

# Statistics on the information society in Europe

**Data 1990-2002**

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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>).

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## FOREWORD

This is the first edition of Statistics on the Information Society in Europe. It aims to provide detailed statistical information on the Information Society in the European Economic Area, Switzerland and the Candidate countries.

Statistical information from a variety of sources, mainly official sources, have been brought together for this publication. The publication uses data from three Eurostat sources that are focused on information society issues, namely the COINS database on communication statistics, the e-commerce survey of enterprises and, for the first time, data from the Information Society Questionnaire. The latter is a collection of data provided by Member States and Candidate countries on a voluntary but less harmonised basis. The publication also provides detailed data relevant to information and communication technologies extracted from broader Eurostat sources, notably Structural Business Statistics, external trade and the Labour Force Survey. A number of other sources covering specific issues complete the picture. Issues of comparability which remain are indicated in the footnotes, particularly concerning coverage.

Chapter 1 looks at the eEurope Actions Plans and their benchmarking exercises. Chapters 2 and 3 provide data on the sectors producing ICT goods and services and the markets for these products. Chapters 4 to 7 look at ICT penetration and the use of ICT by different segments of society. Chapters 8 and 9 provide some background data and methodological information.

Eurostat aims to enhance the role of Information Society statistics within the European Statistical System and work is underway to collect existing statistical data on the Information Society from the Member States, to harmonise data and to build up new official data sets where there are important gaps. In this respect an annual household survey on ICT usage started in 2002 and it is hoped that data from this source will serve to strengthen future editions of the present publication.

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**Statistics on the  
Information Society in Europe**

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## 1. eEUROPE

## 1. eEUROPE

### THE MOST COMPETITIVE AND DYNAMIC ECONOMY

The eEurope initiative was launched by the European Commission in December 1999 with the objective to “bring Europe on-line”. Following a positive reception for eEurope from Member States, the Lisbon European Council of March 2000 set the ambitious objective for Europe to become within ten years the most competitive and dynamic knowledge-based economy in the world.

### eEUROPE 2002 ACTION PLAN

The eEurope 2002 Action Plan was endorsed by the European Council in Feira in June 2000. The aim of this plan was to define the necessary measures to ensure that the targets set by the Lisbon European Council could be reached. Three main objectives were identified:

- a cheaper, faster, secure Internet;
- investing in people and skills;
- stimulate the use of the Internet.

Three main methods to achieve the eEurope targets were identified:

- accelerating the setting up of an appropriate legal environment;
- supporting new infrastructure and services across Europe;
- applying the open method of co-ordination and benchmarking.

The benchmarking exercise included in the plan was based on a list of 23 indicators endorsed in November 2000. At the present time many of these indicators are compiled from special studies or non-official statistics and have not been included in the present publication and work is going on to try to develop robust official statistics for some of these indicators. Two of the indicators are presented later in the present publication:

- secure servers in chapter 4;
- Internet access costs in chapter 5.

A full set of the benchmarking indicators, and their results and various related reports can be found on the web site of the Directorate General for Information Society<sup>1</sup>.

(1) [http://www.europa.eu.int/information\\_society/eeurope/benchmarking/index\\_en.htm](http://www.europa.eu.int/information_society/eeurope/benchmarking/index_en.htm)

It was assumed that the eEurope Action Plan would have an impact on Internet penetration and eventually Internet use. Table 1.1 shows the Internet access in households and the development of this indicator over the past few years.

The eEurope+ 2003 Action Plan was launched by the Prime Ministers of the Candidate Countries at the Göteborg European Summit in June 2001. Actions have been clustered around the same objectives as the eEurope 2002 Action Plan and the same indicators for monitoring and benchmarking progress. However an additional objective was identified, to put in place the fundamental building blocks of the Information Society, and extra benchmarking indicators were identified for this objective.

### eEUROPE 2005 ACTION PLAN

In May 2002 the Commission adopted a Communication on “eEurope 2005: an Information Society for all” which will further contribute to the implementation of the Lisbon strategy. This action plan will succeed the eEurope 2002 action plan.

The eEurope 2005 Action Plan is based on two groups of actions:

- to stimulate services, applications and content;
- to address the underlying broadband infrastructure and security matters.

