energy in Figures, Directorate-General of the European Commission for Energy and Transport, 2001

17.4: 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 completes NACE Division 62.

This sub-chapter also provides separately some information on the air transport infrastructure (terminal facilities and airports); in NACE the activities related to the operation of this infrastructure are classified as part of auxiliary transport activities.

Despite short-term fluctuations in activity that are caused by economic cycles or external factors (see box 17.6), in the long-term there has been rapid growth in the EU's air transport sector. Intra-EU passenger traffic grew on average by 7.5% per annum between 1970 and 1999 and by 6.3% per annum between 1990 and 1999. From 32 billion passenger-kilometres in 1970, intra-EU traffic expanded to 260 billion passenger-kilometres by 1999. As a result, intra-EU air transport accounted for 5.4% of total passenger transport within the EU²⁵, a share that rose from 1.5% in 1970.

STRUCTURAL PROFILE

The EU's air transport services sector (NACE Division 62) generated 29.5 billion EUR of value added in 1999²⁶. The United Kingdom alone accounted for 8.1 billion EUR of this total, ahead of Germany (7.8 billion EUR); however, in relative terms, air transport services were most developed in Ireland and Luxembourg, where they accounted for 30.6% (1997) and 33.3% (1998) of total transport services' value added²⁷. These shares were more than double those recorded in most of the other Member States, and reflect specialisation in particular market segments - air-freight in Luxembourg and low-cost/no-frills passenger travel in Ireland.

(25) Share in total passenger transport by passenger cars, powered two-wheelers, buses and coaches, trams and metros, railways and air transport.

(26) E, I and L, 1998; IRL, 1997;

EL and NL, not available.

(27) L, excluding water transport (NACE Division 61).

Box 17.6: latest developments in air transport

The general slowdown experienced by the world economy in 2001 and the fears of terrorism with respect to air travel in the aftermath of the attacks on New York and Washington in September 2001 both contributed to a severe fall in airborne traffic and the bankruptcy of two European flagship carriers, Swissair and Sabena. The latest results from AEA²⁸ airlines show that total passenger traffic was down 11.1% in January 2002 compared to the year before (see table 17.17). Intra-European traffic lost 12.3%, whilst very heavy losses (-17.6%) were recorded on North Atlantic routes. However, capacity cuts were in general greater than traffic decline, as 14.3% fewer seat-kilometres were operated by AEA airlines, with capacity in Europe reduced by 15.6%, and by almost 25% on North Atlantic routes. As a consequence, load factors have generally improved, notably on North Atlantic routes (up 6.1 percentage points to 72.0%).

(28) The EU members of AEA are Aer Lingus (IRL), Air France, Alitalia, Austrian Airlines, British Airways, British Midland Airways, Cargolux Airlines (L), Finnair (FIN), Iberia (E), KLM (NL), Lufthansa (D), Luxair (L), Olympic (EL), Sabena (B), SAS (DK, S, NO), Spanair (E) and TAP-Air Portugal.

Table 17.17

Recent evolution of passenger and air freight transport on European airlines, January 2002 (% change compared to previous year) (1)

Destination	Passenger traffic	Available seats	Passenger load factor (points)	Freight traffic
Total scheduled	-11.1	-14.3	2.4	-15.2
Domestic	-12.6	-11.3	-0.8	-2.3
Total international	-11.0	-14.6	2.8	-15.3
Total long haul	-10.3	-13.8	3.0	-14.9
Geographical Europe (2)	-12.3	-15.6	2.0	-22.9
North Atlantic	-17.6	-24.5	6.1	-27.5
Mid Atlantic	6.1	11.1	-3.6	22.1
South Atlantic	-14.1	-11.0	-2.7	-25.7
North Africa	-20.5	-18.2	-1.8	-25.5
Sub Saharan Africa	-5.1	-4.8	-0.2	-11.6
Middle East	-13.9	-20.6	5.2	-16.9
Far East - Australasia	-8.2	-11.0	2.4	-7.3

(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 Iceland, Turkey, Azores, Canary Islands, Madeira and Cyprus.

Source: AEA

Box 17.7: main airlines

Data for the main EU airlines in the AEA show that their worldwide passenger traffic expanded by 7.0% in 2000, reaching 554 billion revenue passenger-kilometres²⁹ or an average of 1,476 kilometres per inhabitant (see table 17.18). Scheduled traffic represented 542 billion passenger-kilometres, approximately one-fifth of which was accounted for by European routes. That same year, the carrying capacity of airlines grew more slowly than traffic, by 3.9% to 753 billion seat-kilometres. As a consequence the passenger load factor, in other words, the average rate of seating capacity which was actually sold and utilised, improved to a record 73.6% (73.4% on scheduled flights). Passenger load factors were lower than average on European routes (63.8%), with the highest passenger load factors were achieved by KLM (79.6%), Air France (78.0%) and Aer Lingus (76.0%), whilst the lowest rates were recorded by Finnair (60.2%) and Luxair (53.5%).

(29) Revenue passenger kilometres: one fare-paying passenger transported one kilometre, counted on a point-to-point basis; RPKs are computed by multiplying the number of revenue passengers by the kilometres they are flown.

Table 17.18

AEA passenger airline traffic, 2000

		Total passenger traffic (million passenger-kilometres)	2000/1999 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)
Sabena	B	19,379	9.5	19,379	68.2	37.3	61.8
SAS	DK, S, NO	22,923	6.0	22,647	67.0	41.3	61.0
Lufthansa	D	94,289	9.3	94,170	75.8	19.2	64.0
Olympic Airways	EL	8,884	5.2	8,860	64.9	42.2	59.3
Iberia	E	40,043	15.6	40,043	73.8	21.4	68.1
Spanair	E	9,709	10.6	5,420	62.6	13.8	48.9
Air France	F	91,848	9.5	91,801	78.0	11.3	67.2
Aer Lingus	IRL	9,481	16.3	8,889	76.0	32.4	73.2
Alitalia	I	40,846	10.5	40,618	71.8	19.1	63.1
Luxair	L	997	-11.9	557	53.5	100.0	53.5
KLM	NL	60,331	3.8	60,327	79.6	13.5	70.5
Austrian Airlines	A	8,799	11.5	8,799	67.0	27.7	59.5
TAP Air Portugal	P	10,414	10.4	10,385	72.6	38.2	66.6
Finnair	FIN	12,594	-2.5	7,467	60.2	46.4	52.9
British Airways	UK	119,385	0.9	118,890	71.1	14.3	63.4
BMI British Midland	UK	4,484	20.2	3,837	63.2	63.7	61.5
Total		554,405	7.0	542,088	73.4	19.7	63.8
Swissair	CH	36,212	9.0	34,246	73.7	22.3	61.4
Icelandair	IS	4,113	10.1	3,932	72.4	49.6	70.3

(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 Iceland, Turkey, Azores, Canary Islands, Madeira and Cyprus.
Source: AEA

Box 17.7: main airlines (continued)

North American airlines accounted for the largest share of world passenger air traffic. No fewer than six of the world's top ten airlines were American (see table 17.19), including the four largest. This domination is clear evidence of the fragmentation of the airline industry in the EU, where true cross-border mergers of major airlines remain to be realised, as well as being a reflection of the size of the national market in the US. United Airlines topped the world ranking with 204 billion passenger-kilometres flown in 2000, ahead of American Airlines (188 billion) and Delta Airlines (173 billion). The highest ranked EU company was British Airways, in fifth place with 119 billion passenger-kilometres. EU companies fared better when taking into account only international traffic: as British Airways was the leading carrier in the world for international routes with more than 115 billion passenger-kilometres flown in 2000, of which 98 billion were on routes outside of Europe. British Airways preceded Lufthansa (88 billion passenger-kilometres on international routes), Air France (82 billion) and United Airlines (80 billion).

The progressive liberalisation and privatisation of the air transport sector worldwide has been accompanied by the formation of large

alliances between carriers, whereby two or more airlines agree to link their networks via co-operative arrangements. This is notably done through code-sharing with alliance partners, which allows one member airline to sell tickets under its own name for travel that occurs within another partners network. The constitution of alliances is sometimes seen as an alternative to full mergers. As of January 2002 the main global alliances included Star Alliance network (24.0% of international passenger traffic in 2000³⁰), the One World alliance (19.9% of traffic), Sky Team (6.8% of traffic), the Qualiflyer Group (4.9% of traffic) and finally a fifth large alliance regrouping KLM and Northwest Airlines (6.8% of traffic).

Freight transported by EU members of AEA grew by 10.3% in 2000 to reach 29.5 billion tonne-kilometres, of which only 2.4% was transported on European routes³¹. The total revenue load factor (the percentage of total capacity available for freight and mail which is actually sold and utilised) was 68.4% on all routes (and 54.7% on European routes).

At a world level, the largest freight airline was Federal Express (US) with traffic that exceeded 10.8 billion tonne-kilometres in 2000, of which only 41.2% was destined for international routes. It was followed by Lufthansa (D) with some 7.1 billion tonne-kilometres, almost exclusively on non-national routes, which made Lufthansa the largest international freight carrier in the world. Air France was the sixth largest freight carrier in the world with 5.0 billion tonnes-kilometres and was ranked fourth in terms of international traffic, just ahead of British Airways (4.6 billion tonnes-kilometres).

(30) Share of scheduled international traffic of IATA members.

(31) 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 Iceland, Turkey, Azores, Canary Islands, Madeira and Cyprus.

Table 17.19**Top twenty airlines in the world by passengers flown, 2000**

		Scheduled passenger traffic (million passenger-kilometres)	Share of international destinations (%)	World ranking by international traffic
United Airlines	US	204,187	39.1	4
American Airlines	US	187,542	34.5	7
Delta Air Lines	US	173,411	24.4	12
Northwest Airlines	US	127,324	45.2	9
British Airways	UK	118,890	96.8	1
Continental	US	96,949	35.5	15
Lufthansa	D	94,170	93.4	2
Air France	F	91,801	89.8	3
Japan Airlines	JP	88,999	80.8	5
US Airways	US	75,380	14.6	38
Singapore Airlines	SG	70,795	100.0	6
Qantas	AU	63,495	77.5	10
KLM	NL	60,331	100.0	8
All Nippon Airways	JP	58,042	40.1	22
Cathay Pacific	HK	47,097	100.0	11
Air Canada	CA	44,806	69.5	19
TWA	US	43,798	15.9	49
Thai Airways	TH	42,236	91.6	13
Alitalia	I	40,618	82.1	17
Korean Air Lines	KR	40,467	89.0	14

Source: IATA; AEA

Box 17.8: the world's busiest airports

Five of the world's top ten airports in terms of passenger traffic in 2000 were North American, including the top three, whilst only four were located in the EU. The largest airport in the world was Atlanta Hartsfield International Airport with some 80.2 million passengers in 2000, ahead of Chicago O'Hare (72.1 million passengers) and Los Angeles (66.4 million passengers). Fourth in the list was London Heathrow, with 64.5 million passengers (see table 17.20). At an EU level, Heathrow preceded Frankfurt, Paris Charles de Gaulle and Amsterdam Schiphol, each handling in excess of 35 million passengers.

The busiest airport in the world for freight traffic in 2000 was Memphis, a major express courier hub (2.5 million tonnes of freight loaded and unloaded). The first EU airport was ranked in eighth place, Frankfurt (with 1.7 million tonnes), followed by London Heathrow, Amsterdam Schiphol and Paris Charles de Gaulle, the only other EU airports to exceed one million tonnes of annual freight traffic (see table 17.21).

Table 17.20

**Top EU airports by number of passengers arriving, departing and in transit
(million passengers)**

		1970	1980	1990	1999	2000
London Heathrow	UK	15.6	27.5	43.0	61.3	64.5
Frankfurt Rhein-Main	D	9.4	17.6	29.4	45.9	49.4
Paris Ch. de Gaulle	F	2.2	10.1	22.5	43.2	48.2
Amsterdam Schiphol	NL	5.2	9.4	16.5	36.8	39.6
Madrid Barajas	E	4.8	10.1	16.2	27.7	32.8
London Gatwick	UK	3.7	9.7	21.2	30.6	32.1
Roma Fiumicino	I	6.5	11.4	17.7	24.1	25.9
Paris Orly	F	10.4	15.7	24.3	25.3	25.4
München F.J. Strauss	D	3.6	6.0	11.4	21.3	23.1
Bruxelles National	B	2.8	5.1	7.1	20.0	21.6
Milano Malpensa	I	:	:	:	17.0	20.7
Barcelona Transoceanico	E	4.0	5.8	9.0	17.4	19.8
Palma de Mallorca	E	4.8	7.3	11.3	17.4	19.6
Manchester Ringway Intl	UK	1.9	4.3	10.1	17.8	18.8
Stockholm Arlanda	S	2.6	4.3	14.0	17.4	18.4
København Kastrup	DK	6.5	8.6	12.1	17.4	18.3
Düsseldorf Rhein-Ruhr	D	3.6	7.2	11.9	15.9	16.0
Dublin Collinstown	IRL	1.9	2.6	5.5	12.8	13.8
Wien Schwechat	A	1.5	2.7	5.5	11.2	11.9
London Stansted	UK	:	:	:	9.5	11.9

Source: ACI; ICAO

Table 17.21

Top twenty EU airports by cargo loaded and unloaded and mail (thousand tonnes)

		1995	1999	2000
Frankfurt/Main	D	1,297	1,539	1,710
London Heathrow	UK	1,043	1,356	1,402
Paris Ch. de Gaulle	F	824	1,205	1,380
Amsterdam Schiphol	L	978	1,226	1,267
Bruxelles National	B	427	656	634
Luxembourg Findel	L	286	448	:
Köln/Bonn	D	276	411	442
København Kastrup	DK	:	389	419
London Gatwick	UK	232	314	338
Madrid Barajas	E	230	310	331
Milano Malpensa	I	126	250	300
Liège Bierset	B	8	208	270
Roma Fiumicino	I	257	185	210
East Midlands	UK	83	144	194
London Stansted	UK	93	193	183
Stockholm Arlanda	S	104	144	155
München F.J. Strauss	D	65	138	148
Wien Schwechat	A	93	126	135
Manchester Ringway Intl	UK	51	113	122
Lisboa da Portela de Sacavem	P	89	109	115

Source: ACI

LABOUR AND PRODUCTIVITY

Total employment in the EU's air transport services sector (NACE Division 62) reached 314 thousand persons in 1999³². Air transport employment generally accounted for less than 10% of transport services employment, although this share rose to 16.2% in Ireland (1997).

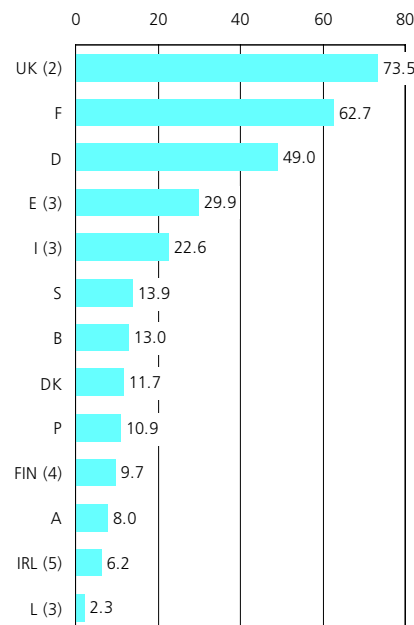
Women represented 36.5% of the air transport workforce in 2000. This was higher than the average for transport services (20.4%), but still below the services (NACE Sections G to K) average of 43.5%. Other notable labour force characteristics include the predominance of paid employees in the air transport sector, as 98.7% of those employed were employees (the highest share for any transport activity at the Division level of NACE). On the other hand, 87.4% of the EU's air transport workforce were in full-time employment, which was the lowest share within the transport services sector in 2000. A high proportion of the workforce possessed a higher level of education.

In most countries for which data was available, wage adjusted labour productivity in 1999 was equal to or higher than 135%; this ratio exceeded 200% in Luxembourg (214%), Italy (289%) and Germany (344%), whilst Sweden (116%), France (114%) and Portugal (113%) were at the lower end of the range³³, with Belgium the only country to report that value added did not cover personnel costs.

The generally higher than average qualification level of the air transport workforce was reflected in higher than average personnel costs, comprised between 45.0 thousand and 50.0 thousand EUR per employee in the majority of Member States in 1999³⁴. France (56.4 thousand EUR) and Sweden (54.6 thousand EUR) had somewhat higher than average personnel costs, whilst Finland (42.3 thousand EUR) and Portugal (37.0 thousand EUR) reported the lowest personnel costs.

(32) E, I and L, 1998; IRL and UK, 1997; UK, number of employees; EL and NL, not available.
 (33) E, I and L, 1998; EL, IRL, NL and UK, not available.
 (34) E, I and L, 1998; UK, 1997; EL, IRL and NL, not available.

Figure 17.10
Air transport (NACE Division 62)
Number of persons employed,
1999 (thousands) (1)



(1) EL and NL, not available.
 (2) Number of employees, 1997.
 (3) 1998.
 (4) 2000.
 (5) 1997.
 Source: Eurostat, Structural Business Statistics
 (theme4/sbs/enterpr/enter_ms)

Table 17.22
Air transport (NACE Division 62)
Labour force characteristics
(% of total employment)

	Female		Higher level of education	
	1995	2000 (1)	1995	2000 (2)
EU-15	34.7	36.5	27.5	28.8
B	25.1	26.9	32.5	29.6
DK	:	31.7	:	28.7
D	32.8	39.7	28.5	28.3
EL	:	44.5	:	:
E	31.8	36.9	35.0	49.1
F	39.8	36.9	34.9	40.7
IRL	49.1	45.7	:	:
I	20.2	28.2	:	9.7
L	29.2	33.5	:	:
NL	36.6	26.2	:	34.4
A	44.1	56.4	:	:
P	:	:	:	:
FIN	64.8	44.0	:	32.5
S	:	:	:	:
UK	35.3	38.1	27.5	37.9

(1) L, 1999.
 (2) EU-15, 1997.
 Source: Eurostat, Labour Force Survey

Box 17.9: employment in major airlines

Major EU airlines (members of AEA) employed 281 thousand employees in 2000. The highest share was accounted for by on-board personnel (pilots, cockpit personnel or cabin attendants), although they accounted for less than one-third of the total.

Table 17.23**Employment in major European airlines, 2000**

		Number of employees	Pilots & cabin attendants (%)	Maintenance (%)	Ticketing and sales (%)	Handling (%)	Other (%)
Sabena	B	7,125	32.9	0.0	0.0	59.4	7.7
SAS	DK	21,820	24.6	17.2	15.9	26.6	15.8
Lufthansa	D	38,094	44.0	0.0	15.4	26.5	14.1
Olympic Airways	EL	6,657	24.4	22.4	21.3	17.0	14.9
Iberia	E	26,814	24.0	15.8	11.2	38.1	10.8
Spanair	E	2,725	49.8	10.8	0.0	25.1	14.3
Air France	F	56,426	26.2	17.0	23.2	26.1	7.5
Aer Lingus	IRL	5,943	32.8	3.6	11.9	38.6	13.1
Alitalia (1)	I	8,147	:	:	:	:	:
Cargolux Airlines International	L	1,326	20.7	25.5	2.6	6.9	44.4
Luxair	L	1,934	13.7	6.0	3.4	55.2	21.7
KLM	NL	27,523	27.2	17.5	11.5	31.6	12.2
Austrian Airlines	A	4,964	31.9	15.1	25.9	12.6	14.5
TAP Air Portugal	P	8,837	22.9	22.7	10.9	31.6	12.0
Finnair	FIN	9,069	25.3	25.9	17.1	16.4	15.2
British Airways	UK	55,263	34.7	14.2	10.4	22.9	17.7
BMI British Midland	UK	6,712	32.0	11.5	7.9	32.3	16.2
Swissair	CH	18,159	29.2	18.9	13.5	25.5	12.9
Icelandair	IS	1,774	31.6	12.7	17.9	22.5	15.3

(1) 8,147 employees in maintenance, ticketing and handling operations.

Source: IATA

17.5: AUXILIARY TRANSPORT ACTIVITIES

This sub-chapter 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 the previous sub-chapters (17.1 to 17.4). The NACE regroups these activities concerning the operation of transport infrastructure within supporting transport activities (NACE Group 63.2), for which official statistics are provided within this sub-chapter.

STRUCTURAL PROFILE

The value added generated by auxiliary transport activities (NACE Groups 63.1, 63.2 and 63.4) in the EU was 67.5 billion EUR in 1999³⁵. This represented, in most countries, between one-quarter and one-third of the total value added created in the transport services sector, with only Denmark (23%), Finland (19%) and Austria (18%) recording lower shares. Amongst the larger EU economies, this sector was relatively small in Italy, where it generated 8.1 billion EUR of value added in 1998, approximately one-half the level recorded in the United Kingdom (15.8 billion EUR, 1999) or Germany (16.4 billion EUR, 1999). In contrast, auxiliary transport activities were well developed in the Netherlands (3.7 billion EUR, 1998) and Belgium (2.8 billion EUR, 1999) in relation to the size of these two countries (probably due to their geographical location and the presence of large sea and inland ports on their territories).

(35) I, L and NL, 1998; IRL, 1997; EL and E, not available.

LABOUR AND PRODUCTIVITY

Excluding Germany, Greece and Spain, auxiliary transport activities employed 875 thousand persons in the EU in 1999³⁶.

Average personnel costs and wage adjusted labour productivity for auxiliary transport services were generally higher than for transport services as a whole. In 1999, average personnel costs ranged between 32.9 thousand EUR per employee (in Finland) and 44.7 thousand EUR (in Belgium), with the United Kingdom (20.7 thousand EUR, 1997) and Portugal (20.3 thousand EUR) below this range³⁷.

Wage adjusted labour productivity was above 145% in the majority of countries reporting data in 1999³⁸. Even when this threshold was not attained, as in Austria (144%), Belgium (140%) and Sweden (133%) the ratio remained relatively high.

(36) I and L, 1998; IRL, NL and UK, 1997; UK, number of employees; D, EL and E, not available.
(37) I and L, 1998; UK, 1997; D, EL, E, IRL and NL, not available.
(38) I and L, 1998; EL, D, E, IRL, NL and UK, not available.

Table 17.24

Supporting and auxiliary transport activities; activities of travel agencies (NACE Division 63) Labour force characteristics (% of total employment)

	Female		Part-time		Self-employed		Higher level of education	
	1995	2000	1995	2000	1995	2000 (1)	1995	2000 (2)
EU-15	30.8	32.5	9.0	11.0	8.1	7.8	13.8	13.6
B	27.7	35.3	6.2	7.4	8.0	6.8	25.1	32.7
DK	33.2	37.4	18.4	18.2	:	7.9	28.0	13.1
D	27.2	28.5	8.0	11.0	10.5	9.0	10.4	12.1
EL	32.9	35.2	:	:	13.5	17.3	16.2	22.2
E	30.1	30.6	6.0	4.0	10.0	9.3	26.9	32.9
F	32.7	33.9	8.0	6.9	3.6	1.7	18.6	21.3
IRL	:	40.2	:	:	:	:	:	:
I	27.7	27.5	6.8	9.1	18.6	24.1	8.1	8.5
L (3)	:	67.4	:	:	:	:	:	:
NL	33.6	31.3	22.7	25.6	:	6.1	:	14.6
A	36.3	36.4	8.1	12.8	:	4.3	8.6	13.3
P	30.9	44.9	:	:	:	20.3	:	:
FIN	36.7	44.9	:	9.3	:	:	14.0	37.9
S	41.5	40.4	:	:	:	:	29.8	23.4
UK	33.4	35.8	10.3	13.3	4.4	4.4	10.7	19.1

(1) B and F, 1998; DK and P, 1997.

(2) EU-15, 1997.

(3) 1997.

Source: Eurostat, Labour Force Survey

Table 17.25

Transport via railways (NACE Group 60.1)
Main indicators in the EU, 1999 (1)

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Number of enterprises (units)	4	22	132	:	7	27	:	143	1	5	17	:	3	30	116
Turnover (million EUR)	1,576	1,857	10,980	:	1,467	:	:	5,255	323	:	:	:	:	1,334	7,703
Purchases of goods and services (million EUR)	802	762	:	:	669	:	:	2,754	117	:	:	:	:	751	6,666
Value added (million EUR)	2,113	1,100	3,699	:	2,369	:	:	5,290	171	:	:	:	:	633	2,828
Personnel costs (million EUR)	1,691	564	:	:	1,122	:	:	5,476	152	:	:	:	:	488	2,042
Number of persons employed (thousands) (2)	41.4	10.3	:	:	40.5	:	:	142.4	3.1	:	:	:	:	12.1	:
Gross investment in tangible goods (million EUR)	1,240	359	:	:	252	:	:	2,302	:	:	:	:	138	105	323
Gross operating rate (%)	26.8	28.8	:	:	85.0	:	:	-3.5	9.3	:	:	:	:	10.9	10.2
App. labour productivity (thous. EUR/pers. emp.)	51.0	106.4	:	:	58.5	:	:	37.1	55.3	:	:	:	:	52.4	:
Wage adjusted labour productivity (%)	124.9	195.0	:	:	211.2	:	:	96.5	112.2	:	:	:	:	129.7	:

(1) E, I and NL, 1998; DK, 1998, except for number of enterprises; L, 1998, except for turnover. (2) UK, number of employees, 1997.
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms)

Table 17.26

Other land transport (NACE Group 60.2)
Main indicators in the EU, 1999 (1)

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Number of enterprises (units) (2)	9,648	12,136	84,731	:	203,340	79,394	:	136,325	621	11,350	8,938	17,254	21,060	25,255	47,012
Turnover (million EUR) (3)	8,262	5,755	41,245	:	:	:	:	32,977	659	10,824	6,107	3,702	4,750	10,353	41,812
Purchases of goods and services (million EUR)	5,293	2,786	:	:	:	:	:	22,316	398	4,722	3,198	2,096	2,362	6,881	21,061
Value added (million EUR)	3,669	3,267	19,869	:	:	:	:	14,224	274	6,526	3,098	1,681	2,276	3,792	20,573
Personnel costs (million EUR)	2,563	1,995	:	:	:	:	:	7,718	191	4,515	2,065	1,183	1,185	2,970	12,315
Number of persons employed (thousands) (4)	86.0	70.9	:	:	:	:	:	421.2	6.7	:	83.1	88.6	58.1	117.1	421.3
Gross investment in tangible goods (million EUR)	947	702	:	:	:	:	:	3,363	:	1,477	1,112	1,087	680	1,495	4,408
Gross operating rate (%)	13.4	22.1	:	:	:	:	:	19.7	13.5	19.1	16.9	13.5	23.8	7.9	19.7
App. labour productivity (thous. EUR/pers. emp.)	42.7	46.1	:	:	:	:	:	33.8	41.1	:	37.3	19.0	37.7	32.4	:
Wage adjusted labour productivity (%)	125.6	141.3	:	:	:	:	:	111.7	131.9	:	133.9	126.1	136.4	113.9	:

(1) I, 1998; E, 1997; L, 1998, except for turnover; NL, 1998, except for number of enterprises and turnover. (2) NL, 1997. (3) FIN, 2000.

(4) FIN, 2000; UK, number of employees, 1997.

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

Table 17.27

Sea and coastal water transport (NACE Group 61.1)

Main indicators in the EU, 1999 (1)

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Number of enterprises (units)	74	461	1,013	:	18	733	41	494	:	595	19	74	198	438	1,027
Turnover (million EUR) (2)	1,497	7,906	3,065	:	317	4,127	303	3,944	:	3,017	26	281	2,368	3,228	4,908
Purchases of goods and services (million EUR)	1,435	6,508	:	:	159	3,586	222	3,139	:	2,374	24	220	1,492	2,598	3,186
Value added (million EUR)	59	1,529	2,265	:	181	635	81	1,029	:	794	3	65	600	685	1,673
Personnel costs (million EUR)	36	437	:	:	87	536	:	601	:	258	0	26	323	509	800
Number of persons employed (thousands) (3)	0.5	10.6	:	:	2.7	12.4	1.6	14.9	:	7.6	0.0	1.3	8.0	13.2	18.4
Gross investment in tangible goods (million EUR)	39	881	:	:	128	252	91	1,336	:	434	0	20	123	362	366
Gross operating rate (%)	1.5	13.8	:	:	29.5	2.4	:	10.8	:	16.9	10.0	14.1	13.4	5.5	17.8
App. labour productivity (thous. EUR/pers. emp.) (4)	110.4	144.0	:	:	66.3	51.3	49.6	68.8	:	104.6	286.5	48.6	72.9	52.0	:
Wage adjusted labour productivity (%) (5)	120.8	334.5	:	:	206.9	115.5	:	164.5	:	293.0	0.0	234.7	185.1	132.8	:

(1) E and I, 1998; IRL, 1997; NL, 1998, except for turnover. (2) FIN, 2000. (3) FIN, 2000; UK, number of employees, 1997. (4) A, 1998. (5) A, 1997.
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms)

Table 17.28

Inland water transport (NACE Group 61.2)

Main indicators in the EU, 1999 (1)

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Number of enterprises (units)	259	37	1,573	:	27	1,191	4	872	66	3,915	59	25	101	338	228
Turnover (million EUR) (2)	150	17	1,365	:	:	384	3	531	7	1,199	67	19	21	99	207
Purchases of goods and services (million EUR)	109	10	:	:	:	265	1	304	2	525	47	12	10	64	135
Value added (million EUR)	41	7	526	:	:	114	2	347	4	654	20	10	10	42	95
Personnel costs (million EUR)	17	5	:	:	:	69	:	256	9	206	16	9	6	32	63
Number of persons employed (thousands) (3)	0.8	0.1	8.1	:	:	2.9	0.0	7.7	0.5	8.0	0.3	0.6	0.3	1.3	1.7
Gross investment in tangible goods (million EUR)	16	1	:	:	:	43	0	70	:	395	2	4	2	16	25
Gross operating rate (%)	15.7	11.3	:	:	:	11.6	:	17.0	-95.1	37.1	5.0	3.1	21.2	10.8	15.5
App. labour productivity (thous. EUR/pers. emp.)	52.1	53.7	:	:	:	39.0	41.3	45.2	8.0	81.3	61.1	16.5	36.2	32.5	:
Wage adjusted labour productivity (%)	140.0	107.2	:	:	:	111.2	:	117.2	38.1	265.7	101.9	104.8	141.3	111.6	:

(1) I, 1998; E and IRL, 1997; L and NL, 1998, except for turnover. (2) FIN, 2000. (3) FIN, 2000; D, 1998; UK, number of employees, 1997.
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms)

Table 17.29

Air transport (NACE Division 62)
Main indicators in the EU, 1999 (1)

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Number of enterprises (units)	101	148	505	:	78	537	34	164	8	140	78	27	65	194	971
Turnover (million EUR) (2)	3,589	2,177	9,167	:	5,166	13,348	1,372	10,288	892	6,801	2,041	1,221	1,531	2,745	24,421
Purchases of goods and services (million EUR)	2,973	1,537	:	:	3,450	9,628	932	6,911	411	:	1,481	819	970	2,012	15,798
Value added (million EUR)	611	784	7,797	:	1,837	4,028	440	3,406	253	:	531	456	515	883	8,057
Personnel costs (million EUR)	610	549	2,265	:	1,324	3,535	:	1,170	119	:	391	404	409	758	4,404
Number of persons employed (thousands) (3)	13.0	11.7	49.0	:	29.9	62.7	6.2	22.6	2.3	:	8.0	10.9	9.7	13.9	73.5
Gross investment in tangible goods (million EUR)	312	445	1,902	:	20	1,042	176	443	:	:	629	355	236	382	3,017
Gross operating rate (%)	0.0	10.8	60.3	:	9.9	3.7	:	21.7	20.0	:	6.9	4.3	7.2	4.5	15.0
App. labour productivity (thous. EUR/pers. emp.)	46.9	66.8	159.1	:	61.5	64.3	70.7	150.6	108.7	:	66.5	41.7	53.2	63.3	:
Wage adjusted labour productivity (%)	99.4	142.6	344.2	:	138.8	113.9	:	288.8	213.8	:	134.9	112.8	125.6	115.9	:

(1) E and I, 1998; IRL, 1997; L and NL, 1998, except for turnover. (2) FIN, 2000. (3) FIN, 2000; UK, number of employees, 1997. Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms)

Table 17.30

Cargo handling and storage; other supporting transport activities; activities of other transport agencies
(NACE Groups 63.1, 63.2 and 63.4)
Main indicators in the EU, 1999 (1)

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Number of enterprises (units)	2,069	1,574	21,564	:	12,122	6,359	522	14,375	83	3,495	982	1,402	1,126	2,342	10,522
Turnover (million EUR) (2)	9,506	4,839	54,665	:	:	36,990	1,317	22,931	197	6,327	6,551	2,769	3,307	9,112	37,768
Purchases of goods and services (million EUR)	6,742	3,151	:	:	:	24,953	916	15,165	137	2,753	5,173	1,814	2,477	7,377	21,576
Value added (million EUR)	2,752	2,045	16,362	:	:	12,865	397	8,146	64	3,706	1,396	1,010	886	2,020	15,812
Personnel costs (million EUR)	1,842	1,068	:	:	:	7,183	:	5,018	42	1,951	942	486	583	1,477	6,987
Number of persons employed (thousands) (3)	44.0	25.2	:	:	:	213.6	9.1	182.4	1.1	53.6	23.6	24.4	17.1	38.1	242.4
Gross investment in tangible goods (million EUR)	858	1,148	:	:	:	5,179	146	1,538	:	1,525	222	727	237	1,106	5,829
Gross operating rate (%)	9.6	20.2	:	:	:	15.4	:	13.6	11.7	31.1	6.9	18.9	9.1	6.0	23.4
App. labour productivity (thous. EUR/pers. emp.) (4)	62.5	81.1	:	:	:	60.2	43.8	44.7	57.3	64.3	59.1	41.5	49.3	53.0	:
Wage adjusted labour productivity (%)	139.8	188.2	:	:	:	178.6	:	145.8	150.2	:	143.7	203.9	150.0	133.4	:

(1) I, 1998; E and IRL, 1997; L, 1998, except for turnover; NL, 1998, except for turnover, persons employed and apparent labour productivity. (2) FIN, 2000. (3) FIN, 2000; NL, 1997. (4) NL, 1997. Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms)

Financial services



This sector has been transformed in recent years by the creation of the Single Market in financial services and furthermore by the introduction of the euro (EUR) as the common currency for twelve of the EU Member States, culminating in January 2002 with the introduction of euro notes and coins.

Rapid changes in the financial services' environment during the past two decades have resulted in the abolition of exchange controls, as well as the progressive removal of legal and administrative barriers, allowing acquisitions, mergers and the direct provision of services to take place both within domestic markets and across borders.

At the same time, technological advances have had a significant impact on the way financial services are provided. Home banking is becoming increasingly popular, as is the direct sale of insurance contracts or on-line stock exchange trading. Bank cards now regroup several functions that required separate cards in the past, such as Europe-wide access to automated teller machines (ATMs), credit cards, telephone cards or electronic purses.

STRUCTURAL PROFILE

Beside their importance in the functioning of markets, financial services (NACE Section J) also constitute a sizeable branch of the economy per se. Estimates based on National Accounts show that they generated some 402.6 billion EUR of value added in the EU in 2000¹. In relative terms, this represented just over one-tenth (10.6%) of the total for services (NACE Section G to K) and 5.1% of the whole EU economy. Unsurprisingly, the largest economy in the EU, Germany, contributed almost one quarter (23.5%) of the total, with 94.8 billion EUR of value added.

Looking at the weight of financial services in the domestic economies of the EU Member States, Luxembourg was the country where financial services were most important, as they accounted for 23.4% of total value added in 1999. Next came Belgium, with a share of 6.7% in 2000, followed by Austria (1999) and Italy (6.4%). At the other end of the scale, Ireland (3.4%, 1999) and particularly Portugal (1.6%, 1999) had a relatively low level of activity in financial services.

(1) F, IRL, L, NL, A and P, 1999; E, 1998; S, not available.