The eEurope 2005 Action Plan comprises four tools:

- policy measures;
- exchange of experience, good practice and demonstration projects;
- benchmarking of progress;
- overall co-ordination of existing policies.

**Table 1.1: Internet penetration in EU households (%)**

	EU-15	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Oct 2000	28	29	52	27	12	16	19	36	24	36	55	38	18	44	54	41
Jun 2001	36	35	59	38	12	23	26	46	33	44	59	46	23	48	64	53
Jun 2002	40	40	65	44	9	29	36	48	35	55	65	49	31	54	64	45

Source: European Commission (Eurobarometer)

## 2. THE ICT SECTOR



## 2. THE ICT SECTOR

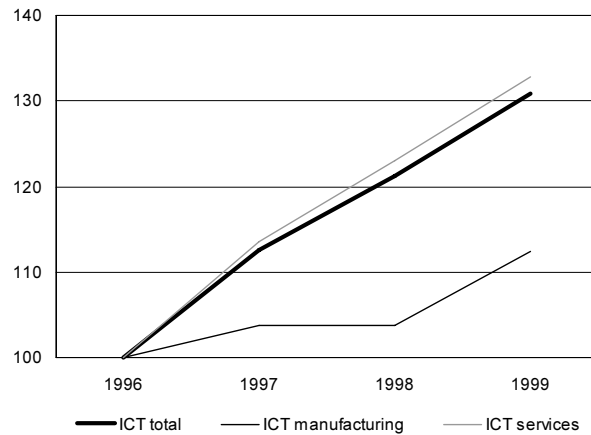
ICT value added in the EU in 1999 was estimated at 421 billion EUR. The number of persons employed was around 5.4 million. ICT services accounted for just over three-quarters of ICT value added (77.4%) and just under three-quarters of ICT employment (72.3%). The difference in these two shares resulted in a level of apparent labour productivity in ICT services (83 thousand EUR) that was 20 thousand EUR higher than in ICT manufacturing. See table 2.1.

Although growth in the number of enterprises between 1996 and 1999 has been higher in ICT services, ICT manufacturing has also recorded growth, notably between 1998 and 1999. See figure 2.1.

In current price terms the EU's ICT manufacturing sector recorded significant growth between 1996 and 2000 as turnover increased by nearly 70%, nearly half of this growth being recorded in 2000. Measures of employment are unaffected by inflation and ICT manufacturing also recorded growth over the same period according to this measure, increasing by a total of 5% in four years. See figure 2.2.

ICT services recorded similar levels of growth in turnover and value added from 1996 to 1999 as seen for ICT manufacturing, however employment increased more rapidly. See figure 2.3.

**Figure 2.1: Number of ICT enterprises in the EU (1996 = 100) (1)**



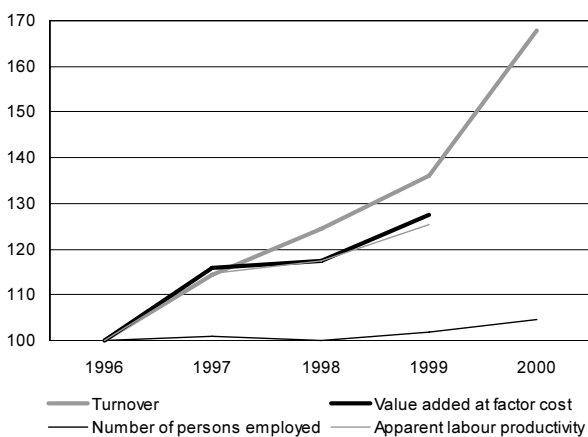
(1) Estimates, excluding B, D and EL.  
Source: Structural business statistics  
(NewCronos Theme4/SBS/Enterpr/enter\_ms), Eurostat

**Table 2.1: ICT total, EU, 1999 (1)**

	Number of enterprises (thousands)	Turnover (billion EUR)	Value added at factor cost (billion EUR)	Number of persons employed (thousands)	Apparent labour productivity (thousand EUR per head)
ICT manufacturing	45	350	95	1,500	63.3
ICT services	503	972	326	3,922	83.1
<b>ICT total</b>	<b>548</b>	<b>1,322</b>	<b>421</b>	<b>5,422</b>	<b>77.6</b>