The financial services sector encompasses financial intermediation as offered by credit institutions, investment funds, leasing enterprises (NACE Division 65), insurance and pension funding services (NACE Division 66), as well as activities providing auxiliary services, such as the administration of financial markets, security brokering or fund management (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.

Table 18.1

Financial intermediation (NACE Section J)

Value added, 2000

	Value added (billion EUR)	Share of services value added (%)	Share of total value added (%)
B	15.3	13.8	6.7
DK	8.3	11.3	5.5
D	94.8	10.6	5.0
EL	6.1	10.4	5.5
E (1)	26.1	11.5	5.3
F (2)	57.1	9.6	4.6
IRL (2)	2.7	7.9	3.4
I	69.5	12.9	6.4
L (2)	4.3	36.9	23.4
NL (2)	21.3	12.8	6.2
A (2)	11.8	13.9	6.4
P (2)	1.5	4.1	1.6
FIN	4.9	9.9	4.2
S	:	:	:
UK	78.8	11.2	5.8

(1) 1998.

(2) 1999.

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

Table 18.2

Financial intermediation (NACE Section J)

Foreign direct investment, 1999 (million EUR)

	In the reporting economy	(% of investment abroad)				
		Abroad	Intra	Extra	JP	US
EU-15	147,268	199,669	:	100.0	1.2	43.4
B	:	:	:	:	:	:
DK	4,343	3,407	68.6	31.4	:	11.6
D	26,898	74,385	63.3	36.7	1.0	14.1
EL	215	:	:	:	:	:
E	14,389	26,715	:	:	:	:
F	25,725	57,394	54.5	45.5	0.3	23.5
IRL	3,610	879	:	:	:	:
I	35,707	62,199	:	:	1.0	8.3
L	:	:	:	:	:	:
NL	47,872	80,564	54.8	45.2	0.4	27.2
A	2,234	4,142	24.3	75.7	:	:
P	4,333	2,981	63.7	36.3	0.0	3.2
FIN	4,392	2,874	97.1	2.9	:	0.2
S	3,153	:	:	:	:	:
UK	76,722	94,521	50.3	49.7	0.4	31.1

Source: Eurostat, European Union Direct Investments (theme2/bop/fdi)

FOREIGN DIRECT INVESTMENT

The EU's financial services sector (NACE Section J) has seen its stock of foreign investment abroad develop at a rapid pace in the second half of the 1990s. It more than doubled between 1995 and 1999, rising to 199.7 billion EUR from 95.7 billion EUR. Stocks of FDI were increasingly directed to the US, which accounted for 43.4% of the EU's investment abroad in 1999 (or 90.6 billion EUR), up from 37.8% in 1995. Japan accounted for only 1.2% of the total in 1999 (7.2 billion EUR).

The stock of foreign direct investment from non-Community countries in the EU was equal to 147.3 billion EUR in 1999, up from 72.1 billion EUR in 1995. There was been a noticeable decline in the stock of Japanese FDI in the EU, which fell in both relative and absolute terms from 15.2% in 1995 (11.0 billion EUR) to 5.0% in 1999 (7.3 billion EUR).

EMPLOYMENT

According to estimates based on National Accounts, the EU financial services' sector employed some 5.3 million persons in 1999, about 8.1% of total services' (NACE Sections G to K) employment. For the majority of Member States, the variance around this average was not very large. However, Luxembourg was a clear exception, as the share (20.0% in 1999) of financial services in total services employment was more than double that in any other Member State (mirroring the importance of this sector in Luxembourg in terms of wealth creation).

LFS data shows that women were well represented within the financial services workforce in the EU, accounting for almost half (48.3%) of those employed in 2000. Women were somewhat less present in financial auxiliaries (44.1%, NACE Division 67) than they were in banking and financial intermediation (48.9%, NACE Division 65) or insurance (49.2%, NACE Division 66).

Only 13.2% of those employed in the EU's financial services' sector in 2000 worked part-time, a relatively low figure compared to the average for service activities (19.9% for NACE Sections G to K).

The educational level of people working in financial services ranked amongst the highest for all sectors of the EU economy. At 26.8% in 1997, the proportion of persons with a higher education degree was clearly above the average for services (19.3% for NACE Sections G to K). Finland and Belgium boasted the highest ratios, with 59.3% and 53.2% of all persons employed in the financial services sector holding a higher education degree. The lowest ratios were found in Italy (19.5%) and Austria (14.4%).

Table 18.3

	Financial intermediation (NACE Section J)							
	Labour force characteristics (% of total employment)							
	Female		Part-time		Self-employed		Higher level of education	
	1995	2000	1995	2000 (1)	1995	2000	1995	2000 (2)
EU-15	46.9	48.3	11.3	13.2	6.4	6.8	25.7	26.8
B	41.5	40.7	12.9	14.5	10.1	13.1	45.8	53.2
DK	50.1	53.1	11.9	14.3	:	:	24.9	21.7
D	51.4	51.4	13.9	16.3	8.7	9.7	22.8	27.8
EL	42.8	47.8	:	3.8	5.5	8.8	34.7	38.9
E	30.9	37.0	4.5	4.0	5.9	5.9	36.8	46.1
F	53.0	53.8	9.2	12.4	4.1	3.8	30.3	38.6
IRL	54.4	57.1	7.0	10.8	:	3.9	34.5	42.0
I	33.1	37.4	4.2	6.5	11.7	13.3	18.4	19.5
L	39.1	44.4	4.5	7.0	:	:	29.9	32.9
NL	41.9	42.5	21.5	25.5	5.2	3.8	:	38.1
A	47.1	47.7	9.8	16.0	1.5	2.0	11.0	14.4
P	31.2	38.1	:	:	:	:	22.5	27.4
FIN	72.7	70.8	13.2	6.3	:	:	22.7	59.3
S	55.3	59.7	24.4	14.4	:	:	30.3	33.7
UK	51.7	51.9	14.6	15.5	4.0	3.2	24.8	30.1

(1) EL, 1999.

(2) EU-15 and IRL, 1997.

Source: Eurostat, Labour Force Survey

18.1: FINANCIAL INTERMEDIATION

The activities covered by this sub-chapter include all financial intermediation activities classified within NACE Division 65, whether they are monetary (NACE Group 65.1) or not (NACE Group 65.2). Particular attention is given to credit institutions classified within NACE Classes 65.12 (monetary intermediation other than central banking) and 65.22 (credit granting other than financial leasing). Note that not all enterprises covered by NACE 65.22 are credit institutions.

Banks can be classified in two broad categories: universal banks, that are multi-purpose banks offering the whole range of financial services (most of them are commercial banks, but in certain countries savings banks, co-operative and public banks are also universal banks); and specialised banks, which include merchant banks, investment banks and mortgage banks.

From the methodological point of view, the term credit institutions is used to describe enterprises in the financial intermediation sector. It is however important to note that for the majority of Member States this term refers only to enterprises engaged in other monetary intermediation (NACE Class 65.12), whereas for the remaining countries² the data presented also includes the activity of other credit granting (NACE Class 65.22).

(2) D, E, F, A, FIN and S.

Box 18.1: credit granted by finance houses

Table 18.4

Finance houses: main indicators, 2000 (1)

	Number of enterprises	Number of persons employed	New credit granted (million EUR)		
			Industrial credit	Consumer credit	Car finance
B	89	3,200	:	5,975	:
D	65	23,820	5,970	6,585	17,897
E	62	:	118	10,811	12,828
F	82	16,000	1,313	25,120	7,442
IRL	20	1,485	3,077	740	1,581
I	44	7,145	0	9,314	13,325
NL	37	4,121	:	10,278	:
P	26	:	8	613	2,588
FIN	5	908	692	1,149	873
S	31	2,119	2,059	655	2,674
UK	666	27,000	2,666	66,157	29,976

(1) DK, EL, L and A, not available.
Source: Eurofinas

STRUCTURAL PROFILE

On-going market liberalisation and the completion of the Internal Market for banking have had a noticeable effect on the market structure of credit institutions³. The number of enterprises has declined in most countries in recent years, which can be explained by a wave of mergers within the banking industry and between banks and other parts of the financial services sector, resulting in larger credit institutions.

According to SBS, there were 8,330 credit institutions in the EU in 1999⁴, down from 9,938 in 1994. The biggest net drops were recorded in Portugal (-27.5%), Belgium (-27.0%), Spain (-24.1%), France and Germany (both -18.2%), whilst Luxembourg, Denmark and the Netherlands experienced only limited reductions (-5.4%, -3.4% and -2.3% respectively). The limited data that is available for 2000 indicate a continuation of this downward trend.

(3) For more information please refer to Special Feature on Banking, Eurostat, 2001.
(4) FIN, 1998; IRL, no data available.

Credit institutions may be broken down into three categories: licensed banks, specialised credit granting institutions and other credit institutions. In most countries, more than 90% of credit institutions are licensed banks, but specialised credit granting institutions are particularly present in Spain, whereas other credit institutions represent almost one-third of Swedish enterprises in this sector. In a majority of countries, credit institutions are generally incorporated enterprises, although a very large number of co-operatives are found in Germany, Italy and Austria.

Table 18.5

Credit institutions, 1999 (units)

	EU-15 (1)	B (2)	DK (3)	D	EL	E (4)	F	IRL	I	L	NL	A	P FIN (5)	S (6)	UK (7)	
No. of enterprises	8,330	89	201	3,055	41	387	1,148	:	876	210	169	870	219	361	212	492
No. of enterprises 1999/1994 (%)	-15.9	-27.0	-3.4	-18.2	5.1	-24.1	-18.2	:	-12.6	-5.4	-2.3	-14.5	-27.5	:	-10.9	-13.2
No. of local units	202,661	5,790	2,333	61,587	2,675	39,376	26,159	:	27,145	310	6,830	5,391	5,491	1,964	2,140	15,470
No. of ATMs	198,285	6,245	2,641	46,200	3,024	41,129	18,416	:	30,298	:	6,673	2,570	8,850	2,725	2,580	26,934
Breakdown of number of enterprises by NACE Class																
Other monetary intermediation (8)	7,396	89	201	2,961	41	290	543	:	876	210	169	840	219	341	124	492
Other credit granting (9)	934	0	0	94	0	97	605	:	0	0	0	30	0	20	88	0
Breakdown of number of enterprises by category of credit institution																
Licensed banks	3,740	89	192	:	41	290	:	:	872	210	:	870	219	341	124	492
Special. credit granting institutions	128	0	9	:	0	96	:	:	0	0	:	0	0	0	23	0
Other credit institutions	90	0	0	:	0	1	:	:	4	0	:	0	0	20	65	0
Breakdown of number of enterprises by legal status																
Incorporated enterprises	2,460	60	75	178	19	189	811	:	278	138	130	107	45	27	106	297
Cooperative enterprises	4,059	14	25	2,018	13	94	161	:	580	2	2	708	148	292	2	0
Public-law enterprises	917	1	101	578	0	1	34	:	0	2	24	46	6	40	84	0
Branches of non-EEA enterprises	364	14	0	30	9	53	93	:	14	8	11	1	3	1	0	127
Others	530	0	0	251	0	50	49	:	4	60	2	8	17	1	20	68
Breakdown of number of enterprises by balance sheet total																
> 99,999 million EUR	31	2	0	10	0	1	6	:	1	0	:	1	0	0	0	10
10,000 - 99,999 million EUR	279	5	10	60	4	17	33	:	37	15	:	7	7	2	11	71
1,000 - 9,999 million EUR	1,381	28	10	481	12	103	266	:	145	70	:	38	26	9	23	170
100 - 999 million EUR	3,405	39	59	1,619	11	132	457	:	369	96	:	283	34	59	69	178
< 100 million EUR	3,065	15	122	885	14	134	386	:	324	29	:	541	152	291	109	63

(1) Sum of available country data.

(2) Number of enterprises, data as of the end of the year; 93 banks were active in 1999; number of ATMs, 2000.

(3) Number of public-law enterprises, including only savings banks.

(4) Number of branches of non-EEA enterprises also includes the branches of EEA enterprises.

(5) 1998.

(6) Number of licensed banks including the branches of foreign banks in Sweden; number of public-law enterprises including only savings banks.

(7) Number of incorporated enterprises including the UK banks and EEA branches in the UK.

(8) NACE Class 65.12.

(9) NACE Class 65.22.

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

In 1999, the majority of the EU's credit institutions were relatively small in size, with a balance sheet total below one billion euro. The number of enterprises in this category decreased by 12.8% in the EU between 1997 and 1999⁵. At the other end of the scale, there were 31 banks in the EU in 1999 whose balance sheet total exceeded 100 billion EUR. Most of these large banks were located in just three countries: Germany, the United Kingdom (both 10) and France (6).

(5) IRL and NL, not available.

Neither the development of banking technology (for example the development of phone or on-line banking), nor the increasing number of mergers and acquisitions in the industry has led to traditional bank branches being replaced as the most common form of distribution outlet. Indeed, the number of local units of EU credit institutions reached 202.6 thousand in 1999⁶, up 8.0% when compared to 1994⁷. It must be noted that methodological differences may

(6) FIN, 1998; local units do not cover agents collecting deposits and granting credits on behalf of banks and that work on an independent basis.

(7) Growth rate excludes FIN and S.

affect these figures, as the 1999 data includes newly privatised institutions in the statistics (for example, Deutsche Postbank). On average, each credit institution in the EU had 24 local units in 1999, compared to 19 in 1994. There were great differences according to the country studied, with larger networks present in Spain (102 local units per enterprise), Belgium and Greece (both 65 per enterprise). In contrast, banks established in Austria, Finland and Luxembourg had much smaller distribution networks, with an average of less than ten local units each.

Box 18.2: leading banks

Table 18.6

Top 20 EU banks, as of 31 December 2000

		Assets (billion EUR)	Capital (million EUR)	World ranking
Deutsche Bank	D	957.3	1,607	2
Bayerische Hypo-und Vereinsbank	D	729.7	1,637	3
BNP Paribas	F	706.8	1,825	4
ABN AMRO	NL	553.2	:	9
Crédit Agricole	F	544.8	3,995	10
The Royal Bank of Scotland	UK	518.5	1,374	13
Barclays	UK	498.2	2,693	15
Dresdner Bank	D	492.4	1,393	17
Commerzbank	D	468.1	1,412	19
Société Générale	F	464.3	539	20
WestLB	D	407.4	1,206	24
ING Bank (1)	NL	328.8	:	26
Lloyds TSB	UK	353.2	2,262	28
Rabobank	NL	349.2	:	29
IntesaBCI	I	338.4	3,070	30
Fortis Bank	B	338.2	3,169	31
Abbey National	UK	331.2	758	33
BayernLB	D	310.6	3,788	34
BBVA	E	305.9	:	35
NatWest	UK	301.8	3,544	36

(1) As of 31 December 1999.

Source: The Bankers' Almanac, available at <http://www.bankersalmanac.com>

The average number of local units per million inhabitants gives some idea of the density and accessibility of credit institutions. This indicator can be regarded as a rough measure of the proximity of credit institutions to their clients. Apart from Luxembourg, host to numerous international financial institutions (722 local units per million inhabitants in 1999), the highest banking presence was observed in those countries where small, regional or co-operative banks still play an important role. This was particularly the case in Spain (1,000), Germany (751) and Austria (667), whilst the EU average was equal to 547 local units per million inhabitants⁸. The lowest density was recorded in Sweden (242) and Greece (233).

To get a complete picture of the retail accessibility, the number of Automatic Teller Machines (ATMs) owned by credit institutions should also be taken into consideration. There were just under 200 thousand ATMs in the EU in 1999, similar to the number of local units. Indeed, the number of ATMs has surpassed the number of local units in several Member States. On average there were 528 ATMs per million inhabitants in the EU in 1999, corresponding to an average of 24 ATMs per credit institution. Spain registered the highest density of ATMs, with 1,044 per million inhabitants. Every Member State recorded high growth in the number of ATMs between 1997 and 1999, in particular Portugal (40.3%), Greece (36.7%) and Belgium (26.1%).

(8) FIN, 1998.

Box 18.3: co-operative, commercial and savings banks

Table 18.7

Co-operative banks: main indicators as of 31 December 2000

	Regional/ local banks	Outlets	Staff	Total assets (million EUR)	Deposits (million EUR)	Loans (million EUR)
EU-15	4,199	50,909	539,466	2,376,886	1,380,443	1,314,821
B	9	184	677	3,000	1,600	1,200
DK	40	85	450	893	710	502
D	1,794	17,490	169,338	534,800	375,400	332,700
IRL	:	584	2,370	7,455	5,631	4,973
E	89	3,947	14,446	38,865	32,247	25,986
F	134	13,272	162,144	891,155	473,498	411,449
EL	29	63	405	557	325	390
I	584	9,058	85,672	384,000	243,300	233,500
L	35	73	384	2,536	2,241	1,186
NL	397	2,275	55,098	342,920	146,705	191,666
A	694	2,473	32,223	122,177	67,491	77,320
P	139	540	3,500	7,065	6,086	4,840
FIN	245	709	8,535	27,086	17,118	20,260
S	10	10	107	3,787	:	3,602
UK	:	146	4,117	10,590	8,091	5,247

Source: GEBC

Table 18.8

Commercial banks: main indicators as of 31 December 1999

	Banks (1)	Outlets (2)	Staff (3)	Total assets (billion EUR)	Deposits (billion EUR) (4)	Loans (billion EUR) (4)
EU-15	3,425	102,637	1,821,485	13,094	6,476	6,976
B	119	6,975	76,302	771	365	376
DK	186	2,188	40,018	211	101	92
D	315	7,182	221,900	1,447	539	800
EL	40	2,497	55,572	151	69	50
E	144	16,948	128,204	605	293	280
F	366	10,128	222,300	1,617	320	427
IRL	77	939	31,400	303	99	148
I	876	27,134	306,794	1,469	485	712
L	210	394	23,985	599	194	117
NL	171	6,089	125,400	899	875	829
A	72	746	14,647	156	49	78
P	54	5,487	62,668	254	119	118
FIN	344	1,580	24,995	125	56	61
S	26	1,700	39,500	272	123	107
UK	425	12,650	447,800	4,216	2,790	2,780

(1) Including foreign banks.

(2) Excluding foreign banks.

(3) Full-time equivalent employees, except for F (number of employees).

(4) Non-bank customers (resident and non-resident).

Source: FBE

Box 18.3: co-operative, commercial and savings banks (continued)

Table 18.9

Savings banks: main indicators as of 1 January 2000

	Banks	Outlets	Staff	Total assets (million EUR)
B (1)	3	2,333	9,763	91,977
DK (1)	11	113	939	2,234
D	578	19,359	282,135	925,444
EL	1	851	1,270	9,589
E	49	18,350	98,372	353,216
F	34	4,715		248,751
IRL (1)	1	80	1,170	2,248
I	62	5,879	72,411	290,932
L	1	96	1,652	29,504
NL	1	7,678	5,800	32,037
A	69	1,421	24,096	191,751
P	5	854	12,134	57,513
FIN	40	257	1,871	5,773
S	1	818	12,791	97,154
UK	1	:	76,056	279,643

(1) As of 1 January 1999.
Source: ESBG

Box 18.4: mortgages

Mortgage granting accounts for an important share of activities carried out by credit institutions. In the second half of the 1990s, the decline in interest rates fuelled strong growth in mortgage markets. According to the European Mortgage Federation, total outstanding loans on residential property reached some 3.2 thousand billion EUR in the EU in 2000, a level approximately 4.7% higher than the year before⁹. The value of outstanding loans against mortgages recorded double-digit growth in 2000 in several Member States, both on commercial and residential property (see table 18.10). In Greece, Spain, Ireland and Portugal growth even exceeded 20%. Germany and Sweden, however, recorded slight reductions. Please note that the data does not only cover credit institutions but also other credit granting institutions.

(9) FIN, 1998; L and A, not available.

Table 18.10

Outstanding loans against mortgage, 2000

	Residential property (million EUR)	Growth rate, 2000/1999 (%)	Residential and commercial property (million EUR)	Growth rate, 2000/1999 (%)
B (1)	65,279	3.2	:	:
DK (2)	117,342	4.9	153,168	4.2
D (3)	1,091,908	-2.4	1,309,553	-1.3
EL (3)	11,269	27.1	13,083	24.3
E (1)	188,165	21.7	262,029	19.6
F	306,834	7.4	:	:
IRL	32,627	24.6	37,553	23.4
I (4)	113,415	12.2	179,696	7.6
L	:	:	:	:
NL (5)	278,621	10.8	299,949	:
A (2)	:	:	8,517	:
P (6)	50,558	20.0	62,569	23.2
FIN (7)	33,765	:	:	:
S (8)	112,973	-0.4	122,097	-0.3
UK	846,369	6.4	:	:

(1) Estimates.

(2) Only members of the association.

(3) Includes loans for residential purposes not secured by a mortgage.

(4) End of third quarter; only members of the association.

(5) Residential and commercial property, 1998.

(6) Excluding Caixa Geral Depositos.

(7) 1998; includes loans for residential purposes not secured by a mortgage.

(8) Specialised mortgage credit institutions only.

Source: EMF

LABOUR AND PRODUCTIVITY

Some 2.8 million persons were employed in credit institutions in the EU in 1999¹⁰, a number that has been gradually rising in recent years (+1.2% in 1999). The average qualification level of the financial intermediation (NACE Division 65) workforce in the EU in 2000 was particularly high, as 32.1% of those in employment had reached a higher level of education¹¹. In Belgium (52.3%) and Finland (57.3%) the majority of persons in employment were highly-educated. Part time work within financial intermediation was not particularly widespread. The proportion of those employed working on a part-time basis in 2000 was estimated at 13.5% in the EU, less than the services' average (19.9% for NACE Sections G to K).

According to SBS, EU credit institutions employed an average of 342 persons each in 1999, which represented a 21.8% increase compared to 1994. Figures on enterprise demography show that this evolution can be mainly attributed to the decreasing number of enterprises, rather than job creation. Greek enterprises were the largest in size, with 1,359 persons employed on average, whilst the smallest enterprises were found in Luxembourg (101) and Austria (84).

Average personnel costs per person employed in EU credit institutions increased by 17% between 1994 and 1999 to reach 50.4 thousand EUR¹². They were the lowest in Portugal (32.6 thousand EUR), at roughly half the level reported in Belgium (72.0 thousand EUR).

Value added generated per person employed reached 110.0 thousand EUR in the EU in 1999¹³, 15.2% higher than in 1994. The highest apparent labour productivity was recorded in Luxembourg (249.0 thousand EUR), followed by Belgium (146.4 thousand EUR).

(10) FIN, 1998; S, 1997.

(11) IRL, not available.

(12) F and DK, 2000; EL, IRL, I, L, FIN and S, not available.

(13) F and DK, 2000; FIN, 1998; D, EL, IRL, L, A, FIN and UK, not available.

Table 18.11
Financial intermediation, except insurance and pension funding (NACE Division 65)
Labour force characteristics (% of total employment)

	Female		Part-time		Self-employed		Higher level of education	
	1995	2000	1995	2000 (1)	1995	2000 (2)	1995	2000 (3)
EU-15	47.5	48.9	11.4	13.5	:	:	25.9	27.1
B	41.2	41.1	13.1	14.5	5.8	6.4	45.1	52.3
DK	50.9	51.7	11.0	15.9	:	:	25.0	21.2
D	55.6	55.0	14.8	17.5	1.5	2.1	22.2	27.6
EL	42.6	46.7	:	:	:	:	36.7	43.2
E	25.9	32.2	3.3	2.1	:	1.4	36.9	49.4
F	50.3	50.6	8.4	12.0	:	:	31.9	38.7
IRL	59.4	61.3	8.9	13.0	:	:	33.7	39.4
I	27.8	34.2	3.0	5.2	4.3	4.4	18.8	20.6
L	40.7	44.1	:	6.6	:	:	28.6	33.6
NL	45.8	43.6	21.6	26.7	:	:	:	42.0
A	49.8	53.1	9.1	18.0	:	:	12.4	16.1
P	29.7	38.0	:	:	:	:	22.3	31.6
FIN	79.5	76.2	14.5	8.3	:	:	20.2	57.3
S	56.8	63.7	23.5	19.0	:	:	29.4	30.5
UK	57.3	56.4	17.4	18.0	1.8	1.7	25.4	29.5

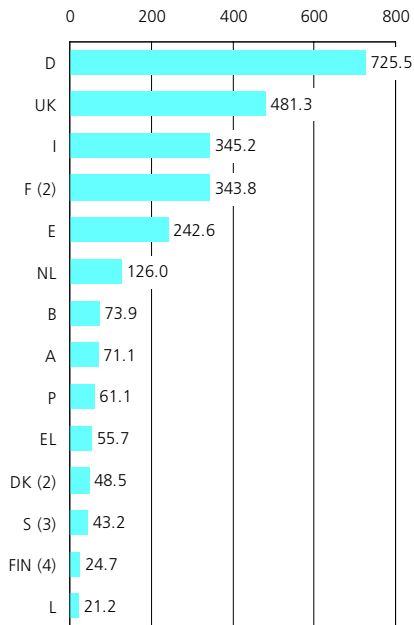
(1) FIN and S, 1999.

(2) E, 1999.

(3) EU-15 and IRL, 1997.

Source: Eurostat, Labour Force Survey

Figure 18.1

Other monetary intermediation
(NACE Class 65.12)Number of persons employed,
1999 (thousands)

(1) IRL, not available.

(2) 2000.

(3) 1997.

(4) 1998.

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

Table 18.12

Other monetary intermediation (NACE Class 65.12)

Labour productivity and personnel costs, 1999

	Apparent labour productivity (thousand EUR per person employed)	Average personnel costs (thousand EUR per employee)	Wage adjusted labour productivity (%)
B	146.4	72.0	203.4
DK (1)	127.5	58.1	219.4
D	:	51.8	:
EL	103.2	:	:
E	85.9	46.4	185.0
F (1)	117.6	62.6	187.9
IRL	:	:	:
I	107.5	:	:
L	249.0	:	:
NL	110.6	46.7	236.9
A	99.8	58.2	171.6
P	77.7	32.6	238.1
FIN (2)	98.8	:	:
S	:	:	:
UK	120.9	38.9	310.7

(1) 2000.

(2) 1998.

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

18.2: INSURANCE AND
PENSION FUNDS

The activities covered by this sub-chapter include insurance and pension fund services which are classified within NACE Division 66. A distinction is made in the classification between life insurance (NACE Class 66.01), pension funding (NACE Class 66.02) and non-life insurance (NACE Class 66.03). Compulsory social security services are excluded.

The insurance sector can be defined as embracing all enterprises exclusively or primarily engaged in converting and mutualising individual risks into collective risks. Life insurance embraces conventional life insurance contracts, as well as life re-insurance, with or without a substantial savings element. Pension funding includes the provision of retirement incomes. Non-life insurance is a residual grouping, including accident, motor and health insurance.

STRUCTURAL PROFILE

There were 3,853 insurance enterprises operating in the EU in 1999¹⁴, down from 4,250 in 1995. Whilst this decreasing trend was experienced in most Member States, the number of insurance enterprises grew over this period in Ireland (from 86 to 122) and Luxembourg (300 to 336), fuelled by the creation of life insurance enterprises. This may be explained by the attractiveness of these countries as financial centres, due to tax advantages. In addition, insurance enterprises have been actively marketing new investment products via insurance contracts, which has further stimulated the life insurance market in these countries.

(14) EL, not available.

Table 18.13

	Number of insurance enterprises, 1999 (units)				
	Total insurance enterprises	Life insurance enterprises	Non-life insurance enterprises	Composite insurance enterprises	Specialist re-insurance enterprises
EU-15 (1)	3,853	1,044	2,187	237	385
B	156	23	81	38	14
DK	231	91	131	0	9
D	492	123	327	0	42
EL	:	:	:	:	:
E	321	52	204	61	4
F	457	92	298	34	33
IRL	122	40	82	0	:
I	215	82	104	20	9
L	336	57	22	0	257
NL	400	109	291	0	:
A	59	5	18	32	4
P	53	17	28	7	1
FIN	167	14	148	0	5
S	149	34	108	0	7
UK	695	305	345	45	:

(1) Sum of available country data.

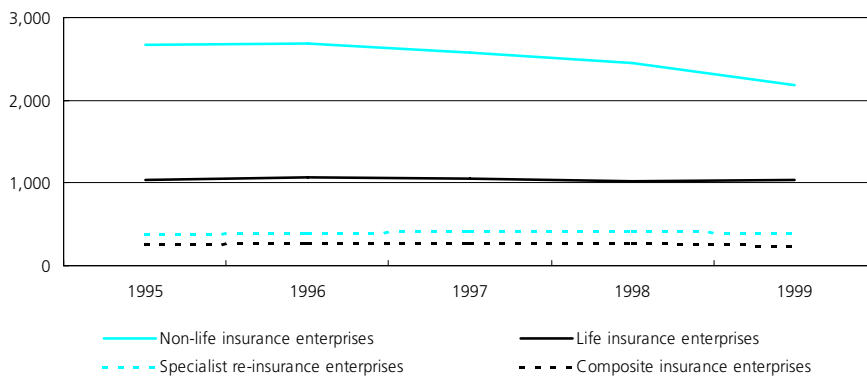
Source: Eurostat, Structural Business Statistics (theme4/sbs)

The bulk of EU insurance enterprises in 1999 were dealing with non-life insurance (2,187, or 56.8% of the total), whilst there were 1,044 life insurance enterprises (27.1%), 237 composite insurers¹⁵ (6.2%) and 385 specialist re-insurers (10.0%). When compared with 1995, the distribution of insurance enterprises had changed in favour of life insurers (gaining 3 percentage points), while non-life insurers lost nearly 5 percentage points.

About half of all life insurers in the EU in 1999 were located in just three countries: 29.2% were located in the United Kingdom, and around 10% in both Germany (123 enterprises) and the Netherlands (109 enterprises). The non-life market did not display the same level of concentration, as four Member States hosted between 13% and 16% of the enterprises: the United Kingdom (15.8%), Germany (15.0%), France (13.6%) and the Netherlands (13.3%). As regards specialist re-insurance, two-thirds (66.8%) of all enterprises active in this sector were located in Luxembourg.

Figure 18.2

Evolution of the total number of insurance enterprises in the EU (units) (1)



(1) Excluding EL, 1998 and 1999.

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

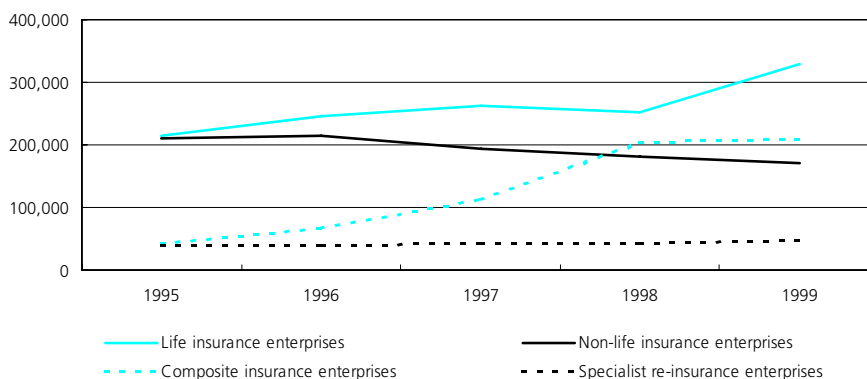
The gross premiums written by EU insurance enterprises amounted to 756.2 billion EUR in 1999¹⁶. This was up 11.5% compared to the year before and up 49.1% compared to 1995. As a general rule, premiums on life insurance showed more progress than those for non-life insurance, as 31.1% more life insurance premiums were written in the EU in 1999 compared to 1998, whilst non-life insurance premiums experienced a 6.4% decline (see figure 18.3).

(15) Enterprises carrying out both life and non-life business.

(16) Excluding EL.

Figure 18.3

Evolution of gross premiums written in the EU (million EUR) (1)



(1) Excluding EL, 1998 and 1999.

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

Table 18.14

Gross premiums written by insurance enterprises, 1999 (million EUR)

	Total insurance enterprises	Life insurance enterprises	Non-life insurance enterprises	Composite insurance enterprises	Specialist re-insurance enterprises
EU-15 (1)	756,198	329,124	208,923	170,305	47,846
B	18,978	1,970	3,832	13,175	:
DK	11,260	6,614	3,817	0	829
D	168,533	59,085	73,853	0	35,596
EL	:	:	:	:	:
E	33,150	9,984	6,472	15,998	696
F	127,497	34,082	42,391	45,932	5,093
IRL	11,904	8,528	3,376	0	:
I	66,714	26,219	10,578	28,249	1,668
L	7,975	4,688	647	0	2,639
NL	36,743	21,193	15,550	0	:
A	12,414	447	1,718	8,966	1,282
P	6,529	2,140	1,595	2,788	5
FIN	5,559	3,152	2,416	0	9
S	17,200	10,843	6,310	0	47
UK	231,743	140,178	36,368	55,197	:

(1) Sum of available country data.

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

At the Member State level, Ireland recorded a booming insurance market, with gross premiums written up 46.1% in 1999, whilst there were also large gains in Sweden (27.6%), Spain (24.9%) and Portugal (21.8%). Only Denmark recorded a decline in gross premiums written (-1.8%).

Within the EU, gross premiums written can be broken down as 329.1 billion EUR (43.5%) for life insurance enterprises, 208.9 billion EUR (27.6%) for non-life insurance enterprises, 170.3 billion EUR (22.5%) for composite insurance enterprises and 47.8 billion EUR (6.3%) for specialist re-insurance enterprises. An analysis by Member State reveals the importance of the enterprises from the United Kingdom for the life insurance market and from Germany for non-life and re-insurance market. The United Kingdom accounted for 42.6% of gross premiums written by life insurance enterprises in the EU in 1999, whilst German enterprises wrote 35.3% of the EU's non-life insurance premiums. German specialist re-insurers, although making-up just 10.9% of all EU specialist re-insurance enterprises, accounted for three-quarters of EU premiums written. Note that three German enterprises are amongst the ten largest re-insurance companies in the world (see table 18.16).

Box 18.5: largest life and re-insurance companies

Table 18.15

Largest life insurance companies in the world, 2000

		Revenues (million EUR)
AXA	F	100,638
ING Group	NL	77,224
Nippon Life	JP	73,817
CGNU	UK	66,706
Generali	I	57,849
Dai-ichi Mutual	JP	50,368
Prudential	UK	46,778
TIAA-CREF	US	41,287
Sumitomo	JP	40,714
MetLife	US	34,652

Source: International Insurance Facts, available at <http://www.internationalinsurance.org>

Table 18.16

Largest re-insurance companies in the world, 2000

		Gross premiums written (million EUR)
Munich Re	D	18,731
Swiss Re	CH	17,546
GE Global Insurance Holdings	US	11,008
Berkshire Hathaway	US	10,055
Hannover Re	D	8,505
Lloyd's of London	UK	6,940
Zürich Financial	CH	5,539
Gerling-Globale Reinsurance Group	D	5,312
SCOR	F	3,535
London Reinsurance Group	CA	2,351

Source: International Insurance Facts, available at <http://www.internationalinsurance.org>

Motor vehicle insurance represented over one third (37.5%) of non-life insurance premiums written in the EU in 1999, and accident and health insurance over one quarter (27.8%). Fire and other damage to property accounted for 19.9% of total premiums. The share of motor vehicle insurance varied from 22.3% in the Netherlands to 60.4% in Italy. Accident and health insurance was the most important non-life insurance product in the Netherlands (46.3%) and Germany (34.6%).

Large differences exist in insurance expenditure across the EU. The average EU citizen spent some 901 EUR on life insurance premiums in 1999 and 572 EUR on non-life insurance premiums¹⁷. An additional 466 EUR were accounted for by composite insurance enterprises.

(17) Excluding EL.

The highest level of gross premiums written per inhabitant was found in Luxembourg¹⁸ (18,441 EUR), of which more than half (10,841 EUR) was for life insurance and over one-third (6,102 EUR) was for re-insurance. This high figure may be largely explained by services rendered in Luxembourg to non-residents. Amongst the other Member States, life insurance expenditure per inhabitant was particularly high in the United Kingdom (2,356 EUR per inhabitant) and Ireland (2,277 EUR), whilst it was lowest in Portugal (214 EUR) and Austria (55 EUR). Non-life insurance expenditure ranged from 1,496 EUR in Luxembourg down to 160 EUR in Portugal.