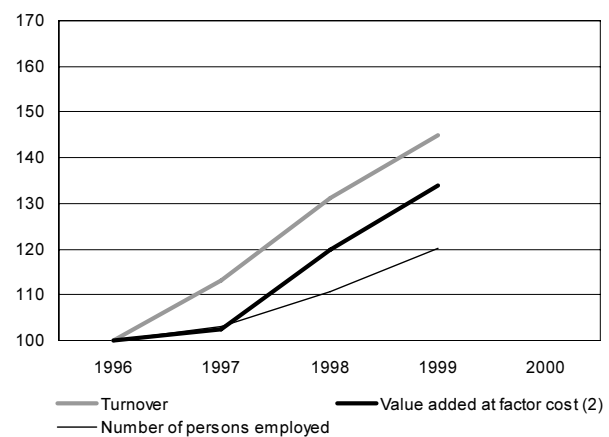
(1) Estimates, excluding EL.  
Source: Structural business statistics  
(NewCronos Theme4/SBS/Enterpr/enter\_ms), Eurostat

**Figure 2.2: Key indicators of ICT manufacturing in the EU (1996 = 100) (1)**



(1) Estimates, excluding D, EL and L.  
Source: Structural business statistics  
(NewCronos Theme4/SBS/Enterpr/enter\_ms), Eurostat

**Figure 2.3: Key indicators of ICT services in the EU (1996 = 100) (1)**



(1) Estimates, excluding DK, EL and E. (2) Also excluding D.  
Source: Structural business statistics  
(NewCronos Theme4/SBS/Enterpr/enter\_ms), Eurostat

Table 2.2: Share in ICT manufacturing total, EU, 1999 (%) (1)

	Number of enterprises	Turnover	Value added at factor cost	Number of persons employed
Manufacture of office machinery and computers (NACE Division 30)	13.3	25.5	18.2	14.8
Manufacture of insulated wire and cable (NACE Group 31.3)	4.6	5.0	5.0	7.1
Manufacture of electronic valves and tubes and other electronic components (NACE Group 32.1)	13.1	14.2	17.1	17.5
Manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy (NACE Group 32.2)	27.1	30.2	30.0	25.1
Manufacture of television and radio receivers, sound or video recording or reproducing apparatus and associated goods (NACE Group 32.3)	7.4	8.8	6.7	8.9
Manufacture of instruments and appliances for measuring, checking, testing, navigating and other purposes, except industrial process control equipment (NACE Group 33.2)	25.9	13.5	19.2	22.1
Manufacture of industrial process control equipment (NACE Group 33.3)	8.4	2.8	3.8	4.5
<b>ICT manufacturing</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(1) Excluding DK, EL, L and NL.

Source: Structural business statistics (NewCronos Theme4/SBS/Enterpr/enter\_ms), Eurostat

Table 2.3: Share in ICT services total, EU, 1999 (%) (1)

	Number of enterprises	Turnover	Value added at factor cost	Number of persons employed (2)
Wholesale of electrical household appliances and radio and television goods (NACE Class 51.43)	6.5	15.8	5.8	7.9
Wholesale of office machinery and equipment (NACE Class 51.64)	5.7	19.5	10.9	10.8
Wholesale of other machinery for use in industry, trade and navigation (NACE Class 51.65)	11.9	18.4	10.9	14.5
Telecommunications (NACE Group 64.2)	2.4	25.0	37.9	20.6
Computer and related activities (NACE Division 72)	73.5	21.3	34.6	46.2
<b>ICT services</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(1) Excluding EL, F, IRL, NL, S. (2) Including estimate for Germany for NACE Group 64.2.

Source: Structural business statistics (NewCronos Theme4/SBS/Enterpr/enter\_ms), Eurostat

The ICT manufacturing sector in the EU was principally made up of four activities. The manufacture of radio and television transmitters (NACE Group 32.2) accounted for three-tenths of value added and one-quarter of ICT manufacturing employment. Instrument engineering (NACE Group 33.2), office machinery and computers (NACE Division 30) and electronic components (NACE Group 32.1) each accounted for close to one-fifth of ICT manufacturing value added. See table 2.2.

Telecommunication (NACE Group 64.2) and computer services (NACE Division 72) each accounted for more than one-third of value added in the ICT services sector in 1999. See table 2.3.

## 2. THE ICT SECTOR

**Table 2.4: Apparent labour productivity, EU, 1999**  
(ICT manufacturing = 100) (1)

	Apparent labour productivity
Manufacture of office machinery and computers (NACE Division 30)	123.0
Manufacture of insulated wire and cable (NACE Group 31.3)	70.4
Manufacture of electronic valves and tubes and other electronic components (NACE Group 32.1)	97.7
Manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy (NACE Group 32.2)	119.8
Manufacture of television and radio receivers, sound or video recording or reproducing apparatus and associated goods (NACE Group 32.3)	75.6
Manufacture of instruments and appliances for measuring, checking, testing, navigating and other purposes, except industrial process control equipment (NACE Group 33.2)	86.9
Manufacture of industrial process control equipment (NACE Group 33.3)	83.1
<b>ICT manufacturing</b>	<b>100.0</b>

(1) Excluding DK, EL, L and NL.

Source: Structural business statistics

(NewCronos Theme4/SBS/Enterpr/enter\_ms), Eurostat

**Table 2.5: Apparent labour productivity, EU, 1999**  
(ICT services = 100) (1)

	Apparent labour productivity
Wholesale of electrical household appliances and radio and television goods (NACE Class 51.43)	73.7
Wholesale of office machinery and equipment (NACE Class 51.64)	100.7
Wholesale of other machinery for use in industry, trade and navigation (NACE Class 51.65)	75.2
Telecommunications (NACE Group 64.2)	183.6
Computer and related activities (NACE Division 72)	74.8
<b>ICT services</b>	<b>100.0</b>

(1) Excluding EL, F, IRL, NL, S.

Source: Structural business statistics

(NewCronos Theme4/SBS/Enterpr/enter\_ms), Eurostat

**Table 2.6: Share in ICT manufacturing, EU**  
(1996 = 100) (1)

	1996	1997	1998	1999	2000
<b>Turnover</b>					
NACE 30	100.0	98.8	102.4	99.4	89.5
NACE 31.3	100.0	94.6	84.2	72.3	77.4
NACE 32.1	100.0	115.6	104.5	114.7	118.0
NACE 32.2	100.0	97.8	107.3	117.0	132.2
NACE 32.3	100.0	101.2	94.5	76.3	73.5
NACE 33.2	100.0	92.7	85.7	82.8	72.9
NACE 33.3	100.0	110.0	109.1	102.6	86.1
<b>ICT manufacturing</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Value added at factor cost</b>					
NACE 30	100.0	85.0	96.7	88.5	:
NACE 31.3	100.0	90.8	85.0	73.3	:
NACE 32.1	100.0	117.6	106.6	119.7	:
NACE 32.2	100.0	105.2	104.6	113.5	:
NACE 32.3	100.0	108.7	99.0	85.9	:
NACE 33.2	100.0	95.3	94.6	90.0	:
NACE 33.3	100.0	104.1	111.7	103.1	:
<b>ICT manufacturing</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>:</b>
<b>Number of persons employed (2)</b>					
NACE 30	100.0	102.8	103.5	106.2	90.7
NACE 31.3	100.0	101.5	99.6	94.9	100.4
NACE 32.1	100.0	105.7	100.5	103.8	115.3
NACE 32.2	100.0	92.3	95.2	100.3	113.3
NACE 32.3	100.0	104.5	101.0	89.5	73.7
NACE 33.2	100.0	97.7	98.1	95.4	78.9
NACE 33.3	100.0	115.1	122.7	112.4	136.3
<b>ICT manufacturing</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(1) Excluding DK, D, EL, L, NL and A; for a list of NACE Divisions and Groups please refer to page 78. (2) 2000, excluding also UK.

Source: Structural business statistics

(NewCronos Theme4/SBS/Enterpr/enter\_ms), Eurostat

Between 1996 and 2000 (1999 for value added), the contribution of electronic components (NACE Group 32.1), radio and television transmitters (NACE Group 32.2) and process control equipment (NACE Group 33.3) to ICT manufacturing increased in terms of value added and employment. However in none of these activities was growth smooth over time and all of these activities have experienced at least one year on year contraction in output or fall in employment. See table 2.6.