(18) This figure is strongly influenced by the large number of non-residents investing in the country.

Table 18.17

Non-life insurance products, gross direct premiums written, 1999 (million EUR) (1)

	Accident and health	Motor vehicle	Marine, aviation and transport	Fire and other damage to property	General liability	Credit and suretyship	Assistance, legal expenses and miscellaneous financial loss	Other non-life products
EU-15 (2)	58,148	78,267	5,561	41,622	18,209	3,483	9,394	7,894
B	5,281	10,166	451	7,607	5,072	469	2,997	:
DK	814	1,164	107	1,543	125	26	1	:
D	25,559	19,536	1,447	11,671	6,513	954	3,536	2,252
EL	:	:	:	:	:	:	:	:
E	3,093	6,765	308	556	662	333	249	3,063
F	8,670	14,137	1,381	9,963	2,538	752	1,805	:
IRL	163	1,087	37	518	569	41	254	:
I	3,410	15,840	627	3,310	1,920	679	151	294
L	22	184	209	104	39	9	79	0
NL	7,196	3,465	496	2,566	:	:	:	1,827
A	1,688	1,990	88	1,249	419	59	262	72
P	754	1,403	54	424	48	28	33	0
FIN	627	776	105	517	112	45	28	43
S	871	1,754	251	1,594	191	89	1	343
UK	:	:	:	:	:	:	:	:

(1) Including business carried out by composite insurance enterprises.

(2) Sum of available country data.

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

Box 18.6: the Single European Insurance Market

As with the banking sector, insurance companies have responded to the completion of the Single Market for financial services with a wave of mergers and acquisitions¹⁹. Underlying the acquisition strategy of many insurers are both the objectives of strengthening their position on home markets and gaining European or even global market shares. Many companies now operate in several EU countries. In addition, the completion of the Single European Insurance market, as a result of the third generation Directives²⁰ not only offers EU companies more possibilities to operate internationally within the EU, but also makes it easier for non-EU insurance companies to operate within the EU through a single licence. This opening up of the Single Market has also paved the way for a series of take-overs and mergers between banks and insurance companies. Through the emergence of "bancassurance", a clear distinction between insurance companies, banks and hybrids of the two cannot be made anymore, with banks increasingly offering insurance products and insurers providing asset management services.

(19) For more information, see Special Feature on Insurance and Pension Funds, Eurostat, 2001.

(20) The third generation insurance Directives came into force in July 1994; the most significant feature of these Directives is the attempt to move the regulatory focus from host-country control to home-country control.

Table 18.18

Main indicators for autonomous pension funds, 1999

	Number of pension funds (units)	Number of members (units)	Active members as a share of active population (%)	Total contributions	Investment income	Other income	Total expenditure on pensions	Net change in technical provisions (reserves)	Total operational expenses (1)
B	310	361,654	5.7	1,039	1,568	235	1,158	1,488	174
DK (2)	56	23,679	0.4	55	972	2	225	86	4
D	298	:	:	18,038	8,436	833	:	12,389	670
EL	:	:	:	:	:	:	:	:	:
E	557	4,319,416	20.6	63,161	1,656	47	3,264	4,140	4,032
F	:	:	:	:	:	:	:	:	:
IRL	:	:	:	:	:	:	:	:	:
I	483	1,239,307	4.9	2,213	:	:	1,454	:	:
L	1	:	:	:	:	:	:	:	:
NL	1,019	12,929,000	62.5	11,742	66,956	2,762	12,858	30,536	2,410
A	18	231,453	4.9	1,860	698	24	228	2,144	27
P	238	397,090	5.9	1,190	822	964	725	0	10,052
FIN	124	134,492	3.2	76	514	-8	440	66	7
S	45	741,729	8.3	498	598	:	278	625	18
UK	:	:	:	26,382	97,901	985	49,505	68,912	3,630

(1) E and P, excluding personnel costs.

(2) Company pension funds only.

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

In several countries, an increasing number of persons choose to complement their legal compulsory pension scheme, notably with contributions to autonomous pension funds. In the absence of a European regulatory and statistical framework, coverage of this sector is still limited. But available data (see table 18.18) suggests that pension funds have experienced rapid development in recent years. Between 1998 and 1999, the number of autonomous pension funds increased in half of the Member States for which data is available. The highest growth rate was recorded in Spain (13.2%). Membership of autonomous pension funds increased at a rapid pace in Austria, Italy and Spain, by rates ranging between 15.1% and 22.4%.

The maturity of the pension fund market can be measured by the share of active members (members still in the active population) in total membership. They represented between 38.2% of the total in the Netherlands and 91.4% in Italy. The share of active members within the total active population ranged, in the same year, from less than 1% in Denmark to over 60% in the Netherlands.

EMPLOYMENT

Data from the LFS shows that insurance services employed an estimated 1.2 million persons in 2000. Working patterns were in many ways similar to those found in banking: in particular, the gender balance of those employed was relatively even, with 49.2% of the workforce comprised of women, whilst 32.1% of the workforce had reached a higher level of education²¹. Similarly, part-time work was not particularly widespread and concerned only 11.8% of those in employment. However, one domain where the employment profile for insurance differed from banking was in the significance of self-employment. Indeed, some 13.4% of those working in the EU's insurance sector in 2000 were self-employed, which was almost twice the average recorded in the whole of financial services (6.8%, NACE Section J). The share of the self-employed in total employment was particularly high in Italy (31.7%), Belgium (29.0%) and Greece (27.8%).

(21) IRL, not available.

Table 18.19

Insurance and pension funding, except compulsory social security (NACE Division 66)
Labour force characteristics (% of total employment)

	Female		Part-time		Self-employed		Higher level of education	
	1995	2000	1995	2000 (1)	1995	2000	1995	2000 (2)
EU-15	45.7	49.2	10.0	11.8	13.7	13.4	24.9	25.9
B	40.0	39.2	11.7	15.4	17.4	29.0	48.5	54.0
DK	47.4	56.3	16.0	12.1	:	:	25.2	24.0
D	44.3	48.5	11.2	13.9	18.2	14.5	23.8	26.1
EL	44.4	50.2	:	:	18.0	27.8	28.1	27.7
E	42.1	47.6	6.9	6.7	16.5	14.1	35.7	37.2
F	59.3	60.4	10.3	11.0	3.0	2.9	27.1	38.8
IRL	48.1	51.5	:	:	:	:	36.0	42.0
I	45.0	46.1	7.6	10.0	28.9	31.7	16.2	17.4
L	:	43.0	:	:	:	:	:	:
NL	32.6	41.4	19.5	24.0	:	:	:	33.5
A	40.2	36.1	10.9	11.6	:	5.4	7.5	10.9
P	36.0	37.4	:	:	:	:	:	:
FIN	49.7	67.1	:	:	:	:	29.4	61.2
S	58.9	62.1	:	:	:	:	:	:
UK	42.9	49.3	10.6	11.3	:	:	24.5	37.2

(1) DK, 1997.

(2) EU-15 and IRL, 1997.

Source: Eurostat, Labour Force Survey

18.3: FINANCIAL AUXILIARIES

The activities covered in this sub-chapter 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).

Activities auxiliary to financial intermediation have a supporting function in capital markets, performing a complementary role to banking and insurance activities, as well as providing some financial services that compete with banks and insurance companies. Financial auxiliaries have experienced dramatic changes in their business environment in recent years. On the one hand, companies increasingly operate on an international or even global basis, which leads them to issue bonds and equity outside of their domestic market. On the other hand, investors are also operating worldwide.

The re-organisation of stock markets has also played an important role in stimulating the supply of financial services and competition between financial intermediaries. Key elements include: the end to brokers' monopoly and the liberalisation of commissions; the creation of secondary listings, allowing medium-sized businesses unable to meet the conditions for a full listing to improve their access to capital; the computerisation of stock markets and market operations in all European exchanges, greatly improving market liquidity by making information more rapidly available.

Box 18.7: stock exchanges

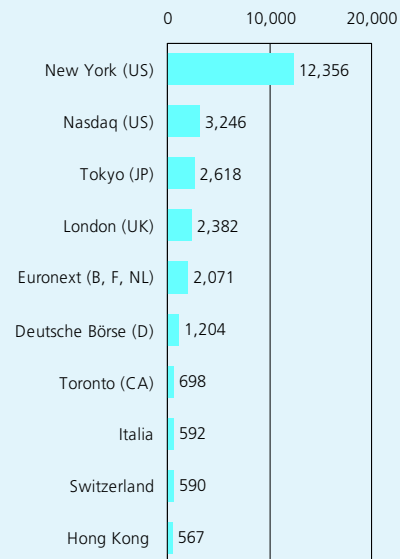
As regards stock exchanges, the London market was the largest in the EU in 2001, with an aggregate total of 2,891 listed shares (excluding investment funds) and market capitalisation of almost 2.4 thousand billion EUR (see table 18.20). This was above the level of Euronext²², with 1,345 shares and a market capitalisation of almost 2.1 thousand billion EUR.

After several years of growth, the number of companies listed on EU exchanges decreased slightly in 2001 in the majority of countries, with the notable exception of Spain, where Madrid saw 43% growth in its number of listed companies and Barcelona 15% growth.

(22) Euronext was created in September 2000 by the merger of the Amsterdam, Brussels and Paris exchanges.

Figure 18.4

The world's largest stock markets ranked by market capitalisation, as of 31 December 2001 (billion EUR)



Source: FIBV

Table 18.20

Stock markets, main indicators as of December 2001

		Total number of companies listed, excluding investment funds (units)	of which, domestic (units)	of which, foreign (units)	Market capitalisation of domestic companies (million EUR)	Share trading, including investment funds (million EUR)	Trading view (1)
Euronext	B, F, NL	1,345	1,131	214	2,070,467	3,563,182	REV
København	DK	217	208	9	95,524	81,046	REV
Deutsche Börse	D	984	749	235	1,203,681	1,611,030	TSV
Athinai	EL	314	313	1	95,185	42,345	TSV
Madrid	E	1,482	1,461	21	525,839	941,657	REV
Barcelona	E	662	657	5	:	410,503	REV
Bilbao	E	339	336	3	:	268,937	REV
Irish	IRL	87	68	19	84,568	25,470	TSV
Italia	I	294	288	6	592,319	1,748,489	REV
Luxembourg	L	257	49	208	25,506	786	TSV
Wien	A	113	99	14	28,307	8,615	TSV
Lisboa	P	99	97	2	52,042	30,804	TSV
Helsinki	FIN	155	152	3	213,901	202,740	TSV
Stockholm	S	305	285	20	262,930	423,332	REV
London	UK	2,891	2,438	453	2,381,664	5,090,274	REV
NYSE	US	2,400	1,939	461	12,356,414	11,754,428	TSV
Nasdaq	US	4,128	3,681	447	3,246,243	12,326,947	REV
Toronto	CA	1,316	1,278	38	697,787	506,205	TSV
Hong Kong	HK	867	857	10	567,037	270,098	TSV
Tokyo	JP	2,141	2,103	38	2,617,649	1,788,608	TSV

(1) TSV (Trading System View) count only those transactions which pass through the trading system or which take place on the exchange's trading floor. REV (Regulated Environment View) includes all transactions subject to supervision by the market authority.

Source: FIBV

Box 18.7: stock exchanges (continued)

The 1990s have been characterised by an enormous growth in trading volumes in the EU and the US. During the period 1990 to 1994, the value of share trading almost doubled in the EU and on the New York Stock Exchange, whilst during the period 1994 to 1997 the value was doubled again, and again between 1997 and 2000. The NASDAQ market in particular witnessed impressive growth, with a share trading value that grew ten-fold between 1990 and 1997, whilst it was further multiplied by a factor of 4.5 between 1997 and 2000. In 2001, however, the slowdown in the global economy burst the "e-bubble" and the increasing uncertainties about future growth of technology enterprises hit the NASDAQ market, where share trading fell by 55%, back to 1999 levels (see figure 18.5). In contrast, trading on the New York Stock Exchange (although affected by the events of 11 September) recorded a slowdown of only 5.2%, whilst EU markets gained 1.8% on average during 2001.

All EU stock markets witnessed a sharp rise in capitalisation during the course of the 1990s, a trend that accelerated in the second half of the decade (see figure 18.6). However, the start of the new century was accompanied by a reversal of this trend, as EU market capitalisation decreased by 15.8% in 2001 to 7.7 thousand billion EUR, which was still three times higher than in 1994. Helsinki, home of telecommunications equipment manufacturer Nokia, was the market that recorded the highest growth in the EU between 1990 and 2001, with capitalisation increasing ten-fold.

In 2001, the market capitalisation of companies listed on EU exchanges represented 30% of the world's total, up from 25% in 1994 (see figure 18.7). North American equities accounted for 55% of the world's total capitalisation, up from 38% in 1994. The Asia / Pacific region recorded a significant decline in value, as its share of world capitalisation dropped from 35% in 1994 to 13% in 2001.

Figure 18.5

Value of share trading including investment funds (1992=100)

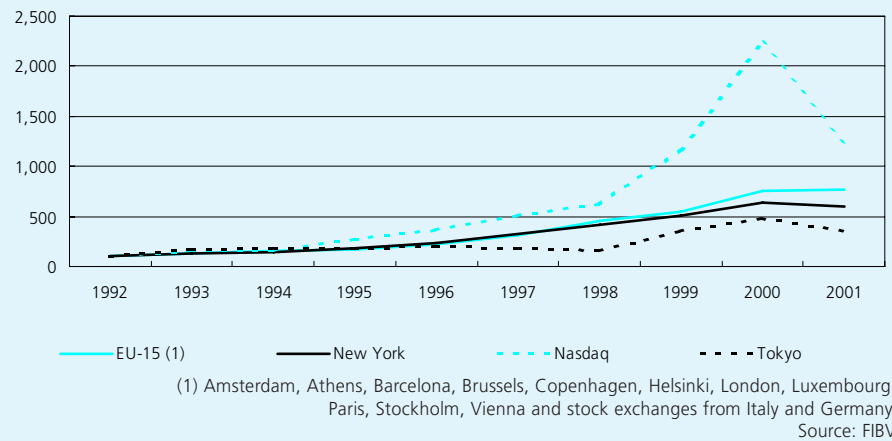


Figure 18.6

Market capitalisation at year end (billion EUR)

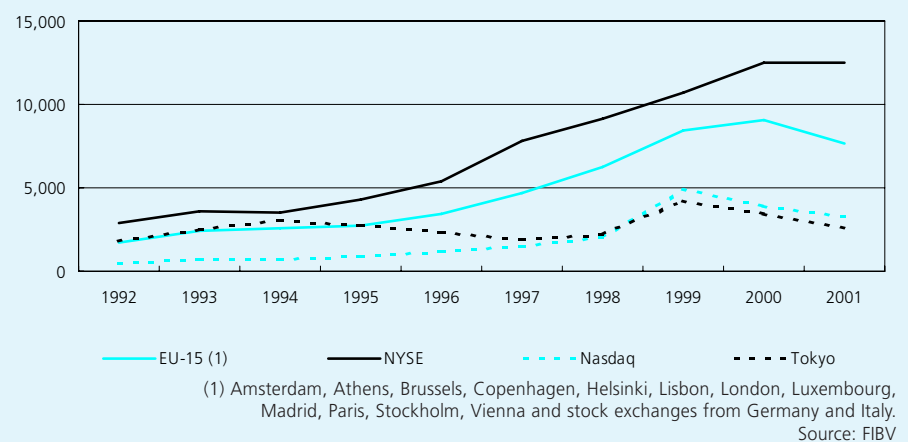
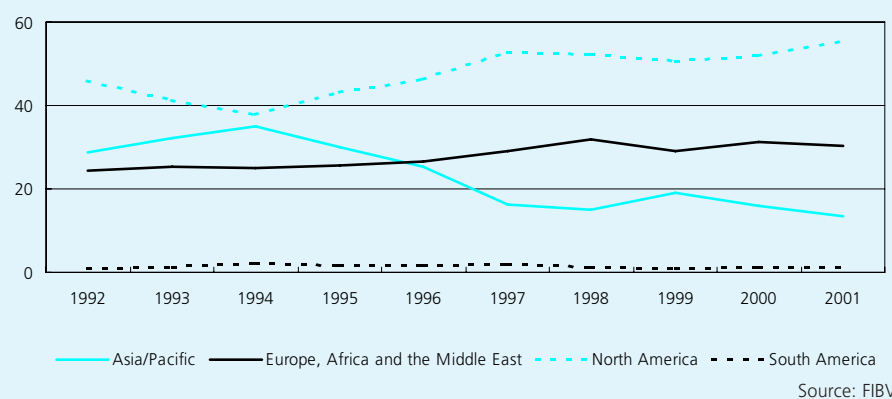


Figure 18.7

Market capitalisation of domestic companies (% share of world total)



Box 18.8: investment funds

FEFSI estimate that there were more than 20 thousand investment funds in the EU, with net assets in excess of 3.2 thousand billion EUR in 2001 (see table 18.21). France accounted for 23.8% of the total net assets managed in the EU, and Luxembourg held 23.6% of the total. The importance of Luxembourg reflects its strategy to establish itself as the first European centre of funds distributed at international level.

The major types of funds are equity, balanced, bond, and money market funds. Balanced funds invest in both equity and bond markets, whereas money market funds invest in instruments such as certificates of deposit or commercial paper. Funds invested in equity represented 38% of total assets in the EU in September 2001, whilst 28% were invested in bonds and 16% on the money market, with balanced funds accounting for the remaining 16%.

Table 18.21**Net assets of European investment funds as of 30 September 2001 (1)**

	Net assets (million EUR)
B	70,707
DK	33,438
D	211,319
EL	24,010
E	169,687
F	769,000
IRL (2)	183,191
I	386,632
L	761,583
NL (3)	99,858
A	59,163
P	17,378
FIN	13,309
S	61,649
UK	364,201

(1) Publicly-offered, open-ended funds investing in transferable securities and money market instruments.

(2) As of 30 August 2001.

(3) As of 31 December 2000.

Source: FEFSI, available at <http://www.fefsi.org>

Table 18.22**Activities auxiliary to financial intermediation (NACE Division 67)****Labour force characteristics (% of total employment)**

	Female		Part-time		Self-employed		Higher level of education	
	1995	2000 (1)	1995	2000	1995	2000 (1)	1995	2000 (2)
EU-15	45.8	44.1	13.0	13.6	15.6	18.1	26.0	27.1
B	53.8	28.3	:	:	:	30.0	38.3	66.7
DK	:	:	:	:	:	:	:	:
D	42.5	36.9	16.2	14.5	34.8	43.6	24.7	32.9
EL	:	48.7	:	:	:	:	:	43.9
E	45.4	45.3	:	13.7	27.2	35.0	42.9	48.3
F	52.9	55.7	10.5	16.2	21.9	19.3	29.4	38.0
IRL	:	44.4	:	:	:	:	:	55.4
I	43.0	35.5	:	:	23.3	35.6	24.1	16.2
L	:	49.4	:	:	:	:	:	56.3
NL	42.5	40.8	24.5	23.9	22.3	17.1	:	31.7
A	:	:	:	:	:	:	:	:
P	:	:	:	:	:	:	:	:
FIN	:	:	:	:	:	:	:	67.4
S	:	:	:	:	:	:	:	:
UK	45.5	44.8	12.8	12.3	7.6	5.4	23.9	28.8

(1) B, 1998.

(2) B and L, 1999; EU-15 and IRL, 1997.

Source: Eurostat, Labour Force Survey

EMPLOYMENT

According to the LFS, employment in the EU's financial auxiliary activities (NACE Division 67) was estimated at some 782 thousand persons in 2000. Amongst financial services, auxiliaries displayed the lowest participation rate for women, as they accounted for only 44.1% of those in employment, below the 48.3% average for the whole financial sector (NACE Section J).

Auxiliaries also had a relatively high presence of persons with only a lower education level, just over one-quarter (25.4%) of those employed in 1997 (compared to the financial services average of 18.8%). Some 13.6% of the financial auxiliaries workforce in the EU worked on a part-time basis in 2000, a share that was in line with the average for financial services (13.2%). Almost one fifth (18.1%) of the EU's financial auxiliaries workforce was self-employed in 2000, which was three times higher than the average for financial services (6.8%). This high figure is due to the large number of independent insurance brokers/agents and financial advisors that operate within this activity.

Business services



Manufacturing enterprises have increasingly out-sourced tasks that were not part of their core activity to independent service providers, triggering a shift in the structure of the European economy from industrial towards service activities. In other words, tasks that used to be executed "in-house", such as accounting, cleaning or security have been sub-contracted to specialised firms, with the hope that this would provide flexibility (including in personnel management) and lower costs, resulting in a higher level of service. At the same time, business services have benefited from increasing demand due to the growing complexity of business processes, increasing pressure from foreign competitors and the emergence of new technologies. This has spurred demand, for example, for consultancy, training and R&D services.

National Accounts data suggest that business services (when combined with real estate and computer services to make up NACE Section K) represented approximately one-fifth of the total value added generated in most Member States in 2000, and not far from half of the value added generated in the whole of services (NACE Sections G to K).

Business services include the technical, professional and operational services generally supplied to firms or administrations, rather than to households, for the support of their production process or their organisation. The most important business services are renting and leasing, research and development, legal, tax and management consultancy, engineering services, personnel services, cleaning and security services, advertising and market research activities. These services make up NACE Divisions 71, 73 and 74 and are addressed in the following subchapters, with the exception of NACE Group 74.8 (miscellaneous business activities). All these activities fall within NACE Section K, which also covers real estate services (NACE Division 70) and computer services (NACE Division 72) which are studied in chapters 14 and 20 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.

Box 19.1: a key to industrial competitiveness

Besides their importance in economic terms, business services are widely recognised as being of “major importance for the competitiveness of European industry and an important factor in the creation of employment and lasting economic growth”¹. This central role has been highlighted by the European Commission in a communication to the Council² that sets the framework for a common policy aimed at strengthening the competitiveness of EU industry. The communication underlines the dynamic relationship between business services and industry, not only as a result of outsourcing, but also because of the growing integration of business services into industrial production. According to the Commission's communication, these intangible contributions to the value added chain of industry are becoming greater than traditional, tangible investments. As a result, business services can provide industry with competitive advantages such as cost reductions, improved quality or better access to knowledge, skills, expertise and new technologies.

For all of these reasons, the business services sector has become an important policy item on the EU's agenda. A study recently carried out for the European Commission³ suggests that “remaining barriers to trade have resulted in fragmented EU markets in the business services sector, the relatively modest levels of cross-border trade having potential negative consequences for both users and providers”. Nevertheless, in recent years policy initiatives have concentrated on removing these barriers within the Internal Market through the promotion of mutual recognition of qualifications in the case of regulated professions (for example, accounting or legal services).

(1) Document 12645/98 approved by the Industry Council of 16 November 1998.

(2) The Contribution of Business Services to Industrial Performance, Communication from the Commission to the Council, COM(1998) 534, 1998.

(3) Barriers to Trade in Business Services, European Commission, January 2001.

STRUCTURAL PROFILE

Estimates based on National Accounts data indicate that total value added generated by NACE Section K (which also includes real estate and computer services) was 1,608 billion EUR in the EU in 2000⁴. The largest contributors to this total were Germany (468 billion EUR), the United Kingdom (309 billion EUR) and France (305 billion EUR).

In relative terms, as noted in the introduction, business services (including real estate and computer services) represented approximately one-fifth of the total gross value added in the EU in 2000⁵, with shares notably below this level in Portugal (12.0%), Spain (13.7%, 1998), Austria (15.7%) and Greece (17.0%), as opposed to the United Kingdom (22.9%), France (24.6%) and Germany (24.8%) at the top of the ranking. These services witnessed a rapid expansion in the second half of the 1990s in all countries reporting data⁶; growth rates generally exceeded 3.0% per annum in constant price terms and were higher than the services' average.

(4) F, IRL, I, L, NL, A and P, 1999; E, 1998;

S, not available.

(5) F, IRL, I, L, NL, A and P, 1999; E, 1998;

S, not available.

(6) Time series in constant prices not available for F, IRL, S and UK.

Table 19.1**Real estate, renting and business activities (NACE Section K)****Value added in the EU, 2000**

	Value added (billion EUR)	Share of services value added (%)	Share of total value added (%)
B	49.7	44.5	21.6
DK	29.2	39.4	19.2
D	468.0	52.2	24.8
EL	19.0	32.3	17.0
E (1)	68.3	30.0	13.7
F (2)	304.5	51.0	24.6
IRL (2)	16.5	48.8	21.1
I (2)	211.8	39.3	19.6
L (2)	3.1	27.2	17.2
NL (2)	69.3	41.5	20.2
A (2)	28.9	34.2	15.7
P (2)	11.2	30.6	12.0
FIN	20.1	40.0	17.1
S	:	:	:
UK	308.8	44.0	22.9

(1) 1998.

(2) 1999.

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

SBS data provides more detailed information on business services, independently of the other services in Section K. This shows value added at factor cost equal to 545.2 billion EUR in the EU in 1999⁷. The largest activity by far was legal, accountancy and management services (NACE Group 74.1, see sub-chapter 19.3). This Group accounted for approximately one-third of EU value added for the activities covered by this chapter in 1999. Architectural, engineering and technical activities (NACE Groups 74.2 and 74.3) came next, with particular importance in the Nordic Member States where they generated approximately one-quarter of business services value added, roughly 10 percentage points more than in the other countries. The importance of personnel services (NACE Group 74.5) was relatively high in countries where temporary work is well established, such as Belgium, France or the United Kingdom, and miscellaneous business services (NACE Group 74.8, including mainly photographic, packaging, secretarial and translation activities) accounted for a higher than average share of value added in Germany, Portugal and the United Kingdom.

Another trend that can be witnessed is the increasing reliance on out-sourcing. Table 19.3 provides the weight of a selected number of business services; the services chosen are generally considered as the main beneficiaries of out-sourcing trends. The table shows that the externalisation of activities has taken place most noticeably in the United Kingdom, France and the Netherlands, as opposed to Finland, Italy or Ireland.

(7) I, L and NL, 1998; IRL, 1997; E, 1998 except 1997 for NACE Groups 74.2 and 74.3; E, excluding NACE Division 71, Classes 74.11, 74.12, 74.14 and 74.15 and Group 74.6; NL, excluding NACE Division 73.

Table 19.2
Renting; research and development;
other business activities
(NACE Divisions 71, 73 and 74)
Turnover (billion EUR)

	1995	1996	1997	1998	1999	2000
B	25.8	25.8	25.5	28.5	32.5	:
DK	:	:	:	:	15.4	:
D	:	256.1	253.6	264.9	286.9	:
EL	:	:	:	:	:	:
E	:	:	:	:	:	:
F	:	135.5	151.6	165.1	178.6	:
IRL	2.9	3.6	4.5	:	:	:
I	:	67.5	68.8	76.4	:	:
L	1.5	:	1.7	2.0	2.1	:
NL	:	:	:	:	:	:
A	12.0	12.9	13.9	14.8	15.9	:
P	6.3	12.2	9.0	11.5	15.1	:
FIN	7.4	6.1	6.6	8.2	9.2	9.9
S	19.5	22.9	24.4	27.1	30.8	:
UK	:	:	190.9	218.7	246.8	:

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

Table 19.3

Share in GDP of selected business services, 1999 (%) (1)

	B	DK	D	F	IRL	I	L	NL	A	P	FIN	S	UK
Advertising	0.27	0.39	0.90	0.38	0.15	0.17	0.17	0.42	0.32	0.27	0.27	0.50	0.53
Labour recruitment and provision of personnel	0.95	0.19	0.24	1.17	0.14	0.05	0.45	1.00	0.30	0.22	0.14	0.04	1.44
Investigation and security activities	0.15	0.03	0.12	0.18	0.17	0.14	0.22	0.14	0.08	0.27	0.11	0.19	0.24
Industrial cleaning	0.35	0.60	0.45	0.34	0.10	0.45	0.37	0.46	0.33	0.26	0.35	0.42	0.31
Total share	1.73	1.21	1.71	2.07	0.57	0.81	1.20	2.01	1.02	1.03	0.87	1.15	2.53

(1) I, L and NL, 1998; IRL, 1997; EL and E, not available.
Source: Eurostat, Structural Business Statistics (theme4/sbs) and National Accounts - ESA95 - aggregates (theme2/aggs)

FOREIGN DIRECT INVESTMENT

FDI in business services (excluding renting) developed at a rapid pace in the second half of the 1990s. The stock of direct investment of the EU Member States in non-Community countries for NACE Divisions 73 and 74 reached 140.0 billion EUR in 1999, more than twice the amount recorded in 1996 (63.7 billion EUR). A large majority of investment was directed to the US, with a stock of 88.8 billion EUR in 1999, or 63.4% of the total, up from 60.1% in 1996. In contrast, Japan represented a marginal, but growing share: from 0.4 billion EUR (0.6%) in 1996 to 1.3 billion EUR (0.9%) in 1999.

The stock of foreign direct investment from non-Community countries in the EU reached 105.9 billion EUR in 1999, up from 61.4 billion EUR in 1996. Here again, the US was the main partner, with investment worth 60.7 billion EUR, or 57.3% of the total. Japan accounted for 2.8 billion EUR (2.6%). Overall the EU invested more in the US than the other way around, whilst the contrary was true as regards the EU and Japan.

Data on foreign owned enterprises (FATS) shed additional light on the international exposure of the business services' sector⁸. In the countries contributing to the pilot survey, the share of total value added generated in business services by foreign owned enterprises was equal to 9.5% on average in 1998, ranging between 7.4% in Ireland and 12.2% in Sweden. Enterprises controlled by non-Community countries were responsible for some 62.7% of the value added of foreign owned enterprises.

(8) Data are available for DK, IRL, NL, FIN, S and UK; IRL and FIN (NACE Division 71), 1997; S (NACE Divisions 71 and 73), 1996; DK, NL, FIN, excluding NACE Division 73; IRL, excluding NACE Divisions 71 and 73; DK, no information available on the breakdown of foreign ownership between Community and non-Community countries.

Table 19.4 Research and development; other business activities (NACE Divisions 73 and 74)
Foreign direct investment, 1999 (million EUR)

	In the reporting economy	(% of investment abroad)				
		Abroad	Intra	Extra	JP	US
EU-15	105,882	140,001	:	100.0	0.9	63.4
B	:	:	:	:	:	:
DK	8,865	:	:	:	:	:
D	176,552	148,700	50.9	49.1	:	41.1
EL	:	:	:	:	:	:
E	22,258	9,453	:	:	:	:
F	62,884	30,450	54.7	45.3	1.0	16.4
IRL	:	:	:	:	:	:
I	:	:	:	:	:	:
L	:	:	:	:	:	:
NL	2,666	3,210	45.8	54.2	:	24.3
A	6,163	4,844	64.2	36.1	:	:
P	4,701	3,054	24.3	75.7	0.0	1.0
FIN	292	173	42.8	57.8	:	:
S	:	:	:	:	:	:
UK	11,385	51,746	51.5	48.5	:	25.3

Source: Eurostat, European Union Direct Investments (theme2/bop/fdi)

LABOUR AND PRODUCTIVITY

According to the LFS, approximately 10.5 million persons were occupied within the business services sector of the EU economy in 2000, of which 9.5 million were working in other business activities (NACE Division 74), 559 thousand in research and development (NACE Division 73) and 352 thousand in renting activities (NACE Division 71).

Gender balance was relatively even in 2000, as women represented 46.9% of the total persons employed in the EU, compared to 43.5% for services (NACE Sections G to K). Women outnumbered men in Austria (54.0%), Portugal (52.8%) and Germany (51.9%), as opposed to Sweden where they accounted for only 42.1% of those employed in these activities.

Business services (NACE Divisions 71, 73 and 74) have contributed significantly to job creation in the EU in recent years. Data from the LFS show that employment in business services has risen on average by 5.2% per annum between 1995 and 2000, with Ireland and Italy even recording double-digit annual growth rates (10.5% and 10.3%, respectively).

Part-time work is of particular importance in business services. It accounted for 22.1% of the persons employed in the EU in 2000, some 2.1 percentage points above the services' average (NACE Sections G to K). The highest penetration of part-time work was found in the Netherlands (39.3%) and Austria (28.4%), whilst only Greece reported less than one-tenth of those employed in business services working part-time (3.4%).

Another typical characteristic of the business services' employment profile is the large proportion of self-employed persons. The self-employed accounted for 22.7% of the total number of persons employed in the EU in 2000, with employees (76.6%) representing the majority of persons in employment and a small minority of family workers (0.8%). For NACE Division 74 (other business activities), the share of the self-employed reached 24.0% in the EU in 2000.

Table 19.5
Renting of machinery and equipment without operator and of personal and household goods; research and development; other business activities
(NACE Divisions 71, 73 and 74)
Labour force characteristics (% of total employment)

	Female		Part-time		Self-employed		Higher level of education	
	1995	2000	1995	2000	1995	2000	1995	2000 (1)
EU-15	46.3	46.9	20.9	22.1	23.2	22.7	39.6	40.5
B	43.4	47.4	15.9	24.6	30.1	24.2	52.3	56.3
DK	43.7	43.4	25.6	22.8	16.4	18.0	53.2	44.3
D	51.3	51.9	24.3	27.2	20.5	20.6	39.0	38.9
EL	40.2	45.2	4.4	3.4	52.7	46.8	61.2	62.3
E	48.8	50.6	14.6	14.5	24.6	21.9	41.0	45.4
F	46.1	46.7	16.2	18.7	13.7	13.0	39.9	42.0
IRL	43.7	50.3	10.2	17.4	25.1	21.1	54.2	56.8
I	40.9	44.5	12.4	17.2	47.3	47.9	32.1	32.8
L	48.1	48.4	14.4	14.8	20.3	21.6	42.3	47.5
NL	44.8	44.0	37.6	39.3	17.8	15.5	:	42.2
A	52.9	54.0	25.3	28.4	17.2	17.6	23.6	29.4
P	45.8	52.8	10.9	10.6	35.1	21.7	36.0	26.1
FIN	45.4	44.0	19.0	16.4	18.9	16.3	37.7	55.2
S	44.3	42.1	25.9	19.2	23.1	20.1	48.4	45.6
UK	44.3	43.0	23.3	22.2	21.6	20.6	38.5	45.4

(1) EU-15 and IRL, 1997.

Source: Eurostat, Labour Force Survey

The competitiveness of the business services sector essentially relies upon the quality of human capital, which depends on the level of education possessed by the workforce. Some 40.5% of the persons employed in business services in 1997 (the latest year for which EU-15 data are available) had completed a higher education, more than twice the average for the services' sector (NACE Sections G to K). It is important to note that within the figure for business services, qualification levels may vary significantly from one activity to the other, for example between research and development and industrial cleaning. At a NACE Division level, the most educated business services' workforces were found in research and development (65.8% with a higher education, NACE Division 73) and the lowest in renting, where as many as 84.6% of those employed had only a lower or upper secondary level of education. In other business activities (NACE Division 74), 39.4% had completed a higher education.

Apparent labour productivity of business services can be measured by the value added generated by each person employed. SBS data suggest that business services' labour productivity was generally higher than in the other service activities. Wage adjusted labour productivity was over 120% in all Member States⁹, except Sweden where it was equal to 101.3%.

(9) EL, E, IRL, NL and UK, not available.

19.1: RENTING AND LEASING

This sub-chapter 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, amongst 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 sub-chapter and financial leasing, which is not covered as it is considered as a special form of credit granting (see chapter 18). The renting and leasing of real estate is also treated separately (see chapter 14).

Renting and leasing both refer to the physical transfer of a good from the owner (the lessor) to another person (the lessee), who can make use of the good based upon regular payments for it. While leasing concerns an operation over the medium or long-term, renting generally refers to the short-term (hours, days, etc). In both cases the legal and economic ownership stay with the lessor, who also generally remains responsible for the maintenance of the equipment.

Renting and leasing of equipment has emerged as a popular alternative to ownership. Similar to the out-sourcing trends witnessed in other business services, enterprises have increasingly sub-contracted the management of certain assets to specialised companies, for example office equipment, a vehicle fleet or even industrial equipment. The main benefits of renting and leasing are that it avoids mobilising a large amount of capital, may bring tax benefits, overcomes equipment failures and avoids maintenance and repair responsibilities. It also provides a hedge against product obsolescence and depreciation, for example in areas where technology is changing rapidly, such as with computer hardware.

STRUCTURAL PROFILE

The interpretation of financial ratios within renting activities should be carried out with great caution. Due to the specific nature of this activity, whereby the rental or leasing enterprise remains the owner of the good it rents or leases, enterprises in this sector may face considerably higher financial income and depreciation charges compared to enterprises active in other services. As a consequence, ratios relying on indicators such as gross value added may appear over-inflated. For example, wage adjusted labour productivity was particularly high, exceeding 200% in most of the countries that supplied data for 1999. The lowest value was recorded in Italy (172.5%, 1998), far below the maximum of 1,397% in Germany.

The value added generated by renting and leasing activities reached 63.5 billion EUR in the EU in 1999¹⁰. Germany was by far the largest contributor to this total, with 31.3 billion EUR, more than twice the figure recorded in the United Kingdom (14.1 billion EUR). In relative terms, however, renting and leasing was particularly well developed in Austria where it accounted for 17.2% of business services' value added, Portugal (15.6%), Germany (15.5%) and Luxembourg (14.1%, 1998).

(10) I, L and NL, 1998; IRL, 1997; EL and E, not available.

Box 19.2: leasing activities in 2000

According to Leaseurope figures, 136.4 billion EUR worth of turnover was generated by equipment leasing in the EU in 2000⁽¹⁾ (see table 19.6), up 10.3% from the year before. European leasing activities were mainly concentrated in the United Kingdom (38.9 billion EUR of turnover) and Germany (31.4 billion EUR), whilst the activity was less developed in France (19.7 billion EUR) and Italy (17.1 billion EUR).

The European leasing market has undergone significant changes during the course of the 1990s in terms of customers and products. Leasing operations used to concentrate on office equipment, but have subsequently extended to all kinds of goods, ranging from machines and industrial equipment to motor vehicles, ships and aircraft. In 2000, only 14.1% of total turnover was attributed to office equipment (see figure 19.1). Passenger cars were the largest market segment constituting about 31.6% of leasing turnover, ahead of industrial equipment (26.6%).

(11) L, 1999; EL, not available.

Table 19.6

Turnover from equipment leasing, 2000 (million EUR)

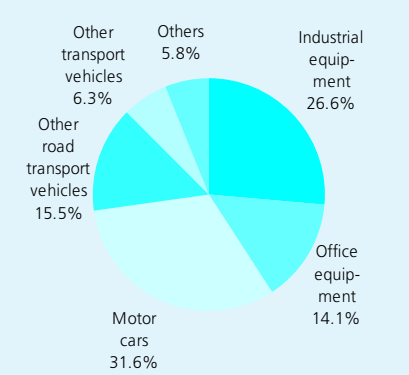
B	2,729
DK	2,366
D	31,400
E	7,102
EL	:
F	19,691
IRL	1,842
I	17,137
L (1)	204
NL	3,215
A	3,313
P	2,874
FIN	707
S	4,891
UK	38,948

(1) 1999.

Source: Leaseurope, Annual Statistics, available at <http://www.leaseurope.org>

Figure 19.1

Equipment leased by type of asset in the EU, 2000 (1)

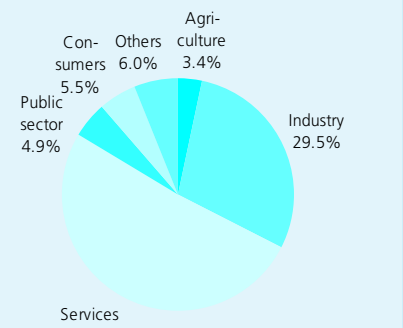


(1) Excluding L.

Source: Leaseurope, Annual Statistics, available at <http://www.leaseurope.org>

Figure 19.2

Equipment leased by type of customer in the EU, 2000 (1)



(1) Excluding L.

Source: Leaseurope, Annual Statistics, available at <http://www.leaseurope.org>

LABOUR AND PRODUCTIVITY

The LFS highlights that renting (NACE Division 71) appears to have many employment characteristics closer to those associated with manufacturing than with the other business services, with a relatively high presence of men, paid employees and lower than average qualification levels.

There were 352 thousand persons employed in renting activities (NACE Division 71) in the EU in 2000, almost two-thirds (65.8%) of which were men, the highest share amongst any of the activities in this chapter. Full-time work was also more prevalent than the business services' average, accounting for 83.4% of the workforce (compared to 77.9% for business services). In addition, paid employees accounted for 84.4% of those persons in employment, almost 8 percentage points above the business services' average. As regards the qualification level of the workforce, 84.6% of the persons had not completed education levels beyond upper secondary education (59.5% in business services).

The relatively low qualifications of the renting and leasing workforce are reflected in the average personnel costs figures, that were generally lower than in business services, ranging from 13.8 thousand EUR per employee in Portugal to 38.0 thousand EUR in Luxembourg (1998)¹².

(12) I, L and NL, 1998; UK, 1997; EL, E and IRL, not available.

Table 19.7

Renting of machinery and equipment without operator and of personal and household goods (NACE Division 71)
Labour force characteristics (% of total employment)

	Female		Part-time		Self-employed		Higher level of education	
	1995	2000 (1)	1995	2000	1995	2000 (2)	1995	2000 (3)
EU-15	33.7	34.2	:	:	:	:	:	:
B	35.4	39.2	:	:	:	:	:	49.4
DK	:	:	:	:	:	:	:	:
D	38.2	41.9	19.6	24.5	:	22.3	:	21.4
EL	:	:	:	:	61.0	50.4	:	:
E	29.1	33.3	:	:	26.1	21.8	25.9	31.2
F	30.6	31.8	8.9	10.7	7.5	8.1	11.7	16.9
IRL	:	:	:	:	:	:	:	:
I	:	41.2	:	:	60.5	50.1	:	:
L	:	:	:	:	:	:	:	:
NL	29.1	25.5	25.2	30.8	20.6	25.2	:	:
A	60.4	:	:	:	:	:	:	:
P	:	:	:	:	:	:	:	:
FIN	:	:	:	:	:	:	:	:
S	:	:	:	:	:	:	:	:
UK	36.7	34.4	18.4	15.4	10.0	10.2	:	16.0

(1) B, 1998. (2) UK, 1999; EL, 1998. (3) B, 1999.
Source: Eurostat, Labour Force Survey

Table 19.8

Renting of machinery and equipment without operator and of personal and household goods (NACE Division 71)
Labour productivity and personnel costs, 1999

	Apparent labour productivity (thousand EUR per person employed)	Average personnel costs (thousand EUR per employee)	Wage adjusted labour productivity (%)
B	145.3	33.1	438.9
DK	73.6	23.6	311.9
D	401.0	28.7	1,397.0
EL	:	:	:
E	:	:	:
F	122.7	31.3	392.2
IRL (1)	34.1	:	:
I (2)	47.1	27.3	172.5
L (2)	299.1	38.0	788.3
NL (2)	107.1	25.5	419.8
A	222.2	29.2	761.6
P	93.0	13.8	676.3
FIN	81.8	27.6	296.6
S	73.5	32.7	224.6
UK (1)	:	22.3	:

(1) 1997.
(2) 1998.

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

19.2: RESEARCH AND DEVELOPMENT

Research and development (R&D) activities are classified within NACE according to the field of investigation. 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). Market research activities are covered within sub-chapter 19.3.

Three types of R&D activities can be distinguished: basic research, when investigation is conducted with no particular application or use is in view; applied research, when investigation is directed primarily towards a specific practical aim or objective; and experimental development, which is systematic work, drawing on existing knowledge and directed at producing new materials, products and devices, or improving those that are already produced.

R&D is a key factor with respect to competitiveness and growth, and as such it has drawn a lot of attention from policy makers. The statistics presented in this sub-chapter concern exclusively those enterprises whose main activity consists of carrying out R&D activities, and thus excludes R&D departments of universities, public administration and enterprises classified outside of Division 73.

STRUCTURAL PROFILE

R&D enterprises in the EU generated 13.9 billion EUR of value added in 1999¹³. Almost half of this total was accounted for by Germany (6.1 billion EUR) and one-quarter by the United Kingdom (3.6 billion EUR). Although R&D enterprises represent only a marginal share of business services activity in most countries (between 0.5% and 2.0% of services' value added), Luxembourg was a notable exception (13.9%, 1998), and Sweden (5.2%), Germany (3.0%) and Belgium (2.9%) also reported that this activity was relatively important.

(13) E, I and L, 1998; IRL, 1997; EL and NL, not available.

LABOUR AND PRODUCTIVITY

The LFS indicates that more than half a million persons (558.6 thousand) worked in R&D enterprises in the EU in 2000, a majority of which were men (58.4%). Contrary to the other business services, practically all persons in employment (over 90%) were paid employees, and only Italy displayed a significant share of self-employed persons (20.7%) in this activity.

Unsurprisingly, the average qualification level of the workforce was very high; in fact in 1997 the share of persons in employment having completed a higher education was over 65%, a threshold surpassed only by this sector and education (NACE Division 80). The share of persons employed in 2000 who had completed higher education exceeded two-thirds in nearly all countries for which data is available¹⁴.

(14) EL, IRL, L and P, not available.

Wage adjusted labour productivity in R&D enterprises was generally lower than in other business services¹⁵ and in some cases value added did not cover personnel costs. In 1999, wage adjusted labour productivity ranged between 53.8% in Finland and 125.2% in Belgium. The low figures can in part be explained by elevated personnel costs, which may well be a direct consequence of the high level of qualifications possessed by the majority of the workforce. Indeed, average personnel costs were generally above 45 thousand EUR per employee, with a maximum of 70.6 thousand EUR recorded in Luxembourg in 1998¹⁶, whilst average personnel costs were typically below 30.0 thousand EUR in the majority of countries for business services in general.

(15) EL, IRL and NL, not available.

(16) EL, IRL and NL, not available.

Table 19.9

Research and development (NACE Division 73)
Labour force characteristics (% of total employment)

	Female		Part-time		Self-employed		Higher level of education	
	1995	2000	1995	2000	1995	2000 (1)	1995	2000 (2)
EU-15	37.4	41.6	12.1	14.9	:	:	59.5	65.8
B	:	42.9	:	25.7	:	:	80.6	80.7
DK	59.1	44.3	27.5	:	:	:	64.6	67.1
D	33.9	37.4	13.6	16.9	:	6.7	51.2	68.7
EL	:	55.1	:	:	:	:	:	73.2
E	41.6	39.8	:	:	:	:	78.4	74.3
F	42.1	39.8	9.5	12.3	:	:	64.7	66.9
IRL	:	:	:	:	:	:	:	:
I	32.4	42.3	:	8.1	18.4	20.7	46.9	57.6
L	:	:	:	:	:	:	:	:
NL	31.5	36.0	23.0	31.0	:	:	:	72.2
A	35.4	48.7	:	:	:	:	53.1	55.4
P	:	:	:	:	:	:	:	:
FIN	46.4	49.6	:	:	:	:	56.9	70.8
S	43.2	49.8	:	:	:	:	79.8	84.0
UK	34.3	43.7	11.0	15.2	:	:	60.6	75.7

(1) D, 1999.

(2) EU-15, 1997.

Source: Eurostat, Labour Force Survey

19.3: LEGAL, ACCOUNTANCY AND MANAGEMENT SERVICES

The activities covered in this sub-chapter extend 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.

Whilst some of these activities are supplied almost exclusively to other businesses (for example, management consultancy or market research), others, such as legal or tax consultancy services, concern both businesses and private customers. All of the activities covered in this sub-chapter have a large proportion of self-employed persons. Sometimes the self-employed are grouped together in the form of partnerships, some of which have grown to become large, multinational organisations.

STRUCTURAL PROFILE

Legal, accountancy and management services were the largest activity within business services in 1999, accounting for 176.3 billion EUR of value added in 1999¹⁷, more than one-third of the total value added for the activities covered in this chapter. Germany had by far the largest professional services sector in the EU, generating 66.8 billion EUR of value added in 1999, just over 50% more than in the United Kingdom (43.1 billion EUR) and more than three times the level in France (20.7 billion EUR). Professional services were also important (in relative terms) in the Netherlands where they generated 10.5 billion EUR of value added in 1998.

(17) I, L and NL, 1998; IRL, 1997; EL and E, not available.

Box 19.3: legal services

Legal services are defined as activities of advocates, barristers and solicitors, notaries, registered lawyers and legal consultants. Whilst some large international partnerships have emerged, the vast majority of persons employed in this sector are self-employed lawyers or notaries. Data compiled by the Council of the Bars and Law Societies of the European Union indicate that there were over 617.6 thousand fully qualified lawyers practising in the EU in 2000 (see table 19.10), which corresponds to 1.6 per thousand inhabitants. Spain and Italy both recorded a particularly high presence of lawyers, with approximately 135 in each country. When expressed in relation to the number of inhabitants, Greece emerged at the top of the ranking, with 31.3 thousand lawyers, equivalent to 3.0 per thousand inhabitants. In contrast, Nordic countries had a relatively low number of lawyers, with less than 1 per thousand inhabitants in Denmark, Sweden and Finland.

Table 19.10

Number of fully qualified lawyers, 2001 (1)

B	12,672
DK	4,181
D	110,367
EL	31,300
E	134,592
F	39,282
IRL (2)	8,000
I (2)	135,000
L	780
NL	11,033
A	4,046
P	16,828
FIN	1,550
S	3,632
UK	104,343

(1) As of 30 October 2001; F and A, as of 30 June 2001; D and NL, as of 1 January 2001; I, as of 31 October 2000; P, as of July 1999.

(2) Estimates.

Source: CCBE available at <http://www.ccbe.org>

Box 19.4: accountancy services

Accountancy services consist mainly of account keeping and auditing, but enterprises in these activities often also provide tax consultancy, financial advisory services or management consultancy. The profession is dominated by a few large international firms (known as the "big five": PricewaterhouseCoopers (PwC), Ernst & Young, KPMG, Deloitte Touche Tohmatsu and Andersen) that usually work for large, national and international companies; although they have increasingly started to work for medium-sized enterprises too. However, the bulk of the profession consists of small enterprises and a large share of persons employed are not employees but self-employed accountants.

Accountancy services (like legal services) are characterised by a highly fragmented market in the EU, which is largely a result of the multitude of rules and regulations to which enterprises are subject, including accession to the profession itself. Rules on accountancy, taxation, company law or social legislation may differ considerably from one country to the other, constituting a barrier to trans-national operations.

According to FEE, there were more than 386.6 thousand qualified accountants who were members of national associations in the EU in 2000 (see table 19.11). About 62% of these worked for specialised accountancy services enterprises, whilst the others were working either in the accounts departments of enterprises in other business sectors (28%) or within the public administration (10%).

Table 19.11

Number of accountants in the EU,
2000 (units)

	Member body	In public practice	In business	In public admini- stration
B	IEC	3,636	2,413	:
	IRE	950	:	:
DK	FSR	1,885	784	20
D	IDW	9,047	:	:
EL	SOEL	521	:	:
E	IACJCE	2,885	:	:
F	CNCC	16,400	:	:
	OEC	16,100	:	:
IRL	ICAI	3,891	:	12,190
	CPA	725	906	226
I	CNR	40,000	:	:
	CNDC	48,000	:	:
L	IRE	270	:	:
	OEC	315	:	:
NL	NIVRA	4,886	5,361	990
A	KWT	5,618	:	:
	IOW	560	:	:
P	OROC	899	:	:
FIN	KHT	540	62	19
S	FAR	1,982	:	13
UK	ACCA	22,147	32,583	9,308
	CIMA	:	:	:
	CIPFA	1,719	389	8,689
	ICAEW	53,550	59,500	5,950
	ICAS	4,206	6,217	258

Source: FEE, available at <http://www.fee.be>

Box 19.5: market research and public opinion polling

Market research deals with analysing markets for products and services. It is generally used by enterprises to identify and evaluate market conditions and emerging trends, and to define and assess marketing strategies. This service also covers the surveying of public attitudes to political, economic and social issues.

According to the ESOMAR, market research activities generated 6.0 billion EUR of turnover in the EU in 2000, an increase of 10.7% when compared to 1999. The main clients of market research enterprises were manufacturing enterprises, which accounted for over half (53.0%) of the turnover generated in 1999 (see table 19.12), whilst broadcasters were the second largest group (8.0%). On average, some 72.0% of turnover was generated in the area of consumer research. The largest market research group in the world was AC Nielsen (US), with turnover in market research activities equal to 1.7 billion EUR in 2000 (see table 19.13), ahead of IMS Health (US), the Kantar Group (UK) and TN Sofres (UK).

Table 19.12**Breakdown of market research clients in Europe 1999 (%) (1)**

	Share of research turnover (%)
Manufacturing	53.0
Broadcasting media	8.0
Research institutes	5.8
Public administration	4.9
Financial services	4.7
Communication services	3.9
Other services	3.9
Distributive trade	3.8
Advertising agencies	2.8
Utilities	2.5
Industrial B2B	2.0
Other media (2)	1.6
Others	3.2

(1) Average for EEA, CH, central and eastern European countries, CY and TR.

(2) Including on-line media.

Source: Annual Study on the Market Research Industry, ESOMAR, 1999

Table 19.13**Top ten global market research companies by turnover, 2000**

		Number of full-time employees	Global research turnover (million EUR)	Share of turnover outside home country (%)
AC Nielsen	US	21,000	1,710.5	67.0
IMS Health	US	8,000	1,227.0	62.5
The Kantar Group	UK	5,800	1,007.1	71.4
Taylor Nelson Sofres	UK	7,125	769.7	75.2
Information Resources	US	4,000	576.9	25.0
VNU	US	2,916	571.5	2.6
NFO WorldGroup	US	3,500	510.3	62.4
GfK Group	D	4,212	481.6	62.4
Ipsos Group	F	2,437	330.0	78.3
Westat	US	1,430	286.8	0.0

Source: Annual Study on the Market Research Industry, ESOMAR, 2000

Box 19.6: management consultancy

Management consultancy services cover the provision of advice on management matters to enterprises or public administration, sometimes extending to the implementation of solutions. This service has a highly fragmented supply, as beyond the large multinational consultants (such as McKinsey, BCG, ATK, Bain, Arthur D Little or Booz-Allen) the majority of enterprises are very small in size, with many consisting of single, self-employed persons.

According to FEACO, this sector has benefited in recent years from a combination of factors that have stimulated demand, such as the increasing globalisation of markets, the introduction of the euro, a wave of privatisation and deregulation and new opportunities that have arisen out of the expanding application of information technology and telecommunications.

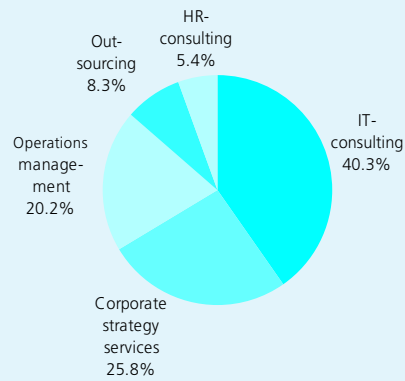
In 2000, FEACO figures show that approximately 233 thousand consultants in Europe¹⁸ generated turnover of 39.7 billion EUR. This corresponds to a growth rate of about 16% compared to 1999's turnover. IT consulting¹⁹ (40.3%), corporate strategy (25.8%) and operations management (20.2%) were the main fields of activity for management consultants in 2000 (see figure 19.3). On the demand side, the most important clients of consulting firms were manufacturing enterprises, representing 19.0% of turnover (see figure 19.4), just ahead of banks (18.3%).

(18) EU-15 (excluding IRL and L), Bulgaria, Switzerland, Hungary, Norway, Poland, Romania, Russian Federation and Slovenia; forecasts.

(19) IT consulting is often carried out by management consultants; note that consultancies with IT consulting as their principal activity are included in NACE Division 72 and are treated in chapter 20.

Figure 19.3

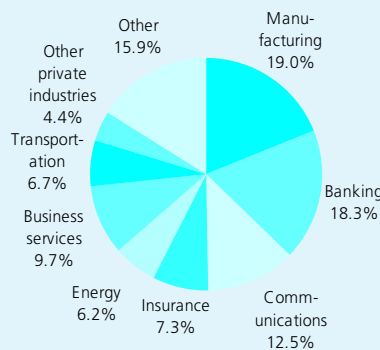
Breakdown of management consulting turnover in Europe by activity, 2001 (1)



(1) EU-15 (excluding IRL and L), BG, CH, HU, NO, PL, RO, RU and SI; forecasts. Source: Survey of the European Management Consultancy Market, FEACO, 31 December 2000

Figure 19.4

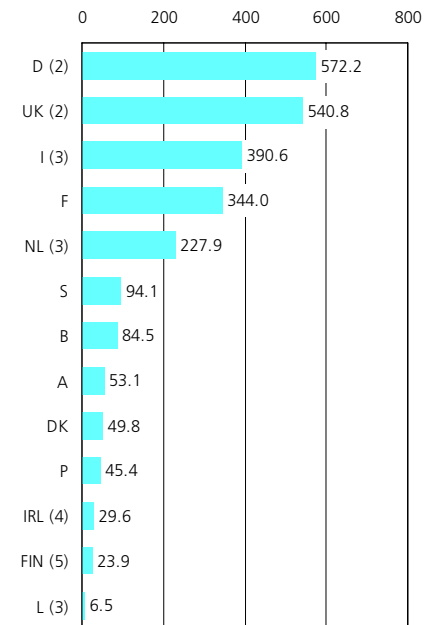
Breakdown of management consulting turnover in Europe by client, 2001 (1)



(1) EU-15 (excluding IRL and L), BG, CH, HU, NO, PL, RO, RU and SI; forecasts. Source: Survey of the European Management Consultancy Market, FEACO, 31 December 2000

Figure 19.5

Legal, accounting, book-keeping and auditing activities; tax consultancy; market research and public opinion polling; business and management consultancy; holdings (NACE Group 74.1) Number of persons employed, 1999 (thousands) (1)



(1) EL and E, not available. (2) Number of employees, 1997. (3) 1998. (4) 1997. (5) 2000. Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms)

LABOUR AND PRODUCTIVITY

According to SBS data approximately 2.5 million persons were working in the professional services in the EU in 1999²⁰. About half of them were working either in Germany or the United Kingdom (both 1997), which numbered respectively 572.2 thousand and 540.8 thousand employees. As mentioned above, the

(20) FIN, 2000; I, L and NL, 1998; D, IRL and UK, 1997; D and UK, number of employees; EL and E, not available.

Netherlands had a highly developed professional services sector, with 227.9 thousand persons employed in 1998.

In the majority of countries for which data is available²¹, wage adjusted labour productivity was generally higher in the professional services than in business services as a whole. This was

(21) D, EL, E, IRL and UK, not available.

particularly the case in Portugal (229.4%) and Luxembourg (161.9%, 1998), whilst in Sweden value added failed to cover personnel costs (85.8%). Average personnel costs were also relatively high, ranging from 19.1 thousand EUR per employee in Portugal up to 54.9 thousand EUR in Belgium, whilst they were above 35.0 thousand EUR per employee in the majority of countries.

19.4: ARCHITECTURAL AND ENGINEERING ACTIVITIES; TECHNICAL TESTING AND ANALYSIS

Architectural and engineering activities covered by NACE Group 74.2 include architectural consulting activities (such as building design and drafting, supervision of construction, town and city planning and landscape architecture), and various engineering and technical activities related to construction, as well as geological and prospecting activities, weather forecasting activities, and geodetic surveying activities. Technical testing and analysis activities (NACE Group 74.3) include environmental measuring, testing in the field of food hygiene, building and equipment, including the periodic testing of vehicles for roadworthiness.

Box 19.7: architects

ACE estimate that there were approximately 320 thousand architects in the EU (between 1997 and 1999). An important characteristic of this activity is that professional registration is compulsory in most Member States. Indeed, certain activities may be restricted to architects only, usually those related to the drawing up of plans, the delivery of building permits or the supervision of the way the work is carried out. According to ACE, non-nationals make up less than 1.0% of registered architects in most Member States, except in Luxembourg where about half are non-nationals.

STRUCTURAL PROFILE

Architectural, engineering and technical services generated 86.8 billion EUR of value added in the EU in 1999²², approximately 16% of the total for business services. Germany had the largest share with 30.0 billion EUR, which was well ahead of the United Kingdom (20.1 billion EUR) and France (10.5 billion EUR). Relative to other business services, these activities were particularly important in the Nordic countries, where they generated one-quarter (or more) of business services' value added.

(22) I, L and NL, 1998; E and IRL, 1997; EL, not available.

Box 19.8: engineering consultancy

Another activity related to construction is that of engineering consultancy, where enterprises advise, design, implement and/or manage engineering solutions for part of, or the entirety of, a construction project. EFCA estimates that there were more than 9 thousand engineering consultancy firms in the EU in 2000, employing almost 207 thousand persons and generating turnover in excess of 25 billion EUR (see table 19.14).

Engineering consultancy is one of only a few business services which have a dynamic international element, as highlighted by the share of turnover generated by exports (over 20% in a majority of Member States). According to FEACO, demand for engineering consultancy in the 1990s increased from Central and Eastern European countries, the Commonwealth of Independent States and the Eastern Länder of Germany. In contrast, demand within the EU stagnated, as a result of a slowdown in public investment. Environmental concerns are expected to further benefit the sector, for example through the construction of waste management facilities.

Table 19.14

Main indicators for engineering consultancy services, 2000				
	Number of enterprises	Number of persons employed	Turnover (million EUR)	Exports as a share of turnover (%)
EU-15	9,027	206,951	25,310	:
B	110	4,965	188	25
DK	350	8,650	830	25
D	3,885	52,467	4,161	20
EL	200	2,200	76	10
E	192	10,100	719	15
F	1,035	21,623	3,673	30
IRL	106	1,870	131	5
I	300	20,000	5,531	50
L (1)	97	1,274	83	:
NL	250	25,500	3,319	25
A	1,224	4,802	77	15
P	160	2,200	277	6
FIN	255	9,500	608	32
S	343	9,800	852	10
UK	520	32,000	4,785	35

(1) Engineering consultants and architects.

Source: Panorama of Engineering Consultancy Services in Europe, EFCA, 2001

Table 19.15

Top ten engineering consulting groups in the EU, 2000				
		Number of employees	Turnover (million EUR)	
WS Atkins	UK	12,843	1,099	
Altran	F	12,823	900	
Arcadis Group	NL	7,657	776	
Fugro	NL	5,492	713	
Groupe Egis	F	4,500	555	
Jaakko Pöyrö Group	FIN	4,717	475	
Grontmij Group	NL	4,134	472	
Ove Arup Partnership	UK	5,037	448	
WSP Group plc/ J&W	UK	5,000	362	
Mott MacDonald Group	UK	3,490	360	

Source: Swedish Federation of Consulting Engineers and Architects (STD), Sector Review, November 2001

Box 19.9: landscape contractors

Landscape contractors participate in the installation, renovation and maintenance of private and public gardens, sports grounds, parks and leisure facilities. Specific activities such as tree maintenance and transplantation, landscaping of public works and installations for noise prevention also fall within this activity. Restoration of sites and on-going maintenance is a significant field of work for landscape contractors.

ELCA estimates that there were almost 40 thousand landscaping enterprises in the EU in 2000²³, employing just over 235 thousand persons (see table 19.16). Reduced public spending in the EU in recent years has led to a reduction in the number and value of public contracts, and the ELCA does not expect a reversal of this trend in the near future.

(23) EL, L and P, not available.

Table 19.16**Main indicators for landscape contractors, 2000 (1)**

	Number of enterprises	Number of persons employed
B	2,000	6,600
DK	600	1,700
D	11,835	92,830
E	5,000	50,000
F	9,000	35,000
IRL (2)	450	850
I	3,000	15,000
NL	3,500	14,000
A	480	1,500
FIN (2)	350	2,000
S (2)	500	3,000
UK (2)	3,000	13,000

(1) EL, L and P, not available.

(2) 1999.

Source: ELCA, available at <http://www.eu-landscapers.org>

Box 19.10: geodetic surveying

The International Federation of Surveyors defines a geodetic surveyor as a professional whose responsibilities are to assemble and assess land and geographic related information, with the aim of using this to plan and implement solutions to efficiently administer land, sea and structures built thereon.

CLGE has almost 18 thousand members in the EU although many of these may be employed outside of the sector, notably in construction or real estate enterprises and also in the public administration; CLGE estimates that the public administration accounts for over half of those employed in most Member States. The average number of square kilometres for each geodetic surveyor ranges from about 60 in Denmark and Belgium up to around 480 in Finland (a large country with low population density). New technologies also have a strong influence on the provision of these services, as land measurement can and is increasingly carried out with satellite systems.

LABOUR AND PRODUCTIVITY

Some 1.7 million persons were working in architectural, engineering and technical services in the EU in 1999²⁴. Germany and the United Kingdom accounted together for half of the EU workforce, with respectively 400.4 thousand (1998) and 311.0 thousand (1997) employees. The relative importance of this activity in the Nordic countries was apparent from the high share of the architectural, engineering and technical services workforce in the business services' total in Sweden (22.9%), Finland (22.8%) and Denmark (18.7%).

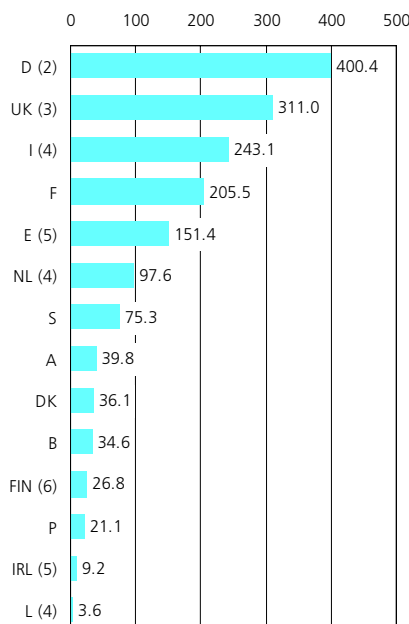
Wage adjusted labour productivity for these activities was generally at lower levels than in business services as a whole. Indeed, the ratio was below 120% in most countries²⁵, with a minimum of 89.8% recorded in Belgium. This ratio is in part influenced by the level of personnel costs. Indeed, average personnel costs were above 35.5 thousand EUR per employee in most countries, and reached 47.2 thousand EUR in Belgium. Only Spain (23.0 thousand EUR, 1997) and Portugal (18.2 thousand EUR) recorded values notably below this level.

(24) D, I, L and NL, 1998; E, IRL and UK, 1997; D and UK, number of employees; EL, not available.

(25) I, L and NL, 1998; E, 1997; D, EL, IRL and UK, not available.

Figure 19.6

Architectural and engineering activities and related technical consultancy; technical testing and analysis (NACE Groups 74.2 and 74.3)
Number of persons employed, 1999 (thousands) (1)



(1) EL, not available.

(2) Number of employees, 1998.

(3) Number of employees, 1997.

(4) 1998.

(5) 2000.

(6) 1997.

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

19.5: 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.

One of the main advertising trends in the 1990s was the increasing fragmentation of the media (proliferation of media channels and titles), and hence also the audience and revenue. This fragmentation resulted from the liberalisation of broadcasting activities, their progressive conversion to digital technologies and the plummeting costs of publishing with the emergence of mainstream desktop publishing and later Internet publishing. As a result, the number of specialised publications and television channels have rapidly expanded across the EU, often being targeted at a specific group of persons.

STRUCTURAL PROFILE

The advertising sector generated value added of 39.2 billion EUR in the EU in 1999²⁶, more than 7% of the business services' total. Not far from half of this amount was accounted for by Germany alone (17.8 billion EUR, 45% of the total), well ahead of the United Kingdom (7.2 billion EUR) and France (5.2 billion EUR). Advertising's share of other business activities (NACE Division 74) value added was highest in Germany and Sweden where it accounted for 10.8% and 10.0%, as opposed to only 4.8% in Italy and 3.5% in Luxembourg.

(26) E, I, L and NL, 1998; IRL, 1997; EL, not available.

Box 19.11: advertising expenditure

Total expenditure on advertising in the EU was estimated to be equal to 76.1 billion EUR in 2000, equivalent to approximately 200 EUR for each inhabitant. Over many years there has been a clear shift in advertising expenditure towards television at the expense of printed press. The deregulation of television, a loosening grip on advertising monopolies by (government-run) television channels and the proliferation of new broadcasting services have largely fuelled this trend. Nevertheless, national daily newspapers remained the most popular medium for disseminating advertisements, accounting for 35.2% of the total expenditure (see table 19.17), ahead of commercial television (31.6%) in 2000.

Table 19.17

Breakdown of total advertising expenditure by medium, 2000 (share of total adspend, %) (1)

	Total adspend (million EUR) (2)	Daily newspapers	Commercial television	Magazines	Outdoor sites	Commercial radio	Cinema
EU-15 (2)	76,144	35.2	31.6	20.7	6.3	5.4	0.8
B	1,855	22.8	43.2	14.1	8.6	9.8	1.5
DK (3)	1,446	50.8	18.1	3.9	25.0	1.9	0.4
D	19,443	43.5	23.6	24.2	3.7	4.0	0.9
EL	1,621	17.1	41.7	25.4	10.8	4.6	0.5
E	5,602	30.2	41.2	13.1	5.5	9.0	1.0
F	10,054	17.7	28.4	34.0	11.9	7.3	0.8
IRL	656	46.8	31.6	3.5	8.9	8.3	0.8
I	7,879	23.2	52.2	14.5	4.0	5.5	0.6
L	74	65.3	7.2	10.1	6.4	11.0	0.0
NL	3,659	48.4	17.5	25.6	3.0	5.3	0.3
A	1,870	31.1	25.5	29.0	5.7	8.2	0.5
P	1,687	11.4	57.5	14.9	9.0	6.8	0.5
FIN	1,088	56.7	19.6	16.9	3.3	3.4	0.1
S	2,034	55.2	22.4	13.7	4.5	3.7	0.4
UK	17,177	40.6	31.8	16.4	5.9	4.3	1.0

(1) No adjustment for different measures of compilation, therefore figures are not always directly comparable; L, 1999.

(2) Estimates.

(3) Outdoor sites include free magazines, directories, annuals and trade press.
Source: Western European Market and Mediafact, Zenithmedia, 2001

Box 19.12: direct marketing

The Federation of European Direct Marketing defines direct marketing as “a part of the commercial communication services sector (...) used by most organisations and companies to sell products at a distance, provide customer care, raise funds, inform customers of offers, etc. It is supported by a variety of service industries (direct marketing agencies, call centres, TV-shopping broadcasters, printers and letter shops)”. As such, the activity is a hybrid that includes elements of advertising, retail distribution, customer database management and customer services.

Although direct marketing is traditionally considered in terms of direct mail and un-addressed mail, other forms of direct marketing are growing at a rapid pace, such as direct response to printed press, TV-shopping, tele-marketing, Internet and other on-line services. FEDMA estimates that the largest share of expenditure on direct marketing services in the EU in 1999 was dedicated to direct mail, as opposed to tele-marketing or Internet/on-line expenditure. This pattern is expected to change, as direct marketing is increasingly likely to rely on telecommunications rather than post.

FEDMA estimates that total direct marketing expenditure in the EU was worth 42.1 billion EUR in 1999, equivalent to 116.5 EUR per inhabitant (see table 19.18). Belgium was the most mailed country, with as many as 107 addressed mails for each inhabitant, ahead of Finland (99), the Netherlands (92) and Austria (83). At the other end of the scale, Portuguese residents received an average of only 19 items of addressed mail. When combined with un-addressed mailings, Dutch residents received as many as 669 items per year, the highest figure in the EU ahead of Austrian residents (531).