Table 2.7a: ICT manufacturing, 1999

	B	DK (1)	D	EL	E (2)	F	IRL	I	L (3)	NL (4)	A (2)	P (2)	FIN	S	UK
Number of enterprises (units)	225	563	6,476	:	2,676	6,884	228	14,278	7	835	496	515	714	1,765	9,350
Turnover (million EUR)	5,001	3,223	74,044	:	14,110	64,746	20,687	26,427	129	5,424	8,723	3,403	16,593	22,546	72,004
Value added at factor cost (million EUR)	1,824	1,199	21,941	:	3,055	16,700	4,666	7,345	58	1,348	2,818	744	5,066	5,218	19,961
Number of persons employed	23,857	21,805	359,576	:	61,733	287,815	39,414	175,818	1,245	22,401	39,173	21,718	45,672	73,968	307,855
Apparent labour productivity (thousand EUR)	76.4	55.0	61.0	:	49.5	58.0	118.4	41.8	46.7	60.2	71.9	34.3	110.9	70.5	64.8

(1) Excluding NACE Group 31.3. (2) 2000. (3) Excluding NACE Divisions 30 and 32 and Group 33.3. (4) Excluding NACE Division 32.

Source: Structural business statistics (NewCronos Theme4/SBS/Enterpr/enter\_ms), Eurostat

Table 2.7b: ICT manufacturing, 1999

	IS	NO (1)	CH (2)	BG	CY (3)	CZ	EE (4)	HU	LV (1)	LT (5)	MT	PL (1)	RO (5)	SK (6)	SI (7)	TR
Number of enterprises (units)	:	188	514	625	:	3,766	104	546	121	108	:	8,373	501	95	1,020	:
Turnover (million EUR)	:	2,038	3,503	143	6	1,625	68	6,113	55	141	:	3,904	338	510	731	:
Value added at factor cost (million EUR)	:	614	1,337	35	2	:	20	842	16	39	:	1,209	86	104	186	:
Number of persons employed	:	10,468	19,038	16,156	82	52,066	3,709	54,153	3,718	8,649	:	86,245	15,686	22,393	12,661	:
Apparent labour productivity (thousand EUR)	:	58.7	70.2	2.2	20.7	:	5.5	15.5	4.3	4.5	:	14.0	5.5	4.6	14.7	:

(1) 1998. (2) NACE Division 32 only. (3) Excluding NACE Division 30 and Groups 33.2 and 33.3; 1998. (4) Excluding NACE Groups 31.3, 33.2 and 33.3; number of employees instead of number of persons employed. (5) Excluding NACE Groups 31.3, 33.2 and 33.3. (6) Number of employees instead of number of persons employed. (7) Number of employees instead of number of persons employed; 1998.

Source: Structural business statistics (NewCronos Theme4/SBS/Enterpr/enter\_ms & enter\_cc), Eurostat

Table 2.8a: ICT services, 1999

	B	DK	D (1)	EL	E	F (1)	IRL (2)	I	L	NL (3)	A	P	FIN	S (1)	UK
Number of enterprises (units)	13,461	9,144	60,647	:	38,452	60,943	2,582	89,288	1,375	21,065	10,361	7,046	7,319	29,289	147,029
Turnover (million EUR)	35,892	25,355	132,315	:	66,990	120,536	5,487	91,067	3,052	60,506	23,490	12,922	16,548	35,797	222,727
Value added at factor cost (million EUR)	9,731	7,331	47,725	:	16,650	28,411	1,490	30,180	1,080	12,023	6,861	4,122	5,024	8,986	82,379
Number of persons employed	126,688	104,033	579,165	:	321,637	503,693	28,571	482,645	7,941	216,011	95,707	72,254	71,824	155,230	1,033,058
Apparent labour productivity (thousand EUR)	76.8	70.5	82.4	:	51.8	56.4	52.1	62.5	136.0	55.7	71.7	57.0	69.9	57.9	79.7

(1) Excluding NACE Group 64.2. (2) Excluding NACE Group 64.2; 1998 for NACE Division 72. (3) Excluding NACE Group 64.2; 1998.