Table 19.18**Direct marketing spend and volume of direct marketing per capita, 1999**

	Volume per inhabitant (items)		Spend per inhabitant (EUR)	
	Addressed	Unaddressed	Direct mail	Teleservices
EU-15 (1)	67	224	73	44
B	107	:	64	:
DK	49	351	71	:
D	78	189	102	31
EL	:	:	:	:
E	22	2	55	11
F	70	307	99	10
IRL	27	59	14	8
I	:	:	:	:
L	:	:	:	:
NL	92	577	136	324
A	83	448	136	:
P	19	64	4	:
FIN	99	215	89	:
S	68	319	80	:
UK	73	:	54	76

(1) Average of available countries.

Source: 2000 Survey on Direct Marketing Activities in the European Union, FEDMA

LABOUR AND PRODUCTIVITY

The advertising sector employed 527 thousand persons in the EU in 1999²⁷. France was the only Member State with more than 100 thousand persons employed (101.8 thousand) in this sector. Germany (1998) and the United Kingdom (1997) displayed similar levels of employment, with 85.6 thousand and 83.8 thousand employees, respectively. In Denmark and Sweden advertising accounted for over 8% of the total number of persons employed in other business activities (NACE Division 74).

(27) FIN, 2000; D, E, I, L and NL 1998; IRL and UK, 1997; D and UK, number of employees; EL, not available.

Wage adjusted labour productivity was generally higher in advertising activities than in other business services, rising to above 120% in most countries in 1999²⁸, with the notable exceptions of the Netherlands (103.8% in 1998) and Sweden (106.4%). The highest rate was recorded in Denmark (145.2%), in part due to average personnel costs (27.6 thousand EUR per employee) that were lower than those found in most other countries in this sector. Nevertheless, average personnel costs were generally higher for advertising activities than they were for other business activities in the majority of countries and ranged between 32.9 thousand EUR in Finland and 40.0 thousand EUR in France, other than in Denmark, Spain (17.5 thousand EUR, 1998) and Portugal (16.9 thousand EUR).

(28) D, EL, IRL and UK, not available.

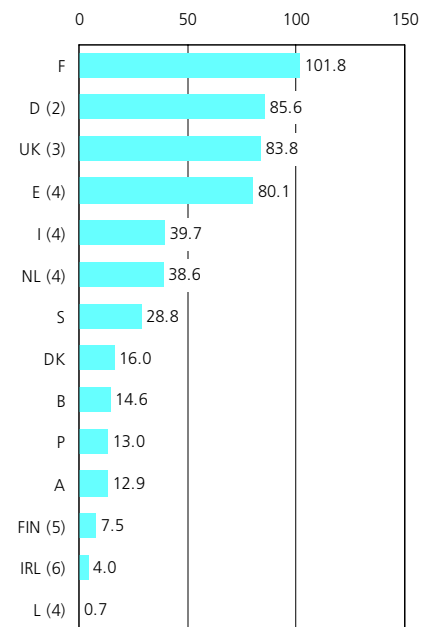
19.6: LABOUR RECRUITMENT AND TEMPORARY WORK SERVICES

Activities covered in this sub-chapter 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.

A series of factors underlie the rapid growth of business services related to human resources, such as deregulation of labour markets, outsourcing of selection and recruitment activities, and an increased need for labour market flexibility (both from enterprises and individuals).

From the customer enterprise's perspective, private employment agencies allow for greater flexibility in organisational and operational aspects, for example, helping to face unexpected variations in demand, carrying out contracts that demand unusual skills or filling temporary absence. For employees, temporary assignments may also satisfy particular individuals' needs and preferences with respect to the organisation of their working and social life.

Figure 19.7
Advertising (NACE Group 74.4)
Number of persons employed, 1999 (thousands) (1)



(1) EL, not available.
(2) Number of employees, 1998.
(3) Number of employees, 1997.
(4) 1998.
(5) 2000.
(6) 1997.

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

Temporary work contributes to a more flexible labour market, with many unemployed persons turning to temporary work agencies to find a job with the expectation of finding a permanent position at a later stage. Conversely, enterprises may treat temporary work contracts as trial contracts before offering a permanent position. CIETT estimates that well over one-third of temporary workers find permanent jobs as a result of temporary contracts.

STRUCTURAL PROFILE

Personnel services covered by NACE Group 74.5 generated total value added of 50.2 billion EUR in the EU in 1999²⁹. The largest share was accounted for by the United Kingdom, with 19.8 billion EUR, followed by France (15.8 billion EUR). In contrast, the sector was clearly less developed in Germany, where only 4.8 billion EUR of value added was generated. Looking at the contribution of personnel services to other business activities (NACE Division 74) value added, highlights France (23.8%), Belgium (19.9%) and the United Kingdom (16.8%) as the countries with the largest personnel service sectors in relative terms, in contrast to Germany (2.9%), Italy (1.5%, 1998) and Sweden (0.8%).

The importance of this activity across Member States reflects historical and legal particularities. All EU Member States have now authorised private employment agencies, although this situation was only achieved during the course of the 1990s in several Member States, for example Sweden (1993), Finland, Spain (both 1994), Italy (1997) and Greece (1999). Nevertheless, significant constraints can still remain as regards the maximum length of each assignment, sectors in which agency work is prohibited (for example, construction in Germany and public administration in Belgium and France), or underlying reasons which govern the use of agency work (for example, unusual work or temporary work, but not to bridge recruitment³⁰ in Belgium and Luxembourg).

(29) E, I, L and NL, 1998; IRL, 1997; EL, not available.

(30) Recruitment of a temporary worker to fill a position of someone who has left and has not yet been replaced.

LABOUR AND PRODUCTIVITY

There were 2.1 million persons employed in personnel services in the EU in 1999³¹. France, with 593.4 thousand persons employed, and the United Kingdom with 508.0 thousand employees (1997) constituted more than half of the EU's workforce in this sector. It is however very important to note the particularity of employment figures for these activities. Indeed, persons taking up temporary work assignments are normally considered as persons employed by the employment agency and not by the client enterprise. According to CIETT, temporary work enterprises employ one permanent staff member for every 20 placed on assignments, with an estimated total of 120 thousand full-time employees working within the agencies themselves.

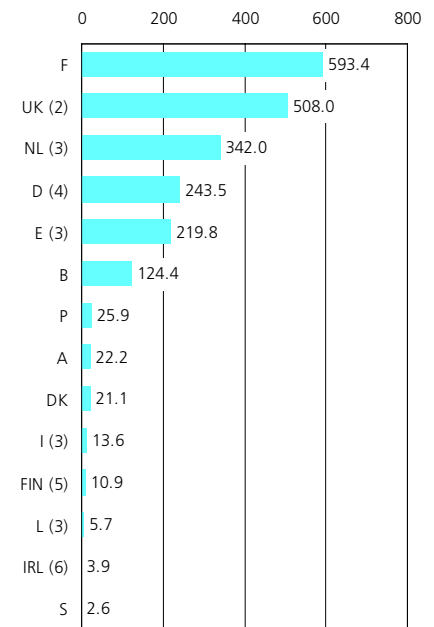
Wage adjusted labour productivity was, as a general rule, below 115%³², except in Italy where it reached 133.7% (1998). In most countries, average personnel costs fluctuated in the range between 13.1 thousand EUR per employee (Denmark) and 25.8 thousand EUR per employee (France). Italy (32.0 thousand EUR, 1998) and Sweden (31.5 thousand EUR) were above the high-end of this scale, and Portugal (8.9 thousand EUR) and Spain (7.8 thousand EUR) were also outside of this range.

(31) FIN, 2000; D, I, L and NL, 1998; E, IRL and UK, 1997; D and UK, number of employees; EL, not available.

(32) D, EL, IRL and UK, not available.

Figure 19.8

Labour recruitment and provision of personnel (NACE Group 74.5)
Number of persons employed, 1999 (thousands) (1)



(1) EL, not available.

(2) Number of employees, 1997.

(3) 1998.

(4) Number of employees, 1998.

(5) 2000.

(6) 1997.

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

Box 19.13: agency workers

CIETT estimate that temporary work represented about 1.5% of total employment in the EU in 1998, up from 0.6% in 1991³³. Temporary work was particularly developed in the Netherlands (4.5% of total employment) and the United Kingdom (3.2%), but also in France (2.7%) and Belgium (1.6%) - see table 19.19.

According to the same source, in 1998, the sectors with the highest penetration of temporary workers were construction in Luxembourg (7.4% of total employment) and France (6.7%) and manufacturing in the Netherlands (6.6%) and France (5.8%). In absolute employment terms, the two largest temporary work markets in the EU were those of manufacturing in France and public administration in the United Kingdom.

(33) Orchestrating the evolution of private employment agencies towards a stronger society, CIETT, 2000.

Table 19.19
Main indicators for private employment agencies, 1999

	Turnover (million EUR)	Daily average number of agency workers (thousands) (1)	Market penetration (%) (2)
B	2,236	59	1.6
DK	115	4	0.2
D	6,188	203	0.7
EL	:	:	:
E	1,750	90	0.8
F	15,073	567	2.7
IRL	247	8	0.6
I	571	8	0.2
L	86	3	2.0
NL	6,398	294	4.5
A	441	21	0.7
P	390	38	1.0
FIN	126	9	0.4
S	559	18	0.8
UK	24,708	878	3.2

(1) 1998.

(2) Number of agency workers assigned on any given day as a percentage of total employment, including the self-employed.

Source: Orchestrating the evolution of private employment agencies towards a stronger society, CIETT, 2000

Table 19.20
Penetration of temporary workers in total employment by sector, 1998 (%)

	Manu- facturing	Con- struction	Services	Public admini- stration
B	4.4	0.5	1.3	0.0
DK	0.1	0.1	0.1	0.3
D	1.0	0.0	0.7	0.2
EL	:	:	:	:
E	0.9	0.4	1.0	0.1
F	5.8	6.7	1.8	0.1
IRL	1.4	0.0	0.1	0.2
I	0.1	0.0	0.0	0.0
L	3.9	7.4	1.3	0.1
NL	6.6	2.9	3.7	4.4
A	1.0	0.5	0.6	0.1
P	0.9	0.7	1.3	0.0
FIN	0.0	1.7	0.9	0.0
S	0.2	0.0	1.0	0.2
UK	2.2	2.1	2.6	5.3

Source: Orchestrating the evolution of private employment agencies towards a stronger society, CIETT, 2000

Almost half of the total manufacturing expenditure on agency workers was accounted for by just four NACE Divisions. Motor vehicles (NACE Division 34) was the largest single user of temporary work in terms of expenditure, accounting for 15.5% of the manufacturing total (see table 19.21), just ahead of fabricated metal products (14.3%, NACE Division 28). The chemical industry (NACE Division 24) and the manufacturing of machinery and equipment (NACE Division 29) each accounted for 9.2% of the total.

Table 19.21
Share of expenditure on agency workers in manufacturing, 1999 (%) (1)

Manufacturing	100.0
Motor vehicles	15.5
Fabricated metal products	14.3
Chemicals	9.2
Machinery & equipment n.e.c.	9.2
Rubber & plastics	8.0
Radio, television & comm. equipment	5.9
Electrical machinery & apparatus n.e.c.	5.0
Basic metals	4.3
Other transport equipment	3.8
Publishing, printing & recorded media	3.5
Other non-metallic mineral products	3.2
Food products & beverages (2)	2.8
Pulp & paper	2.8
Textiles	2.0
Instrument engineering	1.9
Wood	1.7
Office machinery & computers	0.9
Clothes	0.5
Leather	0.2

(1) B, DK, F, IRL, A, P, FIN and S; B, excluding NACE Classes 29.52, 29.53 and 29.55; no data available for NACE Divisions 16, 23, 36 and 37. (2) Excluding S.

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

19.7: SECURITY SERVICES

The services covered in this sub-chapter 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 by this NACE Group.

As with other business services, this activity has benefited from the trend of out-sourcing, whereby individuals and enterprises increasingly rely on specialists for their security needs, for example to guard their premises or to transport their valuables.

STRUCTURAL PROFILE

The United Kingdom had the largest security services sector in the EU in 1999, generating 3.3 billion EUR of value added, whilst Germany (2.5 billion EUR) and France (2.4 billion EUR) followed. The total value added generated by security services enterprises in the EU in 1999 reached 11.8 billion EUR³⁴, or about 2% of other business activities (NACE Division 74) total. In relative terms, security services were of high importance in Portugal and Ireland, where they accounted for 6.3% and 5.7% of other business activities value added, compared to 4% or less in every other Member State, except for Luxembourg (4.7%).

(34) I, L and NL, 1998; IRL, 1997; EL and E, not available.

Box 19.14: cash transportation

Figures from ESTA indicate that there were 367 cash transportation enterprises active in the EU in 2000 (see table 19.22). This small number is an indication of the relatively high degree of market concentration apparent in the majority of Member States, with the exception of Italy and Germany that accounted for more than three-quarters of the EU's enterprises (209 and 100 respectively). According to the same source, cash transportation enterprises employed just over 33.8 thousand persons in 2000 and relied on a fleet of almost 11 thousand armoured vehicles. Enterprise size was highest in the United Kingdom, where each enterprise numbered 353 vehicles and one thousand persons employed on average, more than ten times the EU average of 29 vehicles and 92 persons employed per enterprise. Spanish, French and Portuguese enterprises were also generally larger than the EU average.

Table 19.22

Main indicators of security transport services in Europe, 2000

	Cash transportation			Cash processing	
	No. of enterprises	No. of persons employed	No. of vehicles	No. of centres	No. of persons employed
EU-15	367	33,810	10,735	607	11,930
B	4	1,200	320	4	160
DK	2	150	80	2	125
D	100	6,000	2,300	150	1,500
EL	4	350	150	3	50
E	5	2,100	750	90	1,900
F	10	7,000	1,400	160	3,500
IRL	3	500	150	3	100
I	209	4,500	1,600	90	900
L	3	200	70	3	45
NL	3	1,000	300	10	300
A	6	510	220	10	150
P	2	800	200	5	400
FIN	3	500	125	19	500
S	5	1,000	250	20	500
UK	8	8,000	2,820	32	1,800
CZ	10	3,000	260	3	140
HU	7	1,200	450	15	1,000
NO	6	90	30	15	10
PL	137	5,000	850	45	:
CH	3	500	240	9	100

Source: ESTA

LABOUR AND PRODUCTIVITY

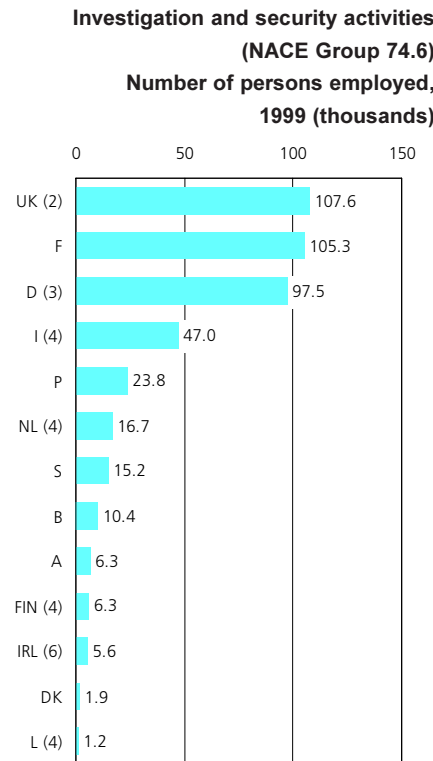
Security services employed 444.9 thousand persons in the EU in 1999³⁵. A large majority of them worked in the United Kingdom (107.6 thousand employees, 1997) and in France (105.3 thousand employees, 1997) and in France (105.3 thousand persons employed). These were the only countries where employment exceeded 100 thousand persons, although Germany recorded 97.5 thousand employees in 1998. Security services accounted for no less than 11.2% of other business activities (NACE Division 74) employment in Portugal, which was well above the level seen in the other countries, less than 6%, except for Ireland (8.1%).

Security services were at the lower-end of the wage adjusted labour productivity scale when compared to other business activities. As a general rule, wage adjusted labour productivity was below 120% in the EU³⁶, except in Denmark where it reached 121.8%. The ratio never fell under parity (100%), with the minimum value being recorded in the Netherlands (100.4% in 1998).

Average personnel costs were generally between 20 thousand EUR and 30 thousand EUR per employee. Only Belgium (32.8 thousand EUR) at one end, and Spain (15.0 thousand EUR, 1996) and Portugal (10.9 thousand EUR) at the other stood outside of this range.

(35) FIN, 2000; D, E, I, L and NL, 1998; IRL and UK, 1997; D and UK, number of employees; EL and E, not available.
 (36) D, EL, IRL and UK, not available.

Figure 19.9



(1) EL and E, not available.
 (2) Number of employees, 1997.
 (3) Number of employees, 1998.
 (4) 1998.
 (5) 2000.
 (6) 1997.

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

19.8: INDUSTRIAL CLEANING SERVICES

Industrial cleaning services include 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 cleaning, 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.

Cleaning services are amongst the main beneficiaries of the trend towards out-sourcing as in-house cleaners have been increasingly replaced by employees from industrial cleaning enterprises. Most cleaning enterprises have diversified their offer beyond their core activity of office cleaning, whose proportion in turnover has progressively decreased over the years, in favour of activities such as waste management services and green space maintenance. This evolution has been partly driven by demand for a package of services ("full facility management") aimed at reducing the number of sub-contractors in this area.

STRUCTURAL PROFILE

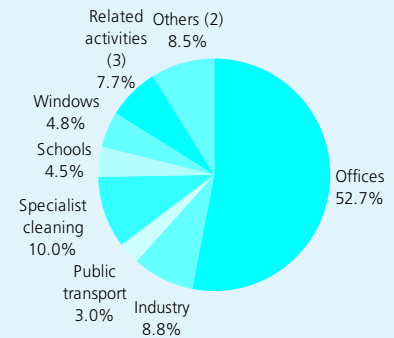
Industrial cleaning generated 31.0 billion EUR of value added in 1999³⁷, which was approximately 6% of the other business activities (NACE Division 74) total. Germany was by far the largest contributor to this total, with 8.8 billion EUR of value added in 1999, followed by Italy (4.8 billion EUR, 1998), France (4.6 billion EUR) and the United Kingdom (4.3 billion EUR). However, it was in Denmark that industrial cleaning services accounted for their highest relative share, as the 972 million EUR of value added generated represented some 13.9% of the Danish other business activities total. Italy (12.5%, 1998) and Finland (10.5%) were the only other countries to report a double-digit share, as opposed to the United Kingdom and Ireland, where cleaning services accounted for only 3.7% and 3.3% of other business activities value added.

(37) E, I, L and NL, 1998; IRL, 1997; EL, not available.

Box 19.15: main market segments of industrial cleaning

The EFCE regularly carries out a survey on the industrial cleaning sector. Office cleaning remained the largest market segment for cleaning enterprises in 1999 (see figure 19.10), as it accounted for more than half of total turnover (52.7%). Specialised cleaning, notably hospital cleaning, was the second largest segment (10.0%), ahead of the industrial sector (factories, nuclear power stations or agro-food enterprises) with 8.8% of turnover. A growing share of turnover was accounted for by specialised cleaning and other related activities supplied by cleaning enterprises which were not part of their core business (for example waste management or catering).

Figure 19.10
Breakdown of industrial cleaning turnover in the EU by market segment, 1999 (1)



(1) Excluding EL and IRL.

(2) Facade cleaning, leisure facilities; also includes individuals (0.2%).

(3) Waste management, catering, etc.

Source: The Cleaning Industry in Europe, EFCE, available at <http://www.feni.be>

LABOUR AND PRODUCTIVITY

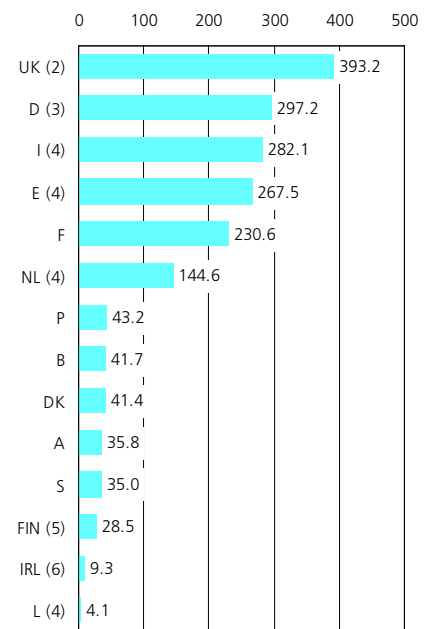
All figures related to employment and labour productivity should be interpreted with care in this sector because of the high incidence of part-time employment in this activity, which may vary between countries and over time. Employment data is usually not adjusted to full-time equivalents, except in Sweden. This affects not only measures of the level of employment, but also artificially lowers average personnel costs and measures of labour productivity.

Industrial cleaning services constitute a sizeable proportion of employment within business services, with 1.9 million persons employed in the EU in 1999³⁸. About one-fifth of these were working in the United Kingdom, which numbered 393.2 thousand employees (1997), about a hundred thousand more than in Germany (297.2 thousand, 1998). Italy followed with 282 thousand persons employed (again in 1998).

Wage adjusted labour productivity was reported by most countries at a level between 110.1% (Sweden) and 117.9% (Austria)³⁹, except in Luxembourg where the ratio was below parity at 95.0% (1998) and Spain (1998) and France, where it stood at 106.2% and 107.2% respectively. Average personnel costs within industrial cleaning activities were also particularly low. They reached a maximum of 24.7 thousand EUR per full-time equivalent employee in Sweden in 1999, down to 5.5 thousand EUR in Portugal, with most countries reporting levels around 15.0 thousand EUR. As noted above, these figures are influenced by the high proportion of part-time work, but they also reflect the generally low level of education within the workforce. Furthermore, labour market policies have been introduced in several EU countries that allow employers to hire on the basis of a contract with tax and social security advantages (and usually relatively low wages for a limited number of hours in the working week).

EFCI provide additional evidence on the employment characteristics of industrial cleaning enterprises; notably that women represented more than three-quarters of the workforce in 1999 (75.6%). A large number of employees, about one-fifth, were nationals of another country than the one where they worked. Another striking characteristic was the prevalence of part-time work, which was carried out by almost three-quarters of employees, with an average working time of just 20.5 hours per week in 1999. Furthermore, most of the hours worked were outside normal working hours, usually in the evening or at night.

Figure 19.11
Industrial cleaning (NACE Group 74.7)
Number of persons employed, 1999 (thousands) (1)



(1) EL, not available.
(2) Number of employees, 1997.
(3) Number of employees, 1998.
(4) 1998.
(5) 2000.
(6) 1997.

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

(38) FIN, 2000; D, E, I, L and NL 1998; IRL and UK, 1997; D and UK, number of employees; EL, not available.
(39) D, EL, IRL and UK, not available.

Table 19.23

Renting of machinery and equipment without operator and of personal and household goods (NACE Division 71)
Main indicators in the EU, 1999 (1)

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Number of enterprises (units)	2,978	2,497	25,750	:	:	21,676	1,215	10,053	200	4,425	1,463	2,264	1,095	4,735	14,393
Turnover (million EUR) (2)	3,837	1,312	36,133	:	:	15,572	468	2,452	264	4,889	2,128	1,265	531	2,132	25,024
Purchases of goods and services (million EUR)	2,222	796	:	:	:	7,802	279	1,448	118	1,994	665	427	266	1,289	10,673
Value added (million EUR)	1,577	535	31,278	:	:	8,704	195	1,036	155	2,465	1,451	873	236	893	14,085
Personnel costs (million EUR)	253	148	2,009	:	:	1,998	:	288	19	480	156	104	73	295	3,620
Number of persons employed (thousands) (3)	10.9	7.3	78.0	:	:	71.0	5.7	22.0	0.5	23.0	6.5	9.4	2.9	12.2	134.5
Gross investment in tangible goods (million EUR)	2,758	539	20,211	:	:	11,000	121	1,711	:	3,518	1,676	2,071	215	695	9,999
Gross operating rate (%)	34.5	29.5	81.0	:	:	43.1	:	30.5	49.2	40.6	60.9	60.8	33.2	28.1	41.8
App. labour productivity (thous. EUR/pers. emp.)	145.3	73.6	401.0	:	:	122.7	34.1	47.1	299.1	107.1	222.2	93.0	81.8	73.5	:
Wage adjusted labour productivity (%)	438.9	311.9	1,397.0	:	:	392.2	:	172.5	788.3	419.8	761.6	676.3	296.6	224.6	:

(1) I and NL, 1998; IRL, 1997; L, 1998, except for turnover. (2) FIN, 2000. (3) FIN, 2000; UK, number of employees, 1997.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms)

Table 19.24

Legal, accounting, book-keeping and auditing activities; tax consultancy; market research and public opinion polling; business and management consultancy; holdings (NACE Group 74.1)
Main indicators in the EU, 1999 (1)

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Number of enterprises (units) (2)	28,650	10,202	140,656	:	127,332	136,710	5,024	189,544	1,843	30,705	9,309	10,007	10,565	39,292	113,267
Turnover (million EUR) (3)	12,612	4,277	105,972	:	:	62,281	1,736	23,470	743	13,950	4,395	3,583	2,796	9,892	66,986
Purchases of goods and services (million EUR)	7,526	1,916	:	:	:	43,876	544	7,842	263	1,668	1,768	1,621	1,617	6,660	23,424
Value added (million EUR)	5,055	2,526	66,819	:	:	20,720	1,194	15,972	414	10,477	2,631	1,989	1,425	3,956	43,129
Personnel costs (million EUR)	2,963	1,705	:	:	:	17,445	:	4,575	219	6,200	1,522	746	833	3,442	21,897
Number of persons employed (thousands) (4)	84.5	49.8	572.2	:	:	344.0	29.6	390.6	6.5	227.9	53.1	45.4	23.9	94.1	540.8
Gross investment in tangible goods (million EUR)	1,306	402	:	:	:	3,728	55	862	:	666	254	292	95	898	3,068
Gross operating rate (%)	16.6	19.2	:	:	:	5.3	:	48.6	28.6	30.7	25.2	34.7	20.2	5.2	31.7
App. labour productivity (thous. EUR/pers. emp.)	59.8	50.8	:	:	:	60.2	40.3	40.9	63.6	46.0	49.6	43.8	58.6	42.1	:
Wage adjusted labour productivity (%)	108.9	129.2	:	:	:	114.7	:	156.3	161.9	131.3	140.2	229.4	146.3	85.8	:

(1) I, 1998; E and IRL, 1997; L, 1998, except for turnover; NL, 1998, except for number of enterprises. (2) NL, 1997. (3) FIN, 2000.
 (4) FIN, 2000; D and UK, number of employees, 1997.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms)

Table 19.25

Advertising (NACE Group 74.4)
Main indicators in the EU, 1999 (1)

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Number of enterprises (units)	5,743	2,271	36,689	:	16,139	20,276	251	14,864	224	9,535	3,628	2,510	2,575	10,723	12,269
Turnover (million EUR) (2)	4,610	2,457	25,309	:	11,529	19,484	494	11,201	122	5,686	2,343	3,244	1,411	4,231	27,040
Purchases of goods and services (million EUR)	3,962	1,870	:	:	9,621	14,215	386	9,495	82	3,662	1,712	2,963	1,003	3,178	19,709
Value added (million EUR)	643	641	17,752	:	1,987	5,190	108	1,809	28	1,471	630	296	329	1,135	7,219
Personnel costs (million EUR)	326	395	:	:	1,204	3,964	:	791	19	757	330	197	210	829	3,248
Number of persons employed (thousands) (3)	14.6	16.0	85.6	:	80.1	101.8	4.0	39.7	0.7	38.6	12.9	13.0	7.5	28.8	83.8
Gross investment in tangible goods (million EUR)	143	74	:	:	294	302	10	137	:	170	57	92	28	116	495
Gross operating rate (%)	6.9	10.0	:	:	6.8	6.3	:	9.1	7.7	12.6	12.8	3.1	9.0	7.2	14.7
App. labour productivity (thous. EUR/pers. emp.)	44.1	40.1	:	:	24.8	51.0	26.9	45.6	41.2	38.2	48.9	22.8	45.2	39.5	:
Wage adjusted labour productivity (%)	121.5	145.2	:	:	141.9	127.5	:	122.3	122.9	103.8	139.7	135.4	137.4	106.4	:

(1) E, I and NL, 1998; IRL, 1997; L, 1998, except for turnover. (2) FIN, 2000. (3) FIN, 2000; D, number of employees, 1998; UK, number of employees, 1997.
 Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms)

Table 19.26

Labour recruitment and provision of personnel (NACE Group 74.5)

Main indicators in the EU, 1999 (1)

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Number of enterprises (units)	381	416	3,241	:	2,408	2,400	186	1,425	60	2,660	309	251	422	293	12,702
Turnover (million EUR) (2)	2,479	376	6,453	:	2,142	17,671	207	1,401	107	9,013	717	331	263	146	29,406
Purchases of goods and services (million EUR)	247	77	:	:	291	1,383	106	1,432	11	4,680	129	90	37	58	9,539
Value added (million EUR)	2,239	310	4,785	:	1,854	15,830	102	583	75	3,519	588	241	171	90	19,768
Personnel costs (million EUR)	2,140	276	:	:	1,699	15,309	:	386	109	3,110	559	231	153	78	14,047
Number of persons employed (thousands) (3)	124.4	21.1	243.5	:	219.8	593.4	3.9	13.6	5.7	342.0	22.2	25.9	10.9	2.6	508.0
Gross investment in tangible goods (million EUR)	40	12	:	:	31	96	4	32	:	264	6	5	3	4	527
Gross operating rate (%)	4.0	9.2	:	:	7.2	2.9	:	14.0	-39.5	4.5	4.0	2.9	8.5	7.9	19.5
App. labour productivity (thous. EUR/pers. emp.)	18.0	14.7	:	:	8.4	26.7	26.3	42.9	13.3	10.3	26.5	9.3	19.4	34.7	:
Wage adjusted labour productivity (%)	104.3	111.6	:	:	108.4	103.4	:	133.7	68.9	111.8	104.2	104.0	109.8	110.0	:

(1) E, I and NL, 1998; IRL, 1997; L, 1998, except for turnover. (2) FIN, 2000. (3) FIN, 2000; D, number of employees, 1998; UK, number of employees, 1997. Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms)

Table 19.27

Investigation and security activities (NACE Group 74.6)

Main indicators in the EU, 1999 (1)

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S
Number of enterprises (units)	281	210	3,667	:	1,701	5,478	209	2,258	20	560	193	338	321	580
Turnover (million EUR) (2)	470	91	3,302	:	:	3,479	152	1,963	46	650	196	353	201	596
Purchases of goods and services (million EUR)	126	41	:	:	:	1,033	30	433	5	164	48	65	44	165
Value added (million EUR)	350	56	2,448	:	:	2,394	122	1,530	37	487	147	297	128	434
Personnel costs (million EUR)	332	42	:	:	:	2,280	:	1,212	32	451	124	258	106	357
Number of persons employed (thousands) (3)	10.4	1.9	97.5	:	:	105.3	5.6	47.0	1.2	16.7	6.3	23.8	6.3	15.2
Gross investment in tangible goods (million EUR)	12	8	:	:	:	344	3	57	:	14	6	23	12	37
Gross operating rate (%)	3.9	15.6	:	:	:	3.3	:	16.2	13.7	5.5	12.0	11.0	12.8	12.9
App. labour productivity (thous. EUR/pers. emp.)	33.6	30.4	:	:	:	22.7	21.9	32.6	31.2	29.1	23.4	12.4	25.7	28.5
Wage adjusted labour productivity (%)	102.3	121.8	:	:	:	103.9	:	117.6	117.9	100.4	114.9	113.8	116.1	118.9

(1) I and NL, 1998; E and IRL, 1997; L, 1998, except for turnover. (2) FIN, 2000. (3) FIN, 2000; D, number of employees, 1998; UK, number of employees, 1997. Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms)

Table 19.28

Industrial cleaning (NACE Group 74.7)

Main indicators in the EU, 1999 (1)

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Number of enterprises (units)	2,879	5,668	23,158	:	13,577	14,016	158	27,881	100	5,770	1,325	1,328	2,491	5,154	9,089
Turnover (million EUR) (2)	1,352	1,275	10,365	:	3,167	6,412	98	6,341	103	2,326	808	433	710	1,367	5,630
Purchases of goods and services (million EUR)	515	384	:	:	573	1,647	27	1,681	32	424	165	151	188	427	1,292
Value added (million EUR)	836	972	8,845	:	2,608	4,600	72	4,773	62	1,606	642	281	422	952	4,286
Personnel costs (million EUR)	698	766	:	:	2,359	4,178	:	3,528	64	1,352	528	234	336	788	3,146
Number of persons employed (thousands) (3)	41.7	41.4	297.2	:	267.5	230.6	9.3	282.1	4.1	144.6	35.8	43.2	28.5	35.0	393.2
Gross investment in tangible goods (million EUR)	53	46	:	:	109	151	5	241	:	100	23	38	39	60	222
Gross operating rate (%)	10.2	16.2	:	:	7.9	6.6	:	19.6	-2.7	10.9	14.1	10.8	14.3	12.0	20.2
App. labour productivity (thous. EUR/pers. emp.)	20.0	23.5	:	:	9.7	20.0	7.7	16.9	15.1	11.1	17.9	6.5	16.4	27.2	:
Wage adjusted labour productivity (%)	111.9	114.9	:	:	106.2	107.2	:	117.0	95.0	111.3	117.9	117.6	116.8	110.1	:

(1) E, I and NL, 1998; IRL, 1997; L, 1998, except for turnover. (2) FIN, 2000. (3) FIN, 2000; D, number of employees, 1998; UK, number of employees, 1997. Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms)

Information and audio-visual services



This chapter encompasses several of the economy's most dynamic activities and is composed of software or content-producing technology, media and telecommunications services; information on the hardware manufacture relating to these sectors may be found in chapter 11. The activities presented are often associated with the emergence of the information society, a society whose wealth and growth is based on its ability to process, store, retrieve and communicate information in whatever form (sound, text or images). Some commentators see this movement towards an information society as being as significant and far-reaching as last century's industrial revolution, with the Internet as the backbone for the transfer of information.

STRUCTURAL PROFILE

According to SBS data, the information services sector (NACE Divisions 64 and 72) of the EU economy generated 265.0 billion EUR of value added in 1999¹. Post and telecommunications (NACE Division 64) was the larger of the two sectors, accounting for 60.7% of the total.

(1) I, L and NL, 1998; IRL, 1997; E, not available.

Box 20.1: total turnover of ICT sectors

According to EITO, information and communications' technologies (ICT) turnover in the EU was valued at 510 billion EUR in 2000, of which the largest part was generated by services (337 billion) - see table 20.1. Telecom services accounted for 207 billion EUR of this services sub-total and computer services for 130 billion EUR.

Table 20.1

ICT services turnover in the EU (billion EUR)

	1998	1999	2000	2001 (1)
Software products	36.6	41.5	47.1	53.8
IT services	64.7	73.6	83.1	93.7
Telecommunications services	167.1	183.4	206.5	226.4
Total	268.3	298.5	336.8	373.9

(1) Forecasts.
Source: EITO, 2001

This chapter addresses a number of sectors that are characterised as having the exchange of information as a key feature of their activity. It includes information on post and courier activities and telecommunication services (NACE Division 64); software and computer services (NACE Division 72). Three sub-chapters look at content providing sectors: film (NACE Group 92.1), radio and television (NACE Group 92.2) and music recording (NACE Classes 22.14 and 22.3).

NACE

- 22.14: publishing of sound recordings;
- 22.3: reproduction of recorded media;
- 22.31: reproduction of sound recording;
- 22.32: reproduction of video recording;
- 22.33: reproduction of computer media;
- 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;
- 92.1: Motion picture and video activities;
- 92.2: Radio and television activities.