Source: Structural business statistics (NewCronos Theme4/SBS/Enterpr/enter\_ms), Eurostat

Table 2.8b: ICT services, 1999

	IS	NO (1)	CH (2)	BG (1)	CY (3)	CZ (2)	EE (4)	HU (5)	LV (5)	LT (2)	MT	PL (6)	RO	SK (7)	SI (7)	TR
Number of enterprises (units)	:	9,660	8,025	4,142	:	18,219	443	1,071	861	650	:	20,753	4,691	190	2,040	:
Turnover (million EUR)	:	17,226	7,264	630	194	1,389	76	3,278	690	62	:	4,277	2,110	1,259	1,301	:
Value added at factor cost (million EUR)	:	3,994	3,835	53	37	:	21	1,326	291	24	:	938	896	447	260	:
Number of persons employed	:	67,297	44,038	17,980	1,692	35,284	1,903	37,434	12,741	3,117	:	64,402	103,489	24,113	9,745	:
Apparent labour productivity (thousand EUR)	:	59.3	87.1	2.9	22.0	:	:	35.4	22.9	7.8	:	14.6	8.7	:	:	:

(1) Excluding NACE Group 64.2. (2) NACE Division 72 only. (3) Excluding NACE Group 64.2 and Division 72; 1998. (4) NACE Division 72 only; number of employees instead of number of persons employed. (5) 1998. (6) Excluding NACE Group 64.2; 1998. (7) Number of employees instead of number of persons employed.

Source: Structural business statistics (NewCronos Theme4/SBS/Enterpr/enter\_ms & enter\_cc), Eurostat

## 2. THE ICT SECTOR

**Table 2.9a: Developments in ICT manufacturing**

	B	DK (1)	D	EL	E	F	IRL	I	L	NL (2)	A	P	FIN	S	UK
<b>Turnover (million EUR)</b>															
1996	4,099	2,272	:	:	10,367	53,079	9,469	28,600	:	4,262	:	2,439	6,944	14,008	48,256
1997	4,108	2,324	:	:	10,656	55,284	12,127	29,222	:	5,160	7,837	2,685	8,998	16,661	64,338
1998	4,519	2,491	:	:	11,355	60,013	13,763	30,573	:	5,537	9,017	3,138	12,127	19,045	66,740
1999	5,001	3,178	74,044	:	12,493	64,746	20,687	26,427	:	6,003	8,753	3,240	16,593	22,546	72,004
2000	6,416	3,382	90,059	:	14,110	77,355	28,805	34,094	:	6,945	8,723	3,403	25,098	32,075	84,458
<b>Value added at factor cost (million EUR)</b>															
1996	1,547	859	:	:	2,937	14,939	2,161	8,627	:	1,322	:	589	2,098	3,558	13,873
1997	1,654	852	:	:	2,747	15,061	2,906	8,319	:	1,349	2,197	676	2,961	6,983	17,726
1998	1,401	915	:	:	2,749	15,522	2,644	8,153	:	1,481	2,626	807	4,031	4,675	18,965
1999	1,824	1,181	21,941	:	2,949	16,700	4,666	7,345	:	1,551	2,728	768	5,066	5,218	19,961
2000	:	:	:	:	3,055	:	:	:	:	2,818	744	:	:	:	:
<b>Number of persons employed</b>															
1996	24,698	19,336	:	:	56,571	277,415	27,780	193,411	:	24,876	:	26,002	33,614	60,009	312,735
1997	23,033	20,656	:	:	55,680	278,061	34,339	185,751	:	24,896	39,400	26,568	36,900	64,563	321,250
1998	22,868	19,936	:	:	55,261	283,178	35,594	179,419	:	24,975	39,253	28,105	40,869	69,178	304,781
1999	23,857	21,369	359,576	:	59,754	287,815	39,414	175,818	:	26,918	38,532	27,767	45,672	73,968	307,855
2000	25,406	22,080	371,807	:	61,733	293,338	42,696	186,035	:	28,894	39,173	21,718	48,389	74,218	:
<b>Apparent labour productivity (thousand EUR)</b>															
1996	62.6	44.4	:	:	51.9	53.8	77.8	44.6	:	53.2	:	22.7	62.4	59.3	44.4
1997	71.8	41.3	:	:	49.3	54.2	84.6	44.8	:	54.2	55.8	25.5	80.2	108.2	55.2
1998	61.3	45.9	:	:	49.7	54.8	74.3	45.4	:	59.3	66.9	28.7	98.6	67.6	62.2
1999	76.4	55.2	61.0	:	49.4	58.0	118.4	41.8	:	57.6	70.8	27.7	110.9	70.5	64.8
2000	:	:	:	:	49.5	:	:	:	:	71.9	34.3	:	:	:	:

(1) Excluding NACE Groups 31.3 and 33.3. (2) Excluding NACE Groups 32.2 and 32.3.