FOREIGN DIRECT INVESTMENT AND INNOVATION

The EU's stock of FDI in non-Community countries rose at a rapid pace during the late 1990s within the telecommunications sector (NACE Group 64.2), rising from 2.2 billion EUR in 1996 to 121.2 billion EUR by 1999. The vast majority of this gain could be attributed to the United Kingdom, whose stocks of FDI abroad rose to 96.0 billion EUR in 1999 (79.2% of the EU total). The EU's stock of FDI for computer and related activities (NACE Division 72) was at a much lower level, but nevertheless grew almost nine-fold between 1996 and 1999 from 581 million EUR to 5.1 billion EUR.

Non-Community countries held 18.1 billion EUR of FDI stocks in the EU's telecommunications sector and 3.8 billion EUR of stocks in computer and related activities sector in 1999. The US was by far the most important partner, accounting for 88.9% of the telecommunications total and 64.2% of the computer and related activities total.

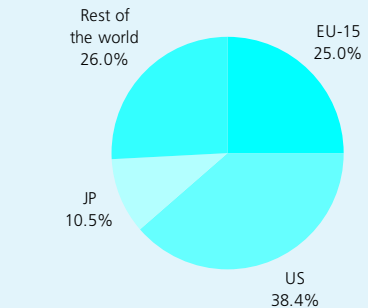
The CIS provides a limited set of information for the telecommunications sector². In 1996 a high share of enterprises operating in this sector were innovating; indeed, the majority of enterprises in every Member State apart from Belgium and Portugal. For all countries, the share of enterprises innovating was higher in the telecommunications sector than the average for the whole of services (NACE Sections G to Q). In Denmark and Germany every enterprise in this sector was innovating in 1996, whilst more than three-quarters of enterprises were innovating in Ireland, Austria and Finland.

(2) EL, E, F, I and L, not available.

Box 20.2: world turnover of ICT

EITO estimates that the EU accounted for 25.0% of the world's ICT services turnover in 2000, against 38.4% for the US and 10.5% for Japan (see figure 20.1). The US has a strong position in each of the ICT segments, accounting for 30.7% of the world's turnover in telecommunications services and 49.0% of software and IT services turnover (see table 20.2).

Figure 20.1
Share of ICT services turnover by world region, 2000



Source: EITO, 2001

Table 20.2

ICT services turnover by product and region, 2000 (billion EUR)

	EU-15	Other Europe (1)	US	JP	Rest of the world
Software products	47.1	4.1	93.0	17.1	32.3
IT services	83.1	7.9	186.4	46.9	52.3
Telecommunications services	206.5	32.1	237.5	77.2	221.1
Total	336.8	44.1	516.9	141.2	305.8

(1) EEA, CH, CZ, EE, HU, PL, RU, SK and SI.

Source: EITO, 2001

LABOUR AND PRODUCTIVITY

LFS data indicate that there were 4.8 million persons employed in information services (NACE Divisions 64 and 72) in 2000 in the EU. Post and telecommunications accounted for 59.4% of this total.

There was a rapid expansion in the number of persons employed in the EU's information services sector in the second half of the 1990s, with an overall gain of 31.2% between 1995 and 2000. Portugal was the only country to report that its workforce declined over this period, with a net reduction of 15.4 thousand persons, equivalent to 5.0% per annum. On the other hand, there were double-digit average annual gains recorded in Ireland and the Netherlands, where the number of persons employed rose by 19.2% and 11.4% per annum respectively. In absolute terms the largest rise in employment was in the United Kingdom, with a net increase of 346 thousand in the workforce between 1995 and 2000; Germany, the Netherlands, Italy and Spain also reported increases in excess of 100 thousand persons.

A more detailed breakdown of the LFS data at the NACE Division level shows that the vast majority of the employment increase was in computer and related activities, where the number of persons employed in the EU almost doubled between 1995 and 2000 from 1.02 million to 1.95 million. As a result, this sector's share of information services employment rose from 27.8% in 1995 to 40.6% by 2000. There was an overall increase of 7.8% in the number of persons employed in the EU's post and telecommunications sector, equivalent to a net increase of 207 thousand persons.

The characteristics of the information services labour force are not typical of a service sector, in fact they correspond more closely to manufacturing. Information services reported a far greater reliance on a male workforce, 68.5% of those employed in the EU compared to 56.5% for services as a whole (NACE Sections G to K). The share of men increased by almost one percentage point between 1995 and 2000. The share of persons working on a full-time basis in information services (87.4%) was also significantly higher than the services average (80.1%), with the gap wider than 12.5 percentage points in Belgium, the Netherlands, Ireland and the United Kingdom. Information services also reported a much lower reliance on self-employed or family workers, as employees accounted for 92.8% of the EU's workforce in 2000, compared to a services average of 80.3%. In Italy and Portugal the share of employees working in the information services sector was around 25 percentage points higher than the services average. More than one-third (35.2%) of the information services workforce had completed a higher level of education in 2000, compared to a services average of 22.8%³.

Looking in more detail, computer and related activities (NACE Division 72) showed a higher proportion of self-employed workers (13.1%) than the post and telecommunications sector (2.7%). An even larger difference was seen in the extent to which education levels varied between these two activities. Whilst 56.3% of those persons employed in computer and related activities in the EU in 2000 had completed a higher level of education, the share for the post and telecommunications workforce was 20.6% (compared to a services average of 22.8%)⁴.

SBS data provides information on the apparent labour productivity of the information services workforce. On average, each person employed generated between 56.6 thousand EUR (Finland) and 119.9 thousand EUR (Luxembourg, 1998) of value added in 1999⁵. Wage adjusted labour productivity was relatively high, with ratios over 150% in all countries except for Belgium, France and Sweden, rising to over 200% in Germany, Luxembourg and Portugal.

(3) Excluding IRL, L and P.

(4) Excluding IRL, L and P.

(5) I, L and NL, 1998; EL E, IRL and UK, not available.

Table 20.3

**Post and telecommunications; computer and related activities
(NACE Divisions 64 and 72)**

Labour force characteristics (% of total employment)

	Female		Part-time		Self-employed		Higher level of education	
	1995	2000	1995	2000	1995	2000	1995	2000 (1)
EU-15	32.4	31.5	12.5	12.6	5.2	6.9	23.6	27.6
B	25.5	31.0	6.3	9.1	4.0	6.9	24.1	41.4
DK	27.6	28.4	17.4	17.5	5.4	6.6	23.4	31.9
D	36.8	34.1	16.5	16.7	5.5	8.5	27.8	33.4
EL	18.5	27.2	:	:	:	:	20.0	29.4
E	26.9	38.0	3.2	5.5	4.7	4.7	33.8	51.9
F	40.2	38.1	14.0	13.2	2.2	2.6	23.9	36.0
IRL	33.3	29.9	:	5.6	10.8	7.8	29.4	34.1
I	29.9	30.5	1.9	4.9	6.2	11.3	9.9	16.1
L	28.5	38.3	:	12.7	:	:	:	29.0
NL	25.7	22.9	30.0	25.0	5.6	7.3	:	40.1
A	26.7	26.9	9.6	12.3	3.9	5.0	6.7	17.2
P	33.7	33.7	:	:	:	:	17.3	25.6
FIN	40.4	34.7	15.1	11.5	:	3.8	23.0	43.2
S	40.6	33.8	20.4	15.0	:	6.2	27.9	41.7
UK	25.7	25.9	12.9	12.0	7.3	7.7	26.6	40.9

(1) EU-15 and IRL, 1997.
Source: Eurostat, Labour Force Survey

Table 20.4

**Post and telecommunications; computer and related activities
(NACE Divisions 64 and 72)**

Labour productivity and personnel costs, 1999

	Apparent labour productivity (thousand EUR per person employed)	Average personnel costs (thousand EUR per employee)	Wage adjusted labour productivity (%)
B	65.9	45.2	145.7
DK	58.9	38.5	153.1
D	82.0	37.0	221.8
EL	:	:	:
E	:	:	:
F	60.1	42.7	140.6
IRL (1)	64.9	:	:
I (2)	57.4	33.0	174.0
L (2)	119.9	46.3	259.2
NL (2)	56.9	37.4	152.1
A	60.3	37.3	161.9
P	66.5	27.7	239.9
FIN	56.6	32.3	175.1
S	59.9	45.0	132.9
UK	:	:	:

(1) 1997.

(2) 1998.

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

20.1: POSTAL AND COURIER SERVICES

This sub-chapter covers NACE Group 64.1. 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 are dominated by express courier services, where enterprises have widened their initial focus on business documents towards the transfer of packages and freight.

Postal and courier services ensure that letters and parcels are moved between businesses, administrations and private customers. Within the EU, the market for letter services is still dominated by national, public, postal operators. However, the competitive environment in this area of the economy is changing fast and there has been a gradual move towards market liberalisation. Public postal operators continue to provide general letter services and in most cases they still operate as a monopoly with exclusive rights within this domain, balanced by the fact that they are bound by a universal service obligation. Private operators dominate the express services market, providing letter and parcel services, specifically for business-to-business, direct mail and business-to-consumer segments of the market. With the development of information technology, postal services have had to face increasing competition, especially for the letter post segment of the market, as alternative ways of communicating have developed (from the telephone and telex, through the fax, to electronic mail and the Internet). Whilst these alternatives may be seen as substitutes that impinge on the volume of postal traffic, it should also be noted that some types of postal traffic have increased as a result of the use of modern technologies, for example, postal deliveries resulting from e-commerce.

STRUCTURAL PROFILE

Based on available data, post and courier activities generated 34 billion EUR of value added in 1999⁶ - this figure does not include France or Spain, nor Greece, the Netherlands and Sweden.

The importance of courier activities other than national post activities (NACE Class 64.12) fluctuated considerably between the Member States. This sub-sector accounted for 2.9% of the total value added generated in post and courier activities in Italy (1998), whilst the corresponding figures in Germany (18.6%) and the United Kingdom (26.7%) were much higher in 1999. A sector-specific study organised by Eurostat on courier activities⁷ shows there were 19.4 thousand enterprises operating in this activity in Germany in 2000, whilst there were 6.1 thousand in Spain.

(6) I and L, 1998; IRL, 1997; EL, E, F, NL and S, not available.

(7) Source: Eurostat, COINS (theme4/coins/post_cou/new/courier)

Box 20.3: postal infrastructure

In 2000, there were 85 thousand permanent post offices operated by the national postal services of the EU⁸ (see table 20.5), about 20 thousand fewer than ten years before. In contrast, the number of post boxes increased over the same period to 664 thousand in 2000⁹, up 50 thousand when compared to their number in 1990.

These indicators on the ease of access to postal services show that postal operators have concentrated traditional post offices in fewer locations. There were however large differences across the Member States: the extremes were recorded in Ireland, where each permanent post office served on average less than two thousand persons, and Spain, where there were on average 10,621 inhabitants per permanent post office in 2000. Most of the other countries reported between 3,202 (the United Kingdom) and 6,075 (Germany) inhabitants per post office.

(8) UK, 1999; S, 1996.
(9) FIN, 1998; S, 1996.

Table 20.5

Access to postal services network, 2000 (units)

	Permanent post offices (1)	Average number of inhabitants served by a permanent post office (1)	Post boxes (2)	Automatic vending machines for postage stamps or pre-payment labels (3)
B	1,368	7,492	19,296	169
DK	1,116	4,784	9,806	0
D	13,500	6,075	140,000	11,000
EL	1,779	5,626	13,672	55
E	3,716	10,621	37,812	5,825
F	16,662	3,534	134,524	6,841
IRL	1,914	1,980	6,200	184
I	14,918	3,856	80,820	60
L	108	4,074	1,171	116
NL	2,282	6,950	19,725	47
A	2,497	3,243	23,146	1,300
P	3,779	2,648	18,766	590
FIN	1,471	3,521	10,000	118
S	1,720	5,139	36,676	2,500
UK (4)	18,341	3,202	112,200	2,000

(1) UK, 1999; S, 1996.
(2) FIN, 1998; S, 1996.

(3) A, 1998; DK, 1997; D, 1996; FIN and S, 1995; I, 1993.

(4) Excluding Northern Ireland.

Source: UPU

Most postal traffic in circulation in Europe originates from business. It is generally estimated that only one-tenth of all mail that is posted in the EU is from households, whilst two-thirds of the mail is addressed to them. According to a European study on postal services carried out in 1998¹⁰, 31% of the postal volume was sent from business users to other business users, 55% from businesses to private households, 6% from private households to businesses and 8% from private households to other private households ("business" was defined as other than private households, and hence included, for example, public administrations).

(10) Study on the Weight and Price Limits of the Reserved Area in the Postal Sector; report by Ctcon for the European Commission, 1998.

Box 20.4: postal delivery

National postal services handled a total of approximately 103 billion letter-post items in the EU in 2000, including national and international receipt and dispatch (see table 20.6); domestic services accounted for the vast majority of traffic. In the five largest Member States, national traffic represented between 92.9% (United Kingdom) and 96.0% (France) of the total volume of letter-post items handled.

In contrast, smaller countries such as Denmark, Austria or Belgium reported shares around 90%, whilst the smallest Member State, Luxembourg, recorded a share of just 59.7%. Letter-post traffic has witnessed a rising trend over the last decade, much of which can be attributed to domestic traffic, which has risen, on average, in most countries by more than 2.0% per annum between 1990 and 2000.

As regards delivery speed, the current Postal Directive (97/67/EC) establishes cross-border quality targets that should be met for the benefit of consumers. These targets are 85% of deliveries within three days and 98% of deliveries within five days. According to the International Post Corporation, the actual performance of postal operators surpasses these objectives. They state that in 2000, some 92.5% of cross-border priority mail was delivered within three days, up from 69.1% in 1994. Over the same period, the share of cross-border priority mail delivered within five days rose from 92.4% to 98.7%. The average speed of delivery for cross-border priority mail improved from 3.1 working days in 1994 to 2.3 working days by 2000 (see table 20.7).

Table 20.6**Number of letter post items treated by the national post, 2000 (millions)**

	Domestic service (1)	International dispatch (2)	International receipt (2)
B	3,533	194	200
DK	1,723	:	:
D	22,600	403	702
EL	459	78	:
E	4,674	141	159
F	25,759	598	468
IRL	588	79	143
I	6,408	162	223
L	108	45	28
NL	7,022	:	299
A	2,868	69	51
P	1,201	61	45
FIN	1,743	38	63
S	:	:	:
UK	19,092	929	522

(1) B and FIN, 1999; A, 1997.

(2) NL and FIN, 1999; B, 1998; D, 1997.

Source: UPU

Table 20.7**Average number of delivery days for intra-EU mail, 2000 (units) (1)**

Destination	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Origin															
B	-	2.2	2.1	3.9	2.5	2.3	2.5	2.5	1.7	2.2	2.3	2.2	2.5	2.3	2.2
DK	2.1	-	2.0	3.6	2.4	2.3	2.2	2.3	2.0	2.1	2.2	2.2	2.2	1.9	2.1
D	2.1	2.0	-	3.6	2.6	2.2	2.2	2.3	1.9	2.0	2.1	2.1	2.2	2.1	2.2
EL	2.8	2.5	2.5	-	3.5	2.7	3.2	3.0	2.8	2.6	2.7	2.6	3.3	2.7	2.8
E	2.4	2.3	2.4	4.1	-	2.5	2.7	2.8	2.8	2.4	2.8	2.3	3.0	2.5	2.4
F	2.2	2.1	2.0	3.7	2.4	-	2.4	2.4	1.9	2.1	2.5	2.2	2.6	2.2	2.2
IRL	2.3	2.2	2.2	3.9	2.9	2.3	-	2.5	2.3	2.2	2.9	2.5	2.6	2.4	2.1
I	2.3	2.3	2.2	3.8	2.6	2.4	2.7	-	2.6	2.3	2.5	2.5	2.9	2.5	2.3
L	2.1	2.1	2.0	4.1	2.5	2.2	2.4	2.5	-	2.1	2.2	2.2	2.6	2.2	2.1
NL	2.2	2.1	2.3	3.6	2.5	2.5	2.3	2.7	2.2	-	2.2	2.2	2.3	2.1	2.3
A	2.2	2.1	2.0	3.8	2.7	2.3	3.0	2.4	2.1	2.2	-	2.5	2.5	2.2	2.2
P	2.2	2.1	2.2	4.3	2.4	2.3	2.8	2.6	2.4	2.1	2.9	-	2.6	2.1	2.2
FIN	2.2	2.0	2.1	3.9	3.1	2.4	2.5	2.7	2.4	2.1	2.2	2.5	-	1.9	2.2
S	2.2	2.0	2.2	3.7	2.5	2.3	2.4	2.6	2.2	2.2	2.2	2.4	2.1	-	2.2
UK	2.3	2.1	2.2	3.9	2.6	2.4	2.1	2.5	2.2	2.4	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 delivery - DK, D, F, I, NL and UK.

Source: UNEX - Unipost External Monitoring System, International Post Corporation, 2001

Box 20.5: prospects for the future

The UPU (Universal Postal Union) expects the rising trend in letter-post traffic volumes to continue. In a study entitled Post 2005, UPU forecasts that domestic letter traffic in high-income countries would grow on average by 2.3% per annum between 1995 and 2005. Forecasts for international mail were even more optimistic, ranging from 3.4% to 5.2% depending on the region considered.

Direct marketing mail already accounts for a large proportion of the handled items and its importance continues to grow. Mail order is also a promising segment: new technological developments such as the development of e-commerce and Internet shopping are expected to further fuel demand for parcel traffic in this market segment.

Conversely, this same technological evolution has a negative influence on postal traffic, with the widespread adoption of fax and e-mail as rapid means of communication. UPU anticipate a reduction in the share of letter-post traffic in the communications market between 1995 and 2005, from 20% to less than 15%. The greatest substitution effect is expected to be seen in the business-to-business segment in high-income countries, with the expanding use of e-mail.

LABOUR AND PRODUCTIVITY

Recent SBS data for postal and courier activities are available for just over half of the Member States. The absence of several of the larger Member States makes an analysis of the level of employment difficult (see box 20.6 for UPU data on the postal service). Wage adjusted labour productivity can however be compiled and was generally quite low, usually between 110% and 120%¹¹, although two countries lay outside of this range, Italy (1998) on the low side with 92.1% and Luxembourg (1998) on the high side with 224.2%.

(11) I and L, 1998; D, E, F, IRL, NL, S and UK, not available.

Box 20.6: national postal administration labour market

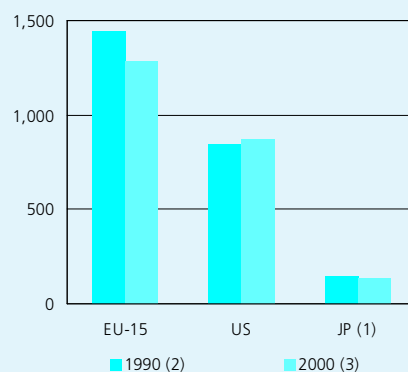
Employment in national postal administrations recorded a decline over the period 1990 to 2000. The total number of employees decreased by over 160 thousand persons over the period to 1.2 million persons in the EU in 2000¹² (see figure 20.2). This was still almost 50% higher than the number of employees in the US.

One trend of important significance has been the evolution of part-time work, that concerned as many as 18.4% of postal employees in the EU in 2000¹³, up from 15.6% in 1990. Particularly high shares were reported in the Netherlands (50.2%, 1996), Germany (30.8%, 1999), Finland (29.0%) and Luxembourg (27.5%). At the other extreme, part-time work was marginal (1% or less) in Greece and Italy.

(12) I, 1999; S, 1996.
 (13) D and I, 1999; NL, 1996; DK, not available.

Figure 20.2

Employment in national post activities (thousands)



(1) Full-time staff only.
 (2) IRL and FIN, 1991.
 (3) I and US, 1999; S, 1996.
 Source: UPU

20.2: TELECOMMUNICATIONS SERVICES

Telecommunications services are classified within NACE Group 64.2. They 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, excluding the provision of radio and television programmes (see sub-chapter 20.5).

Until the 1980s, the telecommunications sector was a heavily regulated market based around state-controlled enterprises with a legal and economic monopoly. Over the past two decades, however, market conditions have changed considerably. Liberalisation moves began in the first half of the 1980s and initially concerned value added services and business users, leaving control of basic services in the hands of national monopolies. The liberalisation of the sector progressed at a faster pace in the 1990s and since January 1998 telecommunication services have been fully liberalised in the majority of EU countries.

STRUCTURAL PROFILE

Excluding France, as well as Greece, the Netherlands and Sweden, the EU's telecommunications sector (NACE Group 64.2) generated 96.3 billion EUR of value added in 1999¹⁴. Together, Germany (30.2%) and the United Kingdom (27.4%) accounted for almost 60% of total value added in the eleven Member States for which data is available.

The number of fixed telephone lines in the EU has more than doubled over the past twenty years to reach 207.1 million by 2000, up from 96.6 million in 1980 (see table 20.8). Growth was fairly stable over this period, with an annual average rate of 3.9%. The fastest expansion was recorded in Portugal, where the number of lines quadrupled over the period considered, and in Ireland and Luxembourg, where the number of lines trebled. The Nordic countries, where connectivity rates were already at high levels in 1980, recorded the slowest expansion.

(14) E, I and L, 1998; EL, F, NL and S, not available.

In 2000, there were 55 lines per 100 inhabitants in the EU, thirteen more than in 1990. Despite the strong growth mentioned above, Ireland and Portugal still displayed the lowest connectivity rates in 2000, with 42 lines and 43 lines per 100 inhabitants respectively. Luxembourg boasted the highest ratio, equal to 77 lines per 100 inhabitants, ahead of Denmark (72) and Sweden (67). In the case of Sweden, network expansion was slower than population growth during the 1990s. As a consequence, Sweden's connectivity rate decreased from 69 lines per 100 inhabitants in 1990. Whilst this reduction could partly have been a sign of market saturation (with Sweden's connectivity rate the highest within the EU between 1980 and 1998) it is also likely to have resulted from a substitution effect towards mobile subscriptions. Belgium, France, Austria and Finland also recorded stagnation or slight decreases in fixed line connectivity between 1998 and 2000.

The development of cellular wireless technology has been the main event in the telecommunication services sector in recent years. There were 238.3 million subscriber lines to cellular mobile telephone systems in the EU in 2000 (see table 20.8), or 62.6% of the population, up from 21.5 million in 1995. In the majority of Member States the penetration of mobile phones exceeded that of fixed lines, with only Denmark, Germany and France reporting a higher share of fixed lines in 2000. Austria boasted the highest penetration rate of mobile phones, with 75.6 lines per 100 inhabitants in 2000, ahead of the United Kingdom (74.0) and Italy (73.2), whilst Luxembourg, Finland and Sweden were the only other countries to report penetration rates above 70. At the other end of the scale, France reported the lowest penetration of mobile subscriptions at 50.0 per 100 inhabitants.

Table 20.8

Fixed and mobile telephone lines (millions)

	Fixed					Mobile					
	1980	1985	1990	1995	2000	1980	1985	1990	1995	1999	2000 (1)
EU-15	96.6	123.8	153.4	182.6	207.1	:	:	3.1	21.5	151.9	238.3
B	2.5	3.1	3.9	4.6	5.1	0.0	0.0	0.0	0.2	3.2	5.6
DK	2.2	2.5	2.9	3.2	4.0	:	0.0	0.1	0.8	2.6	3.5
D	20.5	25.4	32.0	42.0	50.2	:	0.0	0.3	3.8	23.5	48.2
EL	2.3	3.1	3.9	5.2	5.7	:	:	0.0	0.3	3.3	5.9
E	7.2	9.3	12.6	15.1	17.5	:	0.0	0.1	0.9	15.0	24.3
F	15.9	23.0	28.1	32.4	34.0	:	0.0	0.3	1.3	20.6	29.7
IRL	0.5	0.7	1.0	1.3	1.6	:	0.0	0.0	0.2	1.7	2.4
I	13.0	17.4	22.4	24.8	27.2	:	0.0	0.3	3.9	30.3	42.2
L	0.1	0.2	0.2	0.2	0.3	:	0.0	0.0	0.0	0.2	0.3
NL	4.9	5.8	6.9	8.1	9.9	:	0.0	0.1	0.5	6.9	9.9
A	2.2	2.7	3.2	3.8	3.8	:	0.0	0.1	0.4	4.2	6.1
P	1.0	1.4	2.4	3.6	4.3	:	:	0.0	0.3	4.7	6.7
FIN	1.7	2.2	2.7	2.8	2.8	0.0	0.1	0.3	1.0	3.4	3.7
S	4.8	5.2	5.8	6.0	6.1	0.0	0.1	0.5	2.0	5.2	6.3
UK	17.7	21.7	25.4	29.4	34.8	:	0.1	1.1	5.7	27.2	43.5

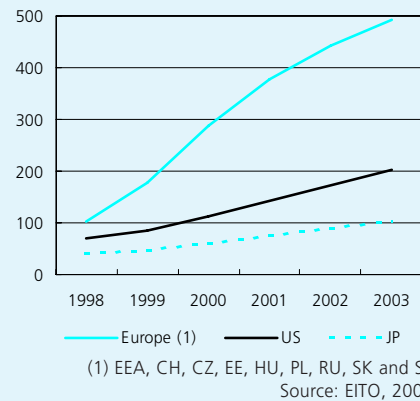
(1) B, EL, IRL, I, NL and A, source: Mobile Communications in Information Society Pocketbook, Eurostat, 2001. Source: Eurostat, Communications (theme4/coins)

Box 20.7: global telecommunication trends

EITO estimates that the number of mobile phone subscribers in Europe¹⁵ will almost treble between 1999 and 2003, to reach 492.2 million (see figure 20.3).

(15) EEA, Czech Republic, Estonia, Hungary, Poland, Russia, Slovakia, Slovenia and Switzerland.

Figure 20.3
Total mobile phone subscribers (millions)



An important development within the sphere of mobile telephony in recent years has been the introduction of pre-paid access¹⁶. According to the OECD¹⁷, “with the exception of Finland, the [mobile penetration] rankings of different countries have been increasingly affected by how actively operators have marketed pre-paid cards. In countries such as Portugal and Italy, the overwhelming majority of users are pre-paid”, with levels between 80% and 90% (see table 20.10). In contrast, the post-paid model represented the vast majority of subscriptions in Germany in 1999, where connectivity rates were at low levels.

(16) Pre-paid cards raise a methodological issue concerning the number of inactive pre-paid customers that are included in the total subscriber count; for example, pre-paid customers may take advantage of an offer and switch network without disconnecting their old subscription and are hence double-counted in the total number of subscribers.
(17) Communications Outlook, OECD, 2001.

Table 20.9

	Main telephone lines	of which, digital (%)	Mobile telephone subscribers (1)	of which, digital (%)
Europe (2)	317.1	86.2	287.9	98.9
US	201.9	95.0	112.0	70.5
JP	71.5	100.0	60.0	100.0
World	980.6	97.7	724.9	91.1

(1) Analogue and digital cellular subscriptions, including pre-paid.
(2) EEA, CH, CZ, EE, HU, PL, RU, SK and SI.
Source: EITO, 2001

Table 20.10

Proportion of mobile subscriptions that are pre-paid users, 1999 (%)

Operator	Pre-paid subscriptions	Operator	Pre-paid subscriptions	Operator	Pre-paid subscriptions
B Belgacom	20	F France Telecom	40	A MaxMobil	40
B Mobistar	59	F SFR	39	A Mobilkom	:
DK Sonofon	39	F Bouygues Télécom	43	A One	:
DK Mobilix	60	IRL Eircell	60	P TMN	84
DK Telia Denmark	:	IRL Esat	:	P Telecel	73
D T-Mobile	12	I Telecom Italia Mobile	82	P Optimus	81
D Mannesmann	15	I Omnitel	90	FIN Radiolinja	Pre-paid not offered
D E-Plus	25	I Wind	:	FIN Sonera	1
D Viag	20	L P&T	19	FIN Telia Mobil	:
EL Panafon	62	L Tango	30	S Telia	35
EL Teleset	62	NL KPN	53	S Europolitan	19
EL Cosmote	36	NL Libertel	66	S Comviq	55
E Telefonica	61	NL Dutchtone	Majority pre-paid	UK Cellnet	50
E Airtel	40	NL Telfort	Majority post-paid	UK Vodafone	58
E Amena	:	NL Ben	:	UK Orange	57
				UK One2One	63

Source: Communications Outlook, OECD, 2001; and Public Networks Europe in Cellular Mobile Pricing Structures and Trends, OECD, 2000

Table 20.11

Average duration of outgoing telephone calls, 2000 (seconds per line per day)

	National calls (1)	International calls (2)
B	282	51
DK	919	35
D	926	30
EL	:	21
E	712	24
F	579	15
IRL	:	94
I	740	19
L	658	169
NL	598	37
A	594	51
P	558	20
FIN	1,037	27
S	1,006	41
UK	642	38

(1) F, I and L, 1999; B and NL, 1998; A, 1997.

(2) B, EL, F, IRL, I, L, NL and S, 1999; A, 1998.

Source: Eurostat, Communications (theme4/coins)

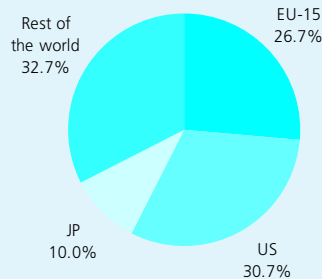
As regards telephone traffic, an average of around 17 minutes of national calls were made on each telephone line every day in 2000 in Finland and Sweden, whilst the EU average lay around 10 minutes per day (see table 20.11).

Internet access has become an important factor in national calls, as a large number of users connect to their service provider through a modem. Internet connections accounted for 34% of national telecoms traffic in 2000 in Sweden, 38% in Portugal, 40% in Spain and as much as 53% in the United Kingdom.

International calls, including both intra and extra-EU calls, averaged between 15 and 40 seconds per day per line in the majority of countries. Smaller countries naturally reported longer average duration for international calls, with the highest figure in Luxembourg (169 seconds per day in 1999). Ireland (94 seconds per day), Belgium (51 seconds) and Austria (also 51 seconds) also recorded a significantly higher than average duration for international calls per line. Amongst the larger Member States, particularly low levels of international calls were recorded in Italy (19 seconds per day) and France (15 seconds per day) when compared to the United Kingdom (38 seconds per day).

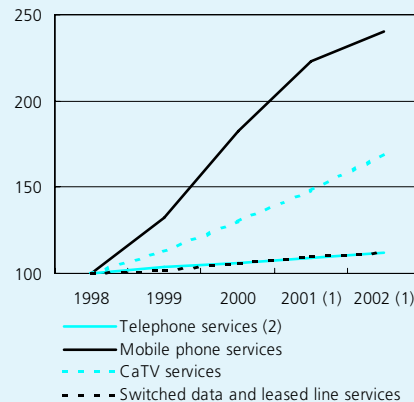
Box 20.8: turnover of telecom services

Figure 20.4

Share of telecommunications services turnover by world region, 2000

Source: EITO, 2001

Figure 20.5

Evolution of telecom services turnover in the EU (1998=100)

(1) Forecasts.

(2) Includes Internet and on-line services.

Source: EITO, 2001

Table 20.12

Telecom turnover in the EU (billion EUR)

	1998	1999	2000	2001 (1)
Telephone services (2)	100.9	104.3	107.1	109.9
Mobile phone services	36.7	48.5	66.9	81.9
Switched data and leased line services	23.5	23.9	24.9	25.8
CaTV services	5.9	6.7	7.7	8.8
Total	167.1	183.4	206.5	226.4

(1) Forecasts.

(2) Includes Internet and on-line services.

Source: EITO, 2001

EITO estimate that the turnover of telecommunication services (carrier services) in the EU was equal to 207 billion EUR in 2000 (see table 20.12). EU telecommunications services accounted for 26.7% of the world's turnover of 774 billion EUR; this share was below that of the US (237 billion EUR or 30.7%), but considerably above that of Japan (77 billion EUR or 10.0%) - see figure 20.4.

The turnover generated by the EU's telecom services sector grew by 12.6% in 2000, with EITO estimating that growth was expected to slow to 9.6% in 2001. Fixed telephone services represented the largest share of telecom services with turnover equal to 107 billion EUR, whilst witnessing the lowest rate of growth (2.7% in 2000) and the lowest growth forecasts (also 2.7% in 2001). This may in part be explained by the fact that the price of local and long-distance calls should continue to decline as competition intensifies. Mobile telephone services on the other hand boasted growth of 38.0% in the EU in 2000, with turnover estimated at 67 billion EUR, thanks to the growing number of mobile phone subscribers.

Table 20.13
Telecommunications (NACE Group 64.2)
Foreign direct investment, 1999 (million EUR)

	In the reporting economy	(% of investment abroad)				
		Abroad	Intra (1)	Extra (1)	JP	US (2)
EU-15	18,145	121,170	:	100.0	0.0	5.4
B	:	:	:	:	:	:
DK	7,522	2,090	69.6	30.4	:	:
D	711	3,987	23.6	76.4	0.0	37.8
EL	:	:	:	:	:	:
E	893	11,427	:	:	:	:
F	731	3,860	0.9	99.1	0.0	36.9
IRL	:	:	:	:	:	:
I	:	:	:	:	:	:
L	:	:	:	:	:	:
NL	5,411	3,586	47.3	52.7	0.0	6.6
A	1,254	28	0.0	100.0	:	:
P	493	183	68.3	31.7	0.0	0.0
FIN	:	:	:	:	:	:
S	:	:	:	:	:	:
UK	49,562	100,951	4.9	95.1	:	23.0

(1) DK, 1998.

(2) UK, 1998.

Source: Eurostat, European Union Direct Investments (theme2/bop/fdi)

LABOUR AND PRODUCTIVITY

Excluding France, as well as Greece, the Netherlands and Sweden there were 569 thousand persons employed in the telecommunications sector in 1999¹⁸. This total included 78.4 thousand employees in Germany (1998), 78.7 thousand persons employed in Spain (1998), 97.8 thousand persons employed in Italy (1998) and 181.1 thousand employees in the United Kingdom (1997).

(18) D, E, I and L, 1998; IRL and UK, 1997; EL, F, NL and S, not available; D and UK, number of employees.

The productivity of the telecommunications sector was particularly high no matter which ratio was analysed. Apparent labour productivity stood at over 100 thousand EUR per person employed in all countries except for Finland (97.0 thousand EUR in 1999) and Ireland (92.4 thousand EUR in 1997)¹⁹. Wage adjusted labour productivity ratios ranged between 202.8% in Belgium (1999) and 1,004% in Luxembourg (1998), with Italy, Spain and Portugal all reporting values above 300%²⁰.

(19) E, I and L, 1998; IRL, 1997; D, EL, F, NL, S and UK, not available.

(20) E, I and L, 1998; D, EL, F, IRL, NL, S and UK, not available; UK simple wage adjusted labour productivity was 253.1% in 1999.

20.3: SOFTWARE AND COMPUTING SERVICES

Software and computing services are covered by NACE Division 72. This sub-chapter also covers the reproduction of computer media (NACE Class 22.33). The manufacture of computers (NACE 30.02) and the retail trade of computers and software (NACE 52.48) are excluded.

Software and computing services constitute one of the largest and fastest expanding areas of the IT sector. This sector is also at the forefront of the information society, providing the software and services that allow others to take full advantage of technological progress. As such, software and computing services are considered as strategic business services and key elements for competitiveness.

Recent years have seen a fundamental change occur in this sector with the development of the Internet and e-commerce fuelling demand for both software and computing services. In addition, two specific problems have also boosted demand for a limited time span: the year 2000 bug and the introduction of the euro, both requiring a careful audit of IT systems.

STRUCTURAL PROFILE

Computer and related activities (NACE Division 72) generated 107.2 billion EUR of value added in the EU in 1999²¹. The largest share of this total (31.7%) was derived in the United Kingdom, followed by Germany (25.4%) and France (14.4%), whilst no other country had a share of more than 10%. Between 1998 and 1999, value added in current price terms grew by between 17.2% (Finland) and 23.9% (Sweden) in six of the seven Member States for which data is available²². Growth of 65.8% was recorded in Portugal, albeit from a very low starting level of 359 million EUR in 1998.

(21) E, I, L and NL, 1998; IRL, 1997; EL, not available.

(22) B, F, A, P, FIN, S and UK.