Source: Structural business statistics (NewCronos Theme4/SBS/Enterpr/enter\_ms), Eurostat

**Table 2.9b: Developments in ICT manufacturing**

	IS	NO	CH (1)	BG	CY (2)	CZ	EE (3)	HU	LV (4)	LT (5)	MT	PL	RO (5)	SK (6)	SI (7)	TR
<b>Turnover (million EUR)</b>																
1996	:	1,895	:	117	6	:	44	:	:	109	:	2,748	:	271	614	:
1997	:	2,001	3,115	119	7	1,323	46	:	50	123	:	3,359	427	366	679	:
1998	:	2,038	3,566	131	6	1,516	73	4,229	55	128	:	3,904	382	368	731	:
1999	:	:	3,503	143	:	1,625	68	6,113	:	141	:	:	338	335	:	:
2000	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
<b>Value added at factor cost (million EUR)</b>																
1996	:	635	:	:	2	:	10	:	:	33	:	934	:	54	165	:
1997	:	676	1,156	:	2	:	14	:	12	35	:	1,037	108	71	176	:
1998	:	614	1,267	:	2	:	16	733	16	40	:	1,209	86	84	186	:
1999	:	:	1,337	35	:	:	20	842	:	39	:	:	86	72	:	:
2000	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
<b>Number of persons employed</b>																
1996	:	10,119	:	25,124	85	48,650	3,158	:	:	13,378	:	86,973	:	12,878	12,762	:
1997	:	10,416	17,342	21,610	82	53,168	2,820	:	5,344	10,895	:	86,777	20,159	14,114	12,535	:
1998	:	10,468	18,912	20,006	82	52,566	3,129	44,447	3,715	9,095	:	86,245	18,258	14,347	12,661	:
1999	:	:	19,038	16,156	:	52,066	3,709	54,153	:	8,649	:	:	15,886	17,695	:	:
2000	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
<b>Apparent labour productivity (thousand EUR)</b>																
1996	:	62.8	:	:	17.6	:	:	:	:	2.4	:	10.7	:	:	:	:
1997	:	64.9	66.7	:	22.0	:	:	:	:	3.2	:	12.0	5.4	:	:	:
1998	:	58.7	67.0	:	20.7	:	:	16.5	:	4.4	:	14.0	4.7	:	:	:
1999	:	:	70.2	2.2	:	:	:	15.5	:	4.5	:	:	5.5	:	:	:
2000	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:

(1) NACE Division 32 only. (2) Excluding NACE Division 30 and Groups 33.2 and 33.3. (3) Excluding NACE Groups 31.3, 33.2 and 33.3; number of employees

instead of number of persons employed. (4) Number of employees instead of number of persons employed. (5) Excluding NACE Groups 31.3, 33.2 and 33.3.

(6) Excluding NACE Groups 33.2 and 33.3; number of employees instead of number of persons employed. (7) Number of employees instead of number of persons employed.

Source: Structural business statistics (NewCronos Theme4/SBS/Enterpr/enter\_ms & enter\_cc), Eurostat

ICT manufacturing value added has grown in the second half of the 1990s in all Member States for which data are available, except for Italy. In employment terms Portugal, Italy, the United Kingdom and Austria have all recorded falls. Apparent labour productivity, in current prices, was lower in 2000 than in 1996 in Italy (1999 compared to 1996) and Spain. The largest overall increases in apparent labour productivity in the EU between 1996 and 2000 were recorded in Finland, Ireland, Portugal and the United Kingdom.

ICT manufacturing employment fell between 1996 and 1999 in Bulgaria, Cyprus (1996 to 1998), Lithuania and Romania (1997 to 1999). Over the same period Slovakia and Estonia recorded the largest percentage increases in ICT manufacturing employment among the Candidate countries, the latter after a large fall in 1997. Only two years of data are available for Hungary but they also show an increase in ICT manufacturing employment. See tables 2.9 and 2.10.

Table 2.10a: Developments in ICT manufacturing (1996 = 100)

	B	DK (1)	D	EL	E	F	IRL	I	L	NL (2)	A (3)	P	FIN	S	UK
<b>Turnover