Table 20.14

Computer and related activities (NACE Division 72) Foreign direct investment, 1999 (million EUR)

	In the reporting economy	(% of investment abroad)				
		Abroad	Intra	Extra	JP	US
EU-15	3,810	5,122	:	100.0	3.2	57.2
B	:	:	:	:	:	:
DK	269	:	:	:	:	:
D	1,385	471	54.6	45.2	:	22.1
EL	:	:	:	:	:	:
E	888	895	:	:	:	:
F	679	3,169	72.9	27.1	-0.1	24.7
IRL	:	:	:	:	:	:
I	:	:	:	:	:	:
L	:	:	:	:	:	:
NL	1,004	1,764	53.5	46.5	:	26.8
A	181	28	50.0	50.0	:	:
P	40	226	100.0	0.0	0.0	0.0
FIN	178	193	88.1	11.9	:	:
S	:	:	:	:	:	:
UK	2,096	1,522	23.6	76.3	:	70.5

Source: Eurostat, European Union Direct Investments (theme2/bop/fdi)

Table 20.15

Computer and related activities (NACE Division 72) Main indicators for innovation, 1996 (% of all enterprises)

	Innovating enterprises	Innovating enterprises	
		with unsuccessful or incomplete innovation	having applied for a patent
B	41.0	14.0	19.0
DK	89.0	33.0	2.0
D	71.0	40.0	9.0
EL	:	:	:
E	:	:	:
F	52.0	47.0	4.0
IRL	73.0	11.0	10.0
I	:	:	:
L	88.0	31.0	:
NL	68.0	44.0	4.0
A	69.0	24.0	5.0
P	53.0	15.0	11.0
FIN	63.0	45.0	:
S	55.0	31.0	7.0
UK	81.0	29.0	2.0

Source: Eurostat, Survey on Innovation in EU enterprises (theme9/innovat)

Box 20.9: turnover of software and computer services

EITO estimate that EU software and IT services accounted for 130 billion EUR of turnover or 56% of the IT total in 2000 (see table 20.16), broken down as 83 billion EUR for IT services and 47 billion EUR for software.

World turnover for software and IT services reached 570 billion EUR in 2000 and was forecast to increase to 722 billion EUR by 2002. The US held the largest market share in 2000 (49%), compared to 23% for the EU and 11% for Japan (see figure 20.6).

The EU software and IT services market grew by 13.2% in 2000 and was forecast to expand at the same rate in 2001. The software products sub-sector recorded growth of 13.5% in 2000. Within the software products market, systems software and applications software each shared about half of the total market value (23 billion EUR and 24 billion EUR respectively).

Computing IT services represented a larger sector, with annual growth of 13.0% in 2000. Almost half of the market was accounted for by consulting and implementation services, one-third by operations management services (for example, systems and network management, help-desks, back-up and archiving services) and the rest by support services (for example, maintenance contracts and telephone support, be it bundled or not with software packages). The fastest growing activities in computing services were consulting and implementation services (see figure 20.7).

Table 20.16

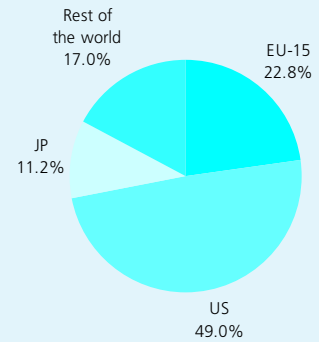
IT turnover in the EU (billion EUR)

	1998	1999	2000	2001 (1)
Software	36.6	41.5	47.1	53.8
Systems software	17.9	20.4	23.0	26.4
Applications software	18.7	21.2	24.1	27.3
Services	64.7	73.6	83.1	93.7
Consulting	6.6	7.7	9.0	10.4
Implementation	21.4	25.3	29.4	34.1
Operations management	21.9	24.9	27.9	31.2
Support services	14.8	15.8	16.8	17.9

(1) Forecasts.
Source: EITO, 2001

Figure 20.6

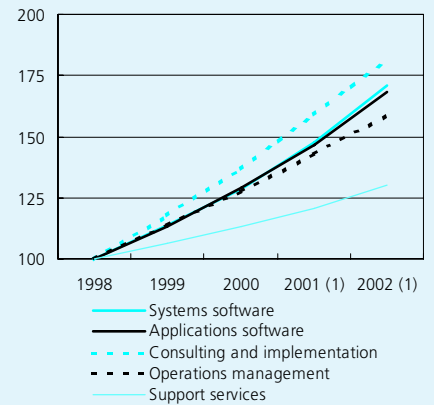
Share of software and IT services turnover by world region, 2000



Source: EITO, 2001

Figure 20.7

Evolution of software and IT services turnover in the EU (1998=100)



Source: EITO, 2001

Recent SBS data for the reproduction of computer media (NACE Class 22.33) is available for just over half of the Member States, but notably not for Germany. An analysis of the level of value added is therefore difficult, however the high importance of this sector in Ireland should be noted; generating 2.0 billion EUR of value added in 1999, compared, for example, to 171.9 million EUR in the United Kingdom and 6.4 million EUR in France.

Box 20.10: largest software and IT services companies

Table 20.17

World's top software and IT services companies, 2000

	Software and IT services revenue (million EUR)	Corporate revenue (million EUR)	Share of IT services in total corporate revenue (%)	Number of employees (thousands)
IBM Corp.	49,624	95,881	38	316.3
Microsoft Corp.	25,864	25,864	:	39.2
PricewaterhouseCoopers	23,321	23,321	100	160.0
EDS	20,855	20,855	100	122.0
Oracle Corp.	11,655	11,655	55	43.0
Hewlett-Packard Co.	11,277	52,913	15	88.5
Accenture	11,146	11,146	100	71.3
Cap Gemini Ernst & Young	8,747	8,747	100	55.4
Compaq Computer Corp.	7,975	45,972	16	70.1
Unisys Corp.	6,338	7,468	69	36.9
SAP AG	6,288	6,379	59	24.5
Computer Associates Intl Inc.	5,982	5,982	11	18.0
Hitachi Ltd.	5,749	72,131	:	344.9
Sun Microsystems Inc.	5,064	20,805	15	38.9
NCR Corp.	3,265	6,464	45	32.9
Compuware Corp.	2,254	2,254	73	15.0
Siebel Systems Inc.	1,947	1,947	38	7.3
PeopleSoft Inc.	1,884	1,884	71	8.0
SunGard Data Systems Inc.	1,801	1,801	84	7.8
Fiserv Inc.	1,794	1,794	:	14.5
Computer Sciences Corp. (CSC)	1,746	1,746	100	61.0
BMC Software Inc.	1,636	1,636	36	7.0
EMC Corp.	1,557	9,624	:	23.4
Cadence Design Systems Inc.	1,388	1,388	51	5.7
Adobe Systems Inc.	1,356	1,356	:	3.0

Source: Software Magazine's Annual Software 500, Wiesner Publishing, Framingham, Mass., 2001

LABOUR AND PRODUCTIVITY

According to the LFS there were 1.95 million persons employed in computer and related activities in 2000; the United Kingdom accounted for just over one-quarter (25.6%) of the total, followed by Germany with just under one-fifth (19.9%).

Between 1995 and 2000 the number of persons employed in the computer and related activities sector increased on average by more than 10% per annum, except in France (7.7%)²³; growth rates peaked in Ireland (23.9%) and Belgium (20.1%).

The importance of full-time work in the service sector (NACE Sections G to K) fell in every Member State, except Sweden, between 1995 and 2000. However, for computer and related activities the relative importance of full-time employment remained constant in the EU (91.0% of the workforce in 1995 and 91.3% in 2000). This was due to increases in Sweden (up 6.8 percentage points), Germany (3.3 points), the United Kingdom (2.1 points) and the Netherlands (0.7 points). In the remaining countries the share of full-time employment decreased at a slower pace than the services average, except in Denmark, Spain and Italy²⁴.

Computer and related activities are characterised by the high share (56.3%) of their workforce that possessed a higher level of education in 2000²⁵. The rate at which highly educated persons were attracted to this sector was above the services average in the majority of countries for which data are available between 1995 and 2000. However, the share of the computer and related activities workforce with a higher level of education declined in Denmark and Germany by 3.8 and 1.8 percentage points respectively over the same period.

(23) EL, L and P, not available.

(24) EL, L and P, not available.

(25) Excluding IRL, L and P.

SBS data provides information on the apparent labour productivity of the computer and related activities workforce. Each person employed generated between 32.0 thousand EUR (Spain, 1998) and 78.0 thousand EUR of value added (Germany) in 1999²⁶; these figures were generally above the services average for each country. Average personnel costs per employee ranged between 23.5 thousand EUR in Portugal and 53.9 thousand EUR in Sweden in 1999²⁷; whilst Spain, Italy and the United Kingdom were the only other countries to report average personnel costs below 39 thousand EUR. Combining these two indicators, the resulting wage adjusted labour productivity ratios were generally quite low compared to other service activities, usually due to higher than average personnel costs that may be explained by the large proportion of those employed with a higher level of education. The majority of countries reported wage adjusted labour productivity between 100% and 125% in 1999²⁸, with Luxembourg the only country where value added did not cover personnel costs (85.6%). At the other end of the range, Germany (196.1%), Portugal (169.0%) and Finland (139.6%) recorded the highest productivity ratios.

(26) E, I, L and NL, 1998; IRL, 1997; EL and UK, not available.

(27) E, I, L and NL, 1998; UK, 1997; IRL, not available.

(28) E, I, L and NL, 1998; EL, IRL and UK, not available.

Table 20.18
Computer and related activities (NACE Division 72)
Labour force characteristics (% of total employment)

	Female		Part-time		Self-employed		Higher level of education	
	1995	2000	1995	2000	1995	2000	1995	2000 (1)
EU-15	26.7	25.0	9.0	8.7	13.8	13.1	50.5	54.6
B	26.5	26.3	:	6.7	16.6	16.5	68.5	77.8
DK	21.5	20.2	:	16.7	15.4	11.7	47.5	43.7
D	25.8	23.3	13.9	10.7	17.9	15.6	54.7	52.9
EL	:	32.9	:	:	:	:	:	67.9
E	24.7	33.6	:	6.2	12.2	9.0	61.4	66.0
F	28.9	28.5	6.6	7.2	7.0	6.4	59.6	69.9
IRL	33.8	31.9	:	:	:	8.9	70.9	75.6
I	29.9	29.0	:	6.1	18.3	23.4	20.8	26.3
L	:	:	:	:	:	:	:	64.2
NL	17.1	15.3	13.6	12.9	9.8	10.8	:	57.8
A	34.4	25.4	12.8	13.5	18.1	15.5	24.9	39.1
P	:	:	:	:	:	:	:	:
FIN	40.0	25.3	:	:	:	8.8	53.1	61.0
S	29.3	26.9	:	:	:	11.6	63.9	67.8
UK	24.9	23.1	10.7	8.7	12.7	11.7	52.1	61.2

(1) EU-15 and IRL, 1997.
Source: Eurostat, Labour Force Survey

20.4: FILM AND VIDEO

The film and video industry is covered by NACE Group 92.1. It includes services of cinematographic and audio-visual production, including films, advertising, television fiction and documentaries and production services such as special effects and dubbing. Distribution services and the management of audio-visual rights are also covered within this sub-chapter, as are activities relating to the reproduction of video recordings (NACE Class 22.32). The retail trade and renting of video tapes to the general public (NACE Groups 52.1 and 71.4) is formally not included in the NACE categories covered by this sub-chapter, although some information is provided as regards the development of the video market.

The cinema industry can be viewed in two perspectives: on the one hand, films can be seen as mass consumption products like any other, following market rules and pursuing profitability; on the other, cinema can be considered as an art form, or as a cultural product, that some observers feel should not be tightly constrained by market rules, justifying public regulation and financing. This second approach is reflected in the so-called "cultural exception", a non-written rule by which countries reserve the right to keep cultural goods such as cinema and audiovisuals outside of world trade rules in order to preserve their cultural diversity.

The emergence of private television channels and the development of pay-TV services since the mid-1980s have significantly affected the film industry. Several broadcasters have actively financed the film industry, with the objective of securing programming for their increasing number of channels. The European Commission has also promoted the film industry by launching the Media programme in 1991²⁹, focusing on three priority areas: training, development of production projects and distribution and promotion of cinematographic works. In addition, several Member States also support their domestic cinema industries, either by requiring television channels to invest in film production or through direct financing.

(29) Now in its third phase 2001 to 2005.

Table 20.19

Main indicators of cinema exhibition, 2000

	Number of cinema sites (1)	Cinema sites per 100 thousand inhabitants (1)	Distribution of cinema sites (%) (2)			Number of screens (3)	Average number of screens per cinema site (3)	Average number of seats per screen (4)	Average number of admissions per seat (4)
			1 screen	2 screens	>8 screens				
EU-15	10,652	2.8	:	:	:	25,412	2.4	228	147
B	135	1.3	12	7	44	465	3.4	229	221
DK	164	3.1	30	20	8	350	2.1	157	194
D	1,722	2.1	18	17	19	4,783	2.8	183	175
EL	322	3.1	84	5	8	380	1.2	:	:
E	1,298	3.3	25	6	32	3,500	2.7	351	110
F	2,163	3.7	26	11	22	4,979	2.3	206	162
IRL	66	1.7	4	11	28	280	4.2	189	281
I	2,259	3.9	70	11	4	4,603	2.0	:	:
L	8	1.8	29	0	48	21	2.6	213	304
NL	181	1.1	10	16	6	562	3.1	187	205
A	234	2.9	22	:	28	503	2.1	143	226
P	373	3.7	49	9	18	558	1.5	304	:
FIN	228	4.4	51	13	9	343	1.5	172	120
S	813	9.2	64	4	13	1,131	1.4	168	89
UK	686	1.2	11	8	51	2,954	4.3	240	201

(1) B, EL, F, IRL, L and A, 1999; EL, F and A, source Media Salles.

(2) 1999; EL and IRL, 1998; source Media Salles.

(3) EL, F, IRL, L and A, 1999; I, 1998; EL, IRL and A, source Media Salles.

(4) E, F, IRL, L, A and UK, 1999.

Source: Eurostat, Audiovisual services (theme4/avis) and Statistics in Focus, Cinema Statistics (Theme 4 - 4/2002)

STRUCTURAL PROFILE

The EU's cinema infrastructure in 2000 included 10.7 thousand sites³⁰ and 25.4 thousand screens³¹, equivalent to 2.4 screens per site (see table 20.19). Cinema sites in Ireland and the United Kingdom were generally larger than in the rest of the EU, with more than 4 screens on average, ahead of Belgium (3.4 screens) and the Netherlands (3.1 screens). Greece reported a low presence of multi-screen cinemas, which resulted in an average of just over one screen per site.

In 2000, the average cinema auditorium in the EU had 228 seats³², with a low of 143 seats per screen in Austria and a high of 351 seats per screen in Spain. Most other countries fell within the range 168 (Sweden) to 240 (United Kingdom) seats per screen. Since 1990, the number of cinema sites and the average size of cinema halls decreased in every country with the exception of Luxembourg, whilst the number of screens increased, which indicates a trend towards fewer and larger cinema sites with smaller auditoriums. In the United Kingdom, half of the cinema halls were part of multi-screen cinemas (multiplexes). In Belgium and Luxembourg, multiplexes accounted for more than 40% of cinema screens, whilst in Ireland, Austria and Spain their share was approximately one-third.

Box office revenues were on a rising trend in the EU during the 1990s, supported by an increasing number of admissions. From 1990 to 2000, cinema admissions increased overall by 47%. Total receipts reached 4.4 billion EUR in 2000 (up 3.7% on the year before), with 850 million admissions (+4.7%) - see table 20.20. This was nevertheless still largely below the levels recorded in the US, as American cinemas had total box office receipts worth 8.3 billion EUR in the same year, with 1.4 billion admissions.

(30) B, EL, F, IRL, L and A, 1999;

EL, F, and A, source Media Salles.

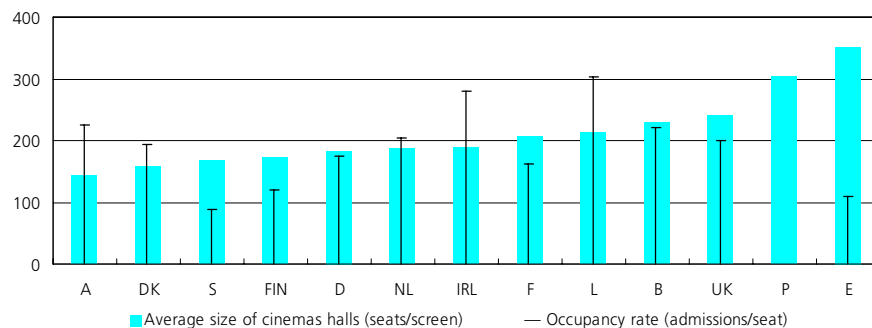
(31) EL, F, IRL, L and A, 1999; I, 1998;

EL, IRL and A, source Media Salles.

(32) F, L, A and UK, 1999; EL and I, not available.

Figure 20.8

Average size and occupancy rate of cinemas, 2000 (units) (1)



(1) F, L, A and UK, 1999; occupancy rate for P, not available; EL and I, not available.

Source: Eurostat, Audiovisual services (theme4/auvis) and Statistics in Focus, Cinema Statistics (Theme 4 - 4/2002)

Table 20.20

Main indicators of cinema attendance, 2000

	Admissions (1)		Box office receipts (2)		Average ticket price (EUR)
	Total (millions)	Per inhabitant	Total (million EUR)	Per inhabitant (EUR)	
EU-15 (3)	849.7	2.3	4,427.0	11.8	5.2
B	23.5	2.3	126.3	11.1	5.4
DK	10.7	2.0	74.4	14.0	7.0
D	152.5	1.9	824.5	10.0	5.4
EL	13.5	1.3	69.8	6.6	5.2
E	135.4	3.4	536.3	13.6	4.0
F	166.0	2.8	893.2	15.1	5.4
IRL	14.9	3.3	66.0	15.4	4.4
I	108.6	1.9	416.2	7.2	3.8
L	1.4	3.0	7.6	17.4	5.6
NL	21.5	1.4	128.1	8.1	5.9
A	16.3	2.0	96.1	11.9	5.7
P	18.9	1.9	60.7	6.1	3.2
FIN	7.1	1.4	46.6	9.0	6.6
S	17.0	1.9	135.6	15.3	8.0
UK	142.5	2.4	947.2	15.9	6.6

(1) EL, I and A, source EAO.

(2) EL, I and L, source EAO; A and P, 1999.

(3) Estimates.

Source: Eurostat, Audiovisual services (theme4/auvis) and Statistics in Focus, Cinema Statistics (Theme 4 - 4/2002)

EU inhabitants went to the cinema on average 2.3 times in 2000, paying 11.80 EUR in total for admissions. France was the leader in terms of admissions, with 166 million, but was surpassed by the United Kingdom in terms of box office receipts, with 947 million EUR against 893 million EUR, probably due to higher ticket prices. However, it was in Luxembourg that the highest value of ticket sales per capita was recorded (17.40 EUR per inhabitant), ahead of the United Kingdom (15.90 EUR), Ireland (15.40 EUR) and Sweden (15.30 EUR). In comparison, Americans spent on average 30.30 EUR for cinema tickets in 2000 and the Japanese less than half that amount (13.60 EUR).

The country within the EU where people visited the cinema most was Spain, with 3.4 cinema tickets sold per inhabitant in 2000, followed by Ireland (3.3 tickets) and Luxembourg (3.0 tickets)³³. These figures are a long way short of those recorded in the US (on average 5.5 tickets per inhabitant). In contrast, the average cinema attendance in Greece was only slightly more than once a year per inhabitant (1.3).

There were 604 long-length feature films produced in the EU in 2000 (taking into account co-productions by different Member States). The EU was therefore one of the largest film producers in the world, with the leader being India (764 films in 1999), whilst 677 long-length feature films were produced in the US in 1999.

The largest contributor to the EU film industry was France with 171 long-length feature films in 2000, of which 111 were national productions (see table 20.21); the average production cost associated with a French film was 4.7 million EUR. Italy (103 productions) and Spain (98 productions) followed as the next most important EU film producers.

(33) Note that cinema visitors may not be resident in the country where they watch a film, which is particularly important for L.

American productions dominate the European film marketplace. Figures indicate that more than half of the new films released each year in the EU are of American origin (53% in 2000)³⁴, a share that exceeded two-thirds in Ireland (73%, 1999) and Greece (70%, 2000) - see table 20.22. France displayed the lowest penetration of American films (just 36% in 1999), together with Italy (42%, 1999) and Germany (44%, 2000). This low penetration may be linked to the higher than average share of national films in these three countries, as national films represented 20% of film releases in Germany (2000), 26% in Italy (1999) and 36% in France (1999).

(34) F, IRL, I, L, NL, A and UK, 1999; B, IRL, A and UK, EAO data.

Table 20.21

Number of film productions, 2000

	Long length films produced (1)	of which, national origin (%) (2)
EU-15 (3)	604	:
B	12	8
DK	23	19
D	75	47
EL	18	14
E	98	64
F	171	111
IRL	3	0
I	103	86
L	8	0
NL	23	:
A (4)	23	:
P	10	2
FIN	10	9
S	38	20
UK	90	44

(1) B, IRL, I, L, NL and A, source EAO.

(2) B, IRL, I, L and P, source EAO.

(3) Corrected for co-productions between several countries.

(4) 1999.

Source: Eurostat, Audiovisual services (theme4/auvis) and Statistics in Focus, Cinema Statistics (Theme 4 - 4/2002)

Table 20.22

Origin of new films released, 2000

	New films released for the first time (1)	Origin		
		National (%) (2)	EU-15 (%) (3)	US (%) (4)
EU-15	307	16	:	53
B	396	2	48	45
DK	192	11	35	56
D	373	20	43	44
EL	191	6	26	70
E	523	19	46	49
F	540	36	52	36
IRL	156	6	25	73
I	428	26	51	42
L	289	0	44	51
NL	272	13	42	51
A	242	10	42	49
P	241	6	39	56
FIN	170	5	25	62
S	223	17	39	54
UK	364	21	38	52

(1) B and A, 1999; IRL, 1998; IRL, I and L, source EAO.

(2) F, IRL, I, L, A and UK, 1999; B, IRL, A and UK, source EAO.

(3) F, IRL, I, L, NL, A and UK, 1999; B, DK, IRL, A and UK, source EAO.

(4) F, IRL, I, L, NL, A and UK, 1999; B, IRL, A and UK, source EAO.

Source: Eurostat, Audiovisual services (theme4/auvis) and Statistics in Focus, Cinema Statistics (Theme 4 - 4/2002)

The EU video market developed rapidly in the 1990s with receipts from sales and rentals reaching 5.7 billion EUR in 2000. An important evolution within this market has been a clear shift from rentals to sales (see figure 20.9), their respective shares of turnover having reversed during the last decade. After experiencing a sharp decline between 1990 and 1994, video rental recovered somewhat in the second half of the 1990s. The number of rental transactions rose to reach 719 million units in 2000.

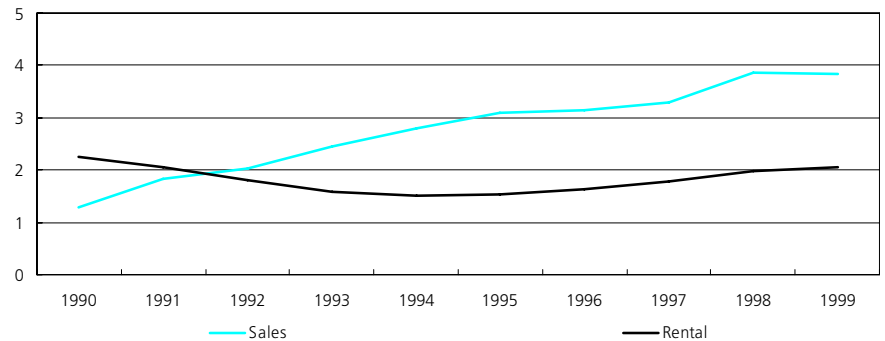
The evolution of the rental market was reflected in the size of the retail network where there was a decline in the number of rental outlets in the EU during the 1990s, from 40 thousand in 1990 to under 26 thousand by 2000.

SBS data is not available for NACE Group 92.1, although there is partial coverage for the reproduction of video recordings (NACE Class 22.32). In the nine countries for which data are available for this Class (note the absence of German data, as well as missing information for Belgium, Denmark, Greece, Luxembourg and Portugal), value added was 369 million EUR in 1999³⁵. The small size of the reproduction of video recordings sector can be demonstrated by the fact that it never accounted for more than 0.1% of manufacturing value added. There were 6.3 thousand persons employed in this sector in the same nine countries in 1999³⁶, whilst motion picture and video production, distribution and exhibition activities are estimated to have employed a further 180 thousand persons in the EU in 1999³⁷.

(35) E, I and NL, 1998; UK, 1997; B, DK, D, EL, L and P, not available.
 (36) E, I and NL, 1998; UK, 1997; B, DK, D, EL, L and P, not available.
 (37) Audio-visual services, Statistics in Focus, Theme 4, 3/2001, Eurostat.

Figure 20.9

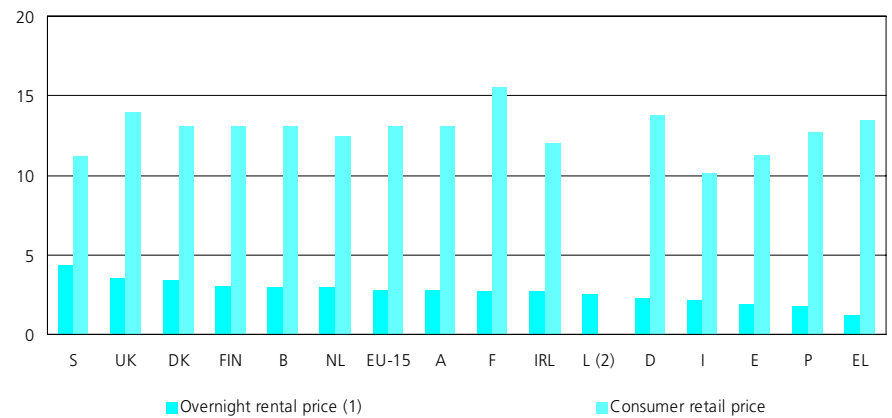
Receipts from pre-recorded video cassettes or discs in the EU (billion EUR)



Source: Eurostat, Audiovisual services (theme4/auvis) and Statistics on audiovisual services, Eurostat, 2001

Figure 20.10

Average price indicators for the video market, 1999 (EUR)



(1) F, S and UK, 1998; L, 1997.
 (2) Consumer retail price, not available.

Source: Eurostat, Audiovisual services (theme4/auvis) and Statistics on audiovisual services, Eurostat, 2001

20.5: RADIO AND TELEVISION

The radio and television sector consists of three major activities: the production of programmes, the compilation of schedules for those programmes and their transmission to the final consumer. Following the NACE classification, the first two are included in Group 92.2, whilst the transmission of signals via Hertzian relays, satellite or cable networks is covered by Group 64.2 (telecommunication services) and is hence not addressed in this sub-chapter. There is no SBS data available for the activities covered in this sub-chapter.

Box 20.11: supply structure of television services

The supply of television channels is expected to continue to rise as broadcasting turns to digital technology. Digitalisation allows a greater number of channels to be transmitted on the same bandwidth, hence reducing transmission costs (notably for the transmission of channel packages). It also provides better images and enhanced transmission capabilities, such as extended pay-per-view services, multiplexing, video on demand, software downloading. In this context of rapidly increasing supply there are two key elements to success, access to transmission capabilities (terrestrial, cable or satellite) and control over content (for example, broadcasting rights for films or sports events). This has led several broadcasters to pursue a vertical integration strategy, with examples including taking (at least part) control of football clubs (BSkyB and Manchester United, Canal+ and Paris Saint Germain), the acquisition of cable networks (Canal+ and one of Vivendi's networks) or co-operation deals with media groups (Kirch and Viacom/Paramount, the merger of CLT-Ufa or Pearson's television activities).

The radio and television sector has been transformed in much the same way as telecommunications over recent decades, with what used to be a regulated market (based around state-controlled enterprises with a legal monopoly) turning into a highly competitive market with an upsurge in supply. Indeed, during the last twenty years, most Member States have opened their audio-visual markets to private operators, pan-European channels have emerged and transmission techniques such as satellite or cable have developed significantly.

STRUCTURAL PROFILE

Television broadcasters can count on three types of revenues, depending on their legal status and commercial strategy: public funding through annual television licence fees and/or subsidies (for public operators); revenues from advertising and sponsorship (for public and commercial operators) and direct receipts from viewers (in the case of pay-TV operators). Advertising and sponsorship is the primary source of financing, with revenues exceeding 24 billion EUR in 1999³⁸ (or 50% of the total), ahead of public funding (30%) and subscription fees (20%).

Some 146 million EU households were equipped with a television set in 1999, or 95.5% of the total. Among the Member States the penetration rate was between 92.8% in Ireland and 99.7% in Portugal (1998) - see table 20.23. Terrestrial (Hertzian) reception of the television signals are the traditional way of receiving television programmes, but cable and satellite have emerged as important alternatives. They generally provide a better quality of reception and a wider choice of programmes and often include additional services such as telephony or high-speed Internet access. In the EU, 29.1% of television households subscribed to cable networks in 1999, whilst 19.3% were equipped with satellite dishes (see figure 20.11). The Benelux countries had the highest cable penetration, with more than 90% of television households connected to a cable network. As for satellite dishes, Danish (42.3%), Austrian (40.5%) and German (35.7%) television households had the highest penetration rates in the EU, despite also reporting relatively high cable penetration rates (63.6%, 39.5% and 47.1% respectively). With much lower cable and satellite penetration rates, countries such as Greece, Spain and Italy depended most on Hertzian transmission.

(38) Statistics on audiovisual services, Eurostat, 2001.

Table 20.23

Equipment rate of households, 1999

	Number of TV households (millions) (1)	Share of households with TV set (%) (2)	Number of VCR households (millions) (3)
EU-15	145.8	95.5	111.1
B	4.1	96.1	3.0
DK	2.4	97.0	2.0
D	37.5	94.6	29.0
EL	3.4	99.0	1.5
E	12.2	99.5	:
F	22.2	93.5	18.6
IRL	1.2	92.8	0.9
I	19.9	98.2	13.8
L	0.2	98.6	0.1
NL	6.8	98.0	5.2
A	3.1	94.0	2.6
P	3.1	99.7	2.0
FIN	2.2	95.4	1.7
S	4.0	99.0	3.3
UK	23.9	97.0	19.6

(1) B, EL, IRL, NL, A and P, source Screen Digest.

(2) L, NL and P, 1998.

(3) L and P, 1998; B and IRL, source Screen Digest.

Source: Eurostat, Audiovisual services (theme4/auvis) and Statistics on audiovisual services, Eurostat, 2001

Table 20.24

Average daily viewing or listening time, 1999 (minutes/day)

	Television (1)	Radio (2)
EU-15	222	162
B	173	:
DK	159	194
D	185	179
EL	253	:
E	213	95
F	189	161
IRL	194	290
I	221	169
L	136	:
NL	165	175
A	:	184
P	202	194
FIN	161	190
S	143	183
UK	220	150

(1) EL, IRL, I and NL, 1998; B, L and JP, 1997.

(2) I and UK, 1998; IRL and A, 1996.

Source: Eurostat, Audiovisual services (theme4/auvis) and Statistics on audiovisual services, Eurostat, 2001

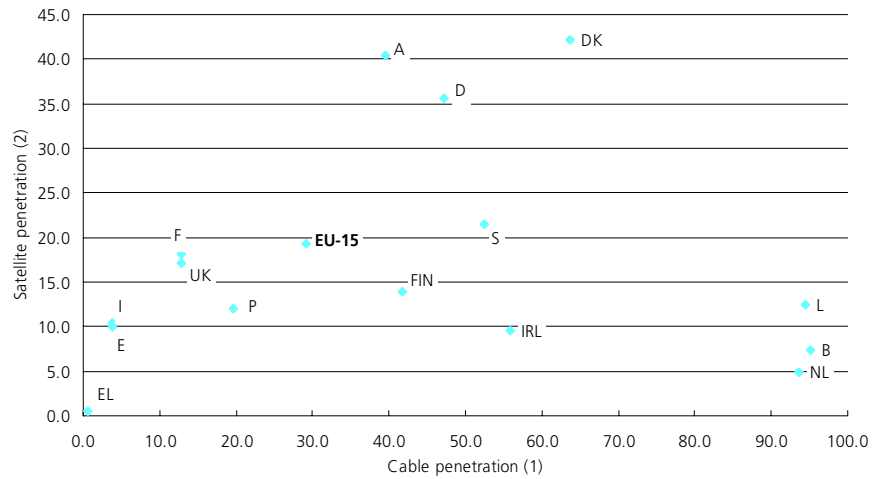
On average, daily television viewing time was equal to 222 minutes per person per day within the EU in 1999³⁹, varying from 136 minutes in Luxembourg (1997) up to 253 minutes in Greece (1998) - see table 20.24. Television viewing times in the EU have increased in recent years, although staying well below the average levels recorded in the US (443 minutes). Viewing time is inter alia influenced by economic, social and technological factors, such as employment conditions (the unemployment rate, the share of part-time work or the average number of working hours), the occurrence of important events (such as major sports events or international crises) or the number and variety of channels available, as well as alternative means of entertainment.

As regards radio broadcasting, the process of deregulation initiated at the start of the 1980s resulted in the rapid growth of the number of radio stations up until 1994, when 7,600 existed in the EU. From 1995 onwards there was a period of consolidation, since when the number of radio stations declined to approximately 5,200 by 1999. It should be noted that the vast majority of radio stations have only regional or local coverage.

(39) EL, IRL, I and NL, 1998; B and L, 1997; A, not available.

Figure 20.11

Cable and satellite penetration rates in TV households, 1999 (%)



(1) P, 1998.

(2) B, 1997; EL, 1996.

Source: Eurostat, Audiovisual services (theme4/auvis) and Statistics on audiovisual services, Eurostat, 2001

The average time spent listening to the radio in 1999 was 162 minutes per day in the EU, ranging from 95 minutes in Spain to 290 minutes in Ireland. Radio is often considered more as an accompanying media, in the sense that listening often takes place at the same time as everyday

activities, such as having breakfast, driving a car or working. Indeed, radio listening patterns generally show a peak in the morning between 7h00 and 9h00, although a second peak is also observed in the late afternoon in some countries.

20.6: MUSIC RECORDING

The music recording industry includes activities that range from the selection, management and production of artists to the manufacturing, marketing and distribution of recorded media in the form of compact discs, vinyl and cassettes. Two Classes of the NACE classification cover this industry, 22.14 for the publishing side and 22.31 for the reproduction side.

The music recording sector is dominated by a small number of multinational distribution companies, known as the "majors", that accounted in 2000 for approximately four-fifths of global turnover⁴⁰; Universal (21.8%), Sony Music (19.0%), EMI (12.9%), Warner Music (11.9%) and BMG (11.9%), all of which were part of larger entertainment conglomerates. Each major owns, in part or in full, various "labels", enterprises that sign and groom artists, guide the album production process and market the final product. There are also independent labels, having little or no financial affiliation with the majors. Independent labels account for roughly 20% of music industry revenues.

Technological developments have made the sale and distribution of music on-line a practical alternative that presents significant new opportunities, as well as threats, for the music industry.

STRUCTURAL PROFILE

Excluding Germany, as well as Greece, Ireland and Luxembourg the publishing and reproduction of music recordings (NACE Classes 22.14 and 22.31) generated some 1.6 billion EUR of value added in 1999⁴¹. These two NACE Classes accounted for less than 0.1% of manufacturing value added in Spain, Italy, Portugal and Finland, however their share rose to 0.7% of manufacturing value added in Austria, due to the presence of a large reproduction plant. The United Kingdom had the highest value added among those countries for which data are available (700 million EUR), followed by France (442 million EUR), Austria (204 million EUR, 1997) and the Netherlands (183 million EUR, 1998); no other country generated more than 100 million EUR of value added.

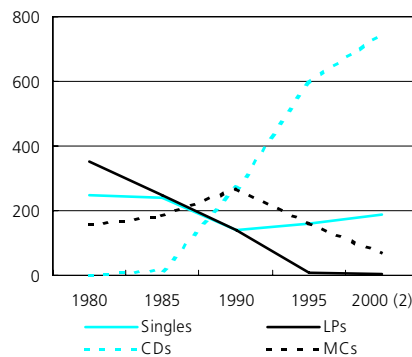
The breakdown of this activity was evenly split between publishing and reproduction; based on the data available for eleven Member States, the reproduction of music recordings accounting for 51.8% of total value added in this sector⁴². The reproduction of recorded media accounted for almost all of the activity in this sector in Austria (98.3%), with the United Kingdom (66.8%) and the Netherlands (56.8%) the only other countries to report that reproduction generated more value added than publishing. Publishing generated 97.8% of the value added in Sweden and approximately three-quarters of the total in France, Italy and Finland.

(42) DK, E, I and NL, 1998; A and FIN, 1997; D, EL, IRL and L, not available.

An analysis of sales in unit terms reveals that turnover growth has been principally fuelled by the sale of CDs. The EU recorded sales of more than 1.0 billion music recordings in 2000⁴³, 73.9% of which were CDs (see figure 20.12). Since the launch of this format in the early 1980s, the number of CDs sold has grown steadily to reach 749 million units in 2000, up from 270 million units in 1990. At the same time, vinyl LP sales plummeted from over 140 million units in 1990 to a mere 4.8 million by 2000. Sales of music cassettes peaked at 274 million units in 1991 before declining to 69.5 million units by 2000.

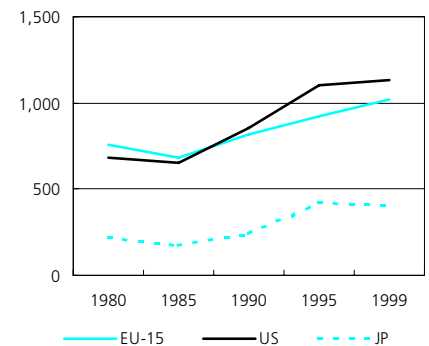
(43) Total number of singles, LPs, CDs and MCs sold; DK, EL, IRL, I, A and P, 1999, Eurostat estimates based on revised data from the International Federation of Phonographic Industry; E, 1999; excluding L.

Figure 20.12 Evolution of the number of music recordings sold in the EU (million units) (1)



(1) Excluding L.
 (2) DK, EL, IRL, I, A and P, 1999, Eurostat estimates based on revised data from the International Federation of Phonographic Industry; E, 1999.
 Source: Eurostat, Audiovisual services (theme4/auvis) and Statistics on audiovisual services, Eurostat, 2001

Figure 20.13 Evolution of turnover of pre-recorded music sales in the Triad (million units)



Source: Eurostat, Audiovisual services (theme4/auvis) and Statistics on audiovisual services, Eurostat, 2001

(40) Source, MBI.

(41) DK, E, I and NL, 1998; A and FIN, 1997; D, EL, IRL and L, not available.

Greece and France were the only Member States in 1999 to report that sales of music by domestic artists exceeded those of international artists (see figure 20.15). In contrast, music from non-domestic artists had the largest share in Ireland and the Netherlands. Multi-artist music sales (in other words compilations) recorded their highest shares in Germany, Austria and the United Kingdom.

Box 20.12: recent trends in music sales

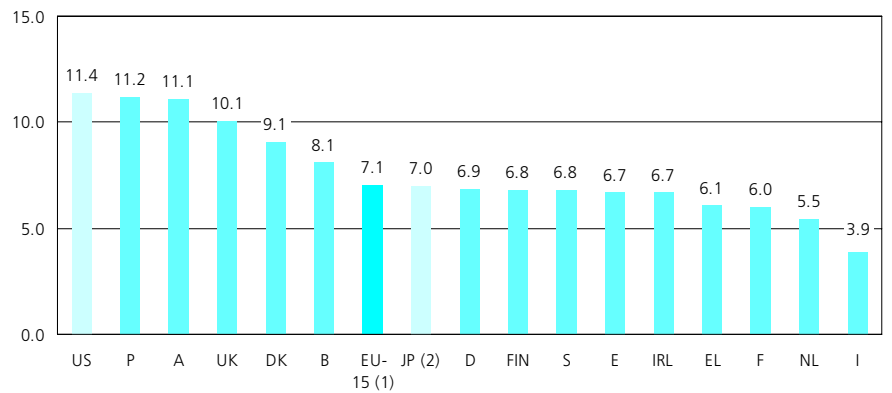
According to IFPI, world pre-recorded music turnover was equal to 40 billion EUR in 2000. The global market for music recordings registered a slight fall in sales in both value terms and the number of units sold, falling 1.2% and 1.1% respectively. The EU recorded sales up by 1.4% in value terms and 1.3% in terms of units.

The global slowdown in 2000 could be attributed to a sharp decline in the sale of singles and cassettes in many markets, whilst the sale of CDs continued to rise by 2.5% in value terms. There were 3.8 billion units of music recordings sold worldwide, with the number of CDs sold increasing by 2.0% and representing close to 65% of total sales.

Provisional figures for the first half of 2001 indicate a sharp downturn in the sale of music recordings; world sales fell by 5.0% in value and 6.7% in unit terms. A decline of 5.0% was recorded in North America, which accounts for almost half of global music sales. In the EU music sales were down by less than 1.0% compared to the first half of 2000.

Figure 20.14

Number of CDs sold per household owning a CD player, 1999 (units)

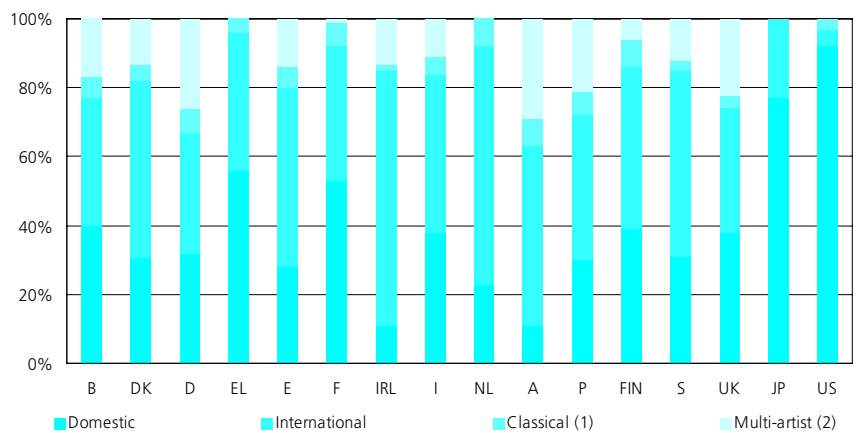


(1) L, not available.
(2) 2001.

Source: Eurostat, Audiovisual services (theme4/auvis) and Statistics on audiovisual services, Eurostat, 2001

Figure 20.15

Music sales broken down by repertoire of origin, 1999 (share of turnover)



(1) JP, not available.
(2) EL, NL, JP and US, not available.

Source: Eurostat, Audiovisual services (theme4/auvis) and Statistics on audiovisual services, Eurostat, 2001

Box 20.13: the development of on-line distribution

Whilst CD sales continue their steady growth worldwide, new formats such as MPEG-1 layer 3, also known after its DOS file extension MP3, have gained momentum in recent years. MP3 is an ISO/IEC sound compression algorithm standard developed by the Moving Picture Experts Group (MPEG). It has become a popular format to send music files over the Internet as it allows them to be compressed to about one-tenth of their original size, whilst keeping near-perfect reproduction quality. The ease of Internet file sharing and the falling cost of recordable CDs raised concerns within the music industry over piracy. According to IFPI, at its peak in early 2001, some 2.8 billion songs were being traded each month on Napster, a popular peer-to-peer file exchange program. Beside the problem of piracy, more general challenges have emerged for the music industry regarding on-line music distribution. Although marginal at present, digital diffusion (through the Internet or other means) is expected to become an important part of the global music market in the future, leading major record companies to set up subscription services in anticipation. RealNetworks, BMG Entertainment, Warner Music Group and EMI Recorded Music formed MusicNet, whilst Sony and Vivendi Universal Group created Pressplay.

LABOUR AND PRODUCTIVITY

Excluding Germany, as well as Greece and Ireland, for which no recent data is available, there were 24 thousand persons employed in the publishing and reproduction of music recordings in the EU in 1999⁴⁴. The highest number of persons employed was in France (with 7.3 thousand), followed by the United Kingdom (6.2 thousand), whilst Italy, the Netherlands and Sweden all employed between 1.9 and 2.3 thousand persons in this sector. Austria was the only other country to employ more than one thousand persons (1.3 thousand).

The publishing of music recordings accounted for 52.2% of those employed in the music recording sector in 1999⁴⁵, with more than 5 thousand persons employed in France, followed by Sweden (2.2 thousand), the United Kingdom (1.7 thousand, 1997) and Italy (1.4 thousand, 1998); no other country employed more than one thousand persons. The United Kingdom (4.4 thousand, 1997) was the largest employer in the reproduction of music recordings, followed by France (2.2 thousand persons), the Netherlands (1.6 thousand persons) and Austria (1.2 thousand persons).

Generally the most specialised countries in the publishing and reproduction of music recordings sector generated the highest apparent labour productivity. Each person employed in Austria generated an average of 159.6 thousand EUR of value added, whilst the corresponding figure in the United Kingdom was 109.1 thousand EUR (both values for 1997)⁴⁶. These two countries also reported some of the highest average personnel costs in the publishing and reproduction of music recordings sector; 41.8 thousand EUR per employee in the United Kingdom and 35.1 thousand EUR in Austria. France (41.5 thousand EUR) and the Netherlands (36.1 thousand EUR, 1998) were the only other countries to report average personnel costs as high. When combining these two indicators in the form of a wage adjusted labour productivity ratio, Austria had clearly the highest productivity (454.8%, 1997), followed by the United Kingdom (261.2%, 1997) with Belgium, Spain and the Netherlands also reporting ratios between 200% and 240%.

(46) For the whole of this paragraph: DK, E, I and NL, 1998; A, FIN and UK, 1997; D, EL and IRL, not available.

(44) DK, E, I and NL, 1998; A, FIN and UK, 1997; D, EL and IRL, not available.

(45) DK, E, I and NL, 1998; A, FIN and UK, 1997; D, EL and IRL, not available.

Table 20.25

Publishing of sound recordings; reproduction of sound recording (NACE Classes 22.14 and 22.31)
Main indicators in the EU, 1999

	B	DK	D	EL	E (1)	F	IRL (1)	I (1)	L (1)	NL (1)	A	P	FIN	S	UK
Number of enterprises (units)	265	112	:	:	48	2,287	6	765	11	420	29	61	367	1,221	1,857
Turnover (million EUR) (2)	93	114	:	:	181	1,727	:	356	:	585	335	27	35	266	1,747
Purchases of goods and services (million EUR) (3)	1	1	:	:	1	7	:	2	:	2	1	0	0	2	6
Value added (million EUR) (2)	36	40	:	:	59	442	:	93	:	183	204	6	14	73	700
Personnel costs (million EUR) (2)	58	77	:	:	124	1,505	:	277	:	429	131	21	22	202	1,044
Number of persons employed (thousands) (2)	9.4	19.0	:	:	26.5	292.8	:	31.2	:	77.0	43.4	5.7	7.7	41.6	229.2
Gross investment in tangible goods (million EUR) (2)	13	13	:	:	3	50	:	19	:	42	26	:	3	15	104
Gross operating rate (%) (3)	66.4	50.6	:	:	62.8	60.9	:	48.4	:	86.0	159.6	17.7	43.2	31.8	109.1
App. labour productivity (thous. EUR/pers. emp.) (3)	218.1	173.8	:	:	219.1	146.7	:	152.5	:	238.2	454.8	104.1	140.7	105.8	261.2
Wage adjusted labour productivity (%) (2)	28.5	18.0	:	:	16.9	8.7	:	17.4	:	18.2	48.0	1.5	16.8	11.7	26.9

(1) 1998. (2) DK, 1998; A and FIN, 1997. (3) DK, 1998; A, FIN and UK, 1997.
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms)

Table 20.26

Post and courier activities (NACE Group 64.1)
Main indicators in the EU, 1999 (1)

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Number of enterprises (units)	2,032	1,327	6,130	:	4,199	1,382	472	1,757	30	1,790	336	32	245	304	6,803
Turnover (million EUR) (2)	2,587	1,677	24,909	:	:	:	685	6,271	431	:	2,098	594	1,185	:	16,995
Purchases of goods and services (million EUR)	843	496	:	:	:	:	230	1,217	135	:	685	153	462	:	7,777
Value added (million EUR)	1,740	1,176	13,676	:	:	:	456	5,053	281	:	1,424	447	710	:	9,051
Personnel costs (million EUR)	1,446	1,006	:	:	:	:	5,425	125	:	1,210	400	603	:	7,555	
Gross investment in tangible goods (million EUR)	106	70	:	:	:	:	33	425	:	:	101	52	81	:	1,249
Gross operating rate (%)	11.4	10.1	:	:	:	:	-5.9	37.3	:	10.2	7.9	9.2	:	8.8	
App. labour productivity (thous. EUR/pers. emp.)	36.0	29.2	:	:	:	:	41.8	27.3	94.7	:	35.9	25.9	26.2	:	:
Wage adjusted labour productivity (%)	115.2	114.8	:	:	:	:	92.1	224.2	:	116.7	111.8	117.4	:	:	

(1) I and NL, 1998; E and IRL, 1997; L, 1998, except for turnover. (2) FIN, 2000.
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms)

Table 20.27

Main indicators for postal services, 2000

	EU-15 (1)	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK (2)
Total staff (thousands) (3)	1,283	40	25	276	11	59	292	9	174	2	63	33	17	25	47	210
Share of full-time staff (%) (4)	:	87.5	:	69.2	98.3	94.9	81.0	92.8	:	72.5	56.8	86.6	95.5	71.0	84.2	83.0
Expenditure (million EUR) (5)	80,497	1,772	:	32,184	363	1,367	15,089	574	7,124	131	2,994	1,664	599	907	2,435	13,292
Investment (million EUR) (6)	5,679	65	:	3,262	6	152	543	65	415	4	218	108	48	64	198	530
Receipts (million EUR) (7)	83,108	1,852	:	33,378	375	1,315	15,422	585	7,078	114	3,782	1,682	609	999	2,630	13,287

(1) Sum of available country information; mixed reference years. (2) Excluding Northern Ireland. (3) I, 1999; S, 1996.
(4) D, 1999; NL and S, 1996. (5) S, 1996. (6) B, 1999; S, 1996. (7) B and FIN, 1999, A, 1997; S, 1996.
Source: UPU

Table 20.28

Telecommunications (NACE Group 64.2)
Main indicators in the EU, 1999 (1)

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Number of enterprises (units)	315	245	551	:	1,198	2,362	53	512	44	635	186	149	224	280	5,946
Turnover (million EUR) (2)	7,219	3,816	40,065	:	15,949	:	1,989	26,699	828	:	5,583	4,632	5,236	:	55,067
Purchases of goods and services (million EUR)	3,565	1,796	:	:	5,947	:	773	9,567	193	:	3,187	2,481	2,297	:	30,080
Value added (million EUR)	3,744	2,330	29,099	:	10,291	:	1,222	15,846	400	:	2,555	2,514	1,886	:	26,402
Personnel costs (million EUR)	1,738	858	:	:	3,172	:	:	4,040	40	:	978	726	668	:	10,433
Number of persons employed (thousands) (2)	31.0	20.5	78.4	:	78.7	:	13.2	97.8	0.6	:	24.4	21.2	22.4	:	181.1
Gross investment in tangible goods (million EUR)	1,438	700	:	:	1,006	:	409	5,301	:	:	1,563	1,647	755	:	14,063
Gross operating rate (%)	27.8	38.6	:	:	44.6	:	:	44.2	54.2	:	28.2	38.6	29.7	:	29.0
App. labour productivity (thous. EUR/pers. emp.)	120.6	113.4	:	:	130.8	:	92.4	162.1	656.4	:	104.5	118.5	97.0	:	:
Wage adjusted labour productivity (%)	202.8	271.3	:	:	320.0	:	:	390.1	1,004.3	:	260.1	346.0	282.1	:	:

(1) E, I and NL, 1998; IRL, 1997; L, 1998, except for turnover. (2) FIN, 2000; D, number of employees, 1998; UK, number of employees, 1998.
Source: Eurostat, Structural Business Statistics (theme4/sbs/enterpr/enter_ms)

Table 20.29

Main indicators for telecommunications services, 2000 (thousands)

	EU-15	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
ISDN lines (1)	14,628	319	351	17,947	29	544	1,540	10	1,521	28	574	253	195	208	270	819
DSL subscriptions (2)	:	:	26.4	462.0	:	0.7	:	:	:	:	:	:	:	10.0	26.0	49.0
Internet subscriptions (3)	:	1,150	1,684	23,900	235	8,251	5,263	550	3,950	:	5,911	:	1,987	616	2,527	12,600

(1) B, EL, E, I, L, A and FIN, 1999; EU-15, F, IRL and NL, 1998.

(2) E, 1999.

(3) I, 1999.

Source: Eurostat, Communications (theme4/coins)

Table 20.30

Computer and related activities (NACE Division 72)
Main indicators in the EU, 1999 (1)

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Number of enterprises (units)	6,479	5,221	46,544	:	14,875	31,285	1,098	61,195	528	10,180	6,425	2,280	3,535	19,045	124,501
Turnover (million EUR) (2)	5,503	4,571	34,293	:	7,307	31,710	894	21,371	347	9,361	3,674	1,477	3,408	10,986	58,264
Purchases of goods and services (million EUR)	3,229	2,527	:	:	4,298	16,512	376	12,987	171	2,549	2,133	899	1,501	6,189	24,003
Value added (million EUR)	2,348	2,122	27,229	:	3,074	15,387	516	8,874	125	4,962	1,562	595	1,480	4,977	33,945
Personnel costs (million EUR)	1,732	1,644	11,775	:	2,167	12,894	:	5,022	142	4,154	995	329	1,030	4,025	17,766
Number of persons employed (thousands) (2)	39.5	34.7	349.0	:	96.0	262.1	9.7	235.8	3.1	93.6	27.7	15.0	31.1	86.7	351.7
Gross investment in tangible goods (million EUR)	220	181	1,974	:	281	1,225	64	781	:	334	210	121	148	498	3,002
Gross operating rate (%)	11.2	10.5	45.1	:	12.4	7.9	:	18.0	-5.8	8.6	15.4	18.1	15.3	8.7	27.8
App. labour productivity (thous. EUR/pers. emp.)	59.5	61.1	78.0	:	32.0	58.7	53.2	37.6	39.7	53.0	56.4	39.8	58.1	57.4	:
Wage adjusted labour productivity (%)	114.0	115.7	196.1	:	125.1	118.3	:	119.0	85.6	107.8	123.1	169.0	139.6	106.4	:

(1) E, I and NL, 1998; IRL, 1997; L, 1998, except for turnover.

(2) FIN, 2000; UK, number of employees, 1997.

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

Table 20.31

Main indicators for the video market, 2000

	EU-15 (1)	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Number of outlets renting videos (2)	25,873	700	2,118	4,591	530	4,600	1,200	1,000	3,500	16	1,250	350	718	1,000	600	3,700
Receipts from video sales & rentals (million EUR) (3)	5,737	160	154	751	18	321	1,067	108	568	4	209	78	44	70	149	2,036
Share of rentals in receipts (%) (4)	35	42	45	41	65	49	21	69	29	31	48	32	27	32	52	32
Video rental transactions (millions) (5)	718.9	23.5	20.7	159.0	9.7	73.3	73.1	28.0	79.0	0.6	36.0	9.2	6.8	8.0	18.0	174.0
DVD rental transactions (millions) (6)	37.2	1.2	0.2	9.5	0.2	0.6	2.3	0.3	2.3	:	3.0	0.2	0.1	0.3	0.7	16.6
Pre-recorded video cassettes sold (millions) (7)	294.3	7.9	6.5	35.9	0.5	14.5	57.9	2.8	40.0	:	9.5	4.0	7.6	3.6	7.7	96.0
Average price per pre-recorded video sold (EUR) (8)	13.1	13.1	13.1	13.8	13.5	11.3	15.5	12.0	10.1	:	12.5	13.1	12.7	13.1	11.2	14.0

(1) Sum of available country information; mixed reference years. (2) DK, EL, F, IRL, A and S, 1999, source Screen Digest/IVF.
(3) B, DK, EL, IRL, A, P and S, 1999, Eurostat estimates based on Screen Digest/IVF; E, F and I, 1999; UK, 1998; L, 1997.
(4) UK, 1998; L, 1997; all other countries, 1999. (5) DK, EL, IRL, A and S, 1999, source Screen Digest/IVF.
(6) B, DK, D, EL, E, IRL, I, A and P, 1999, source Screen Digest/IVF. (7) DK, EL, E, IRL, A and UK, 1999, source Screen Digest/IVF. (8) 1999.
Source: Eurostat, Audiovisual services (theme4/avis) and Statistics on audiovisual services, Eurostat, 2001

Table 20.32

Main indicators for the television market, 2000

	EU-15 (1)	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Number of cable operators (2)	821	30	40	120	1	28	144	5	1	7	50	270	16	100	4	5
Households connected to a cable (thousands) (3)	43,348	3,940	1,335	17,810	20	299	3,007	660	1,100	150	6,160	1,250	925	930	2,210	3,552
Households equipped with satellite dishes (thousands) (4)	29,539	300	1,750	12,020	20	1,380	3,820	130	2,350	20	330	1,450	380	343	1,050	4,196

(1) Sum of available country information; mixed reference years.
(2) DK, EL, IRL, L and A, source Inside Cable & Telecoms Europe online database; DK, D, EL, I, A, FIN and UK, 1999; F and IRL, 1998; L, 1996.
(3) B, EL, IRL, L, A and S, 1999, Eurostat estimates based on Inside Cable & Telecoms Europe online database, adjusted by households; DK, D, I and FIN, 1999.
(4) IRL, I, NL, A, P, S, source SES/ASTRA; P, 1999; B, 1997; EL, 1996.
Source: Eurostat, Audiovisual services (theme4/avis) and Statistics on audiovisual services, Eurostat, 2001

Table 20.33

Sales of music recordings, 2000 (millions) (1)

	EU-15 (2)	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Total music recordings	1,012.4	35.5	19.1	262.2	8.4	61.4	150.5	9.5	53.9	:	48.9	22.4	16.8	12.7	28.8	282.3
Singles (3)	189.7	7.8	1.3	51.1	1.0	2.4	36.8	2.3	5.1	:	5.4	3.7	1.0	0.6	5.1	66.1
LPs	4.8	0.0	0.0	0.8	0.0	0.0	0.5	0.0	0.1	:	0.1	0.0	0.0	0.0	0.0	3.2
CDs	748.5	27.6	17.6	190.6	6.9	48.4	104.8	6.1	35.8	:	43.1	18.0	12.9	11.8	23.4	201.6
MCs	69.5	0.1	0.2	19.7	0.5	10.6	8.4	1.1	12.9	:	0.3	0.7	2.9	0.3	0.3	11.4

(1) DK, EL, IRL, I, A and P, 1999, Eurostat estimates based on revised data from the International Federation of Phonographic Industry; E, 1999.
(2) Sum of available country information; mixed reference years.
(3) Includes vinyl, CD and MC singles.

Source: Eurostat, Audiovisual services (theme4/avis) and Statistics on audiovisual services, Eurostat, 2001

Community, social and personal services



Community, social and personal services may be provided by private or public organisations, non-profit organisations, public administration or indeed private individuals. Many of the services in this sector can be distinguished from the services covered by NACE Section K (see chapter 19 on business services) as they concentrate on providing services to individuals and households; this is particularly true for Divisions 92 and 93. Community, social and personal services have benefited from vigorous growth in recent years (see structural profile below), which may in some way be related to lifestyle changes, such as a reduction in average working time, the relative ageing of the population and increased disposable income. A combination of these factors means that a growing share of the population have the time and means to participate in leisure and entertainment activities.

This chapter deals mainly with NACE Divisions 92 and 93, although some of the activities included within these two Divisions are covered in more detail in other chapters of this publication. This is notably the case for cinema, video, radio and television (see chapter 20) and zoos and recreation parks (see chapter 16). Furthermore, NACE Division 90 which is part of NACE Section O is covered in sub-chapter 1.3.

Despite their increasing importance in the EU economy, community, social and personal services are not well covered by official business statistics, and are notably not covered by the SBS Regulation. Nevertheless, National Accounts provide estimates of value added and employment, whilst the LFS gives a picture of the main characteristics of the workforce for each NACE Division. Alternatively, data is also available from the demand side, notably the consumption expenditure of households, as collected by the Household Budget Survey (HBS). Contrary to the other chapters in this publication, the description provided in this chapter is largely based on the second of these approaches.

Community, social and personal service activities are covered by NACE Section O. They are composed of sewage and refuse disposal activities (NACE Division 90), activities of membership organisations (NACE Division 91), recreational, cultural and sporting activities (NACE Division 92) and other (personal) service activities (NACE Division 93), such as dry-cleaning, hairdressing, funeral activities and physical well-being activities.

NACE

- 90: sewage and refuse disposal, sanitation and similar activities;
- 91: activities of membership organization n.e.c.;
- 91.1: activities of business, employers, professional organizations;
- 91.2: activities of trade unions;
- 91.3: activities of other membership organizations;
- 92: recreational, cultural and sporting activities;
- 92.1: motion picture and video activities;
- 92.2: radio and television activities;
- 92.3: other entertainment activities n.e.c.;
- 92.4: news agency activities;
- 92.5: library, archives, museums, other cultural activities;
- 92.6: sporting activities;
- 92.7: other recreational activities;
- 93: other service activities.

STRUCTURAL PROFILE

Estimates based on National Accounts data indicate that total value added generated by community, social and personal service activities (NACE Section O) was 280 billion EUR in the EU in 1999.

Amongst the larger countries, the most important contributors to this total were Germany (88 billion EUR) and the United Kingdom (57 billion EUR), whilst France (36 billion EUR) and Italy (33 billion EUR) reported levels of value added that were noticeably lower.

Community, social and personal service activities have boasted strong growth in recent years. It is estimated that EU value added expanded on average by 6.0% per annum between 1996 and 1999. This average hides a diverse range of growth rates from one country to another. Per annum average growth rates ranged from a low of 2.4% in Germany up to 18.8% in the United Kingdom. Other countries with higher than average growth included Ireland (11.4%), Portugal (7.7%) and the Netherlands (6.2%). In contrast, Denmark (3.6%), Austria (3.2%) and Italy (3.0%) recorded a much slower expansion within this sector. It is important to note that these figures are expressed in current prices and that, as mentioned below, prices have also witnessed faster than average growth in this area.

Community, social and personal service activities contributed an estimated 3.8% of total value added in the EU in 1999. Their share was between 2.9% and 3.9% of total value added in most Member States. The EU average was at the upper end of this range, due to the much higher relative weight of this branch in Germany and the United Kingdom (both 4.8%). At the other end of the range were Greece (2.6%) and Belgium (2.5%).

Seen from the demand perspective, the HBS provides interesting information on the consumption expenditure of households for recreational and cultural services and personal care. The COICOP¹ classification includes two headings that are directly related to the services classified within NACE Section O. The first is COICOP Group 9.4 (recreational and cultural services), which covers expenditure in the domains of sports centres, fitness clubs, amusement parks, lotteries and casinos, as well as cinemas, theatres, concert halls, museums, zoological and botanical gardens and television and radio licence fees and subscriptions. The second is COICOP Class 12.1.1 (personal grooming establishments), that includes for example hairdressers, beauty shops, saunas and solaria. This data can be used as a first indicator of activity in this sector of the economy, although when used as a measure of total demand it is important to note that revenue streams can also be derived from sources other than paying customers, most notably corporate and public sponsorship and advertising.

HBS data can be made more directly comparable across the EU by adjusting consumption expenditure in national currencies with purchasing power parities, in order to eliminate differences in price levels from one country to the other. The resulting data is expressed in purchasing power standard (PPS)² and include taxes. All data refer to 1999, except France and Portugal which at the time of writing were only available for 1994.

Mean household consumption expenditure for recreation and cultural services was greater than 300 PPS in all countries but Portugal (1994) - see table 21.1 - and exceeded 500 PPS in the majority of Member States, rising to 1,015 PPS in the United Kingdom. Four southern European countries were grouped together at the bottom of the ranking: Spain, Italy, Greece and Portugal.

(2) The purchasing-power parity between the PPS and each national currency expresses the number of units of national currency necessary at a given moment for purchasing, in each country, the same volume of goods and services obtainable with one PPS in the European Union; the PPS is expressed in EUR.

(1) Classification Of Individual Consumption according to Purpose.

Table 21.1

Mean consumption expenditure by household for recreational and cultural services and personal care, 1999 (PPS)

	COICOP	B	DK	D	EL	E	F (1)	IRL	I	L	NL	A	P (1)	FIN	S	UK
Recreational and cultural services	09.4	767	695	648	320	394	395	:	361	804	503	719	120	473	802	1,015
Recreational and sporting services	09.4.1	140	146	:	65	83	173	:	107	338	149	221	16	106	222	302
Cultural services	09.4.2	521	379	516	145	123	140	:	112	318	303	333	43	214	270	349
Games of chance	09.4.3	106	170	133	111	188	81	:	142	148	51	165	61	152	310	364
Personal grooming services	12.1.1	242	207	219	91	145	207	:	352	567	181	283	121	135	198	171

(1) 1994.

Source: Eurostat, Household Budget Survey (theme3/hbs)

Table 21.2

Share of recreational and cultural services and personal care in total household consumption expenditure, 1999 (%)

	COICOP	B	DK	D	EL	E	F (1)	IRL	I	L	NL	A	P (1)	FIN	S	UK
Recreational and cultural services	09.4	2.8	3.0	2.8	1.4	1.9	1.8	:	1.3	1.9	2.0	2.7	0.7	2.6	3.7	3.7
Recreational and sporting services	09.4.1	0.5	0.6	:	0.3	0.4	0.8	:	0.4	0.8	0.6	0.8	0.1	0.6	1.0	1.1
Cultural services	09.4.2	1.9	1.6	2.2	0.6	0.6	0.6	:	0.4	0.7	1.2	1.3	0.3	1.2	1.2	1.3
Games of chance	09.4.3	0.4	0.7	0.6	0.5	0.9	0.4	:	0.5	0.3	0.2	0.6	0.4	0.8	1.4	1.3
Personal grooming services	12.1.1	0.9	0.9	0.9	0.4	0.7	0.9	:	1.3	1.3	0.7	1.1	0.7	0.7	0.9	0.6

(1) 1994.

Source: Eurostat, Household Budget Survey (theme3/hbs)

The share of recreation and cultural services in total household consumption was greater than 2% in a majority of countries, with a maximum of 3.7% in Sweden and the United Kingdom (see table 21.2). Countries where this share was noticeably lower included Greece (1.4%), Italy (1.3%) and Portugal (0.7%, 1994).

Looking at a more detailed level of the structure of expenditure reveals some interesting differences in consumption patterns from one country to the other. Household expenditure on cultural services was highest in Belgium (521 PPS) and Germany (516 PPS); note that this figure includes television fees and pay-TV subscriptions, which may account for a substantial share of the total. In most of the other countries, households spent between 300 PPS and 400 PPS for cultural services.

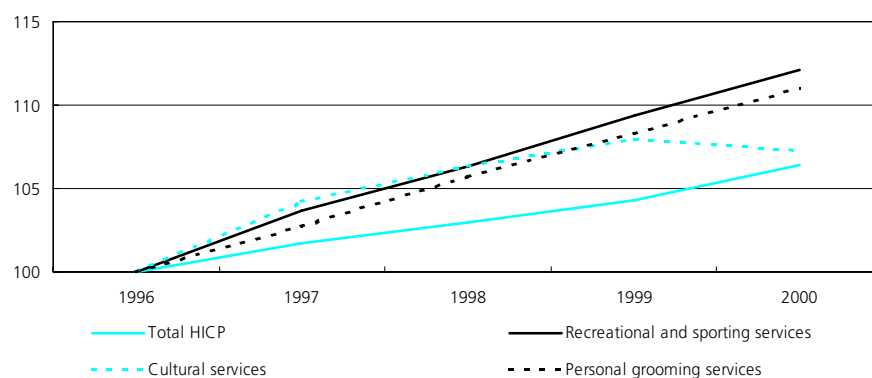
Expenditure for recreational and sporting services was generally lower than that for cultural services; ranging between 100 PPS and 250 PPS in most countries, although Luxembourg (338 PPS) and the United Kingdom (302 PPS) exceeded that level. Games of chance were of particular importance in the United Kingdom (364 PPS), as well as in Sweden (310 PPS), ahead of Spain (188 PPS).

Expenditure in personal grooming establishments was in the same range (although generally slightly lower) as that for recreational and sporting activities (between 100 PPS and 250 PPS). Households in Ireland, Sweden and the United Kingdom were the only ones to spend less on average on personal grooming than they did on recreation and sport. This category of consumption usually represented less than 1.0% of total household expenditure, although Italian and Luxembourg households dedicated a slightly greater share (1.3%) of their expenditure to personal grooming and Austrian households 1.1%.

Consumer prices of personal services have increased in recent years at a faster than average pace. Prices of cultural services in the EU rose by 7.3% between 1996 and 2000, prices of personal grooming services by 11.0% and prices of recreational and sporting services by 12.1%, whilst the all-items harmonised index of consumer prices rose by 6.4% over the same period (see figure 21.1).

Figure 21.1

Development of harmonised indices of consumer prices in the EU (1996=100)



Source: Eurostat, Harmonized indices of consumer prices (theme2/price)

EMPLOYMENT

According to National Accounts, EU employment in community, social and personal services (NACE Section O) was estimated at 5.8 million persons in 1999, excluding the United Kingdom (where no recent data is available). This branch represented between 4.0% and 5.0% of total employment in the majority of countries. Its importance mirrored the figures above for value added, as Germany employed 1.8 million persons in this branch, almost twice the level reported in France and Italy (both 1.0 million persons employed).

Employment grew in recent years for all countries reporting data. The number of persons employed expanded on average by over 2.0% per annum between 1996 and 1999 in the majority of countries, and growth even exceeded 3.0% per annum in seven of the Member States. This positive trend was most pronounced in Portugal (4.8%), the Netherlands (3.9%) and Ireland (3.6%). In contrast, job creation was less dynamic in Belgium (0.9%) and Greece (0.6%).

According to the LFS, a majority of the persons employed in community, social and personal services (NACE Section O) in the EU in 2000 were women (53%). At a more detailed level, women were outnumbered by men in recreational, cultural and sporting activities (NACE Division 92), where they accounted for 45.7% of the workforce, whilst their share of those employed in other service activities (NACE Division 93) was 68.3%.

There was a relatively high propensity for people to work on the basis of a part-time work contract in this area of the economy. Some 27.7% of those employed in NACE Section O in the EU in 2000 worked part-time, whilst the corresponding share for services (NACE Sections G to K) was 19.9%. No significant variation around this average existed for either recreational, cultural and sporting activities (30.1%) or other personal services (27.3%). In recent years, recourse to part-time work has shown a tendency to increase, as its share of NACE Section O employment gained 2 percentage points in the EU between 1995 and 2000, in line with the general trend seen in all service sectors.

One notable characteristic of employment in this category of services is the high proportion of self-employed persons. They accounted for 21.7% of those working in NACE Section O in the EU in 2000 (against a 17.8% services average), a share that rose to 23.5% for recreational, cultural and sporting activities (NACE Division 92) and 34.9% for other service activities (NACE Division 93). In addition, it is interesting to note that the average education level of the workforce in community, social and personal services was higher than for other service sectors. Indeed, some 28.6% of persons employed in Section O in the EU in 2000 had reached higher level of education³, compared to a 22.4% average for services (NACE Sections G to K).

(3) IRL, L, and P, not available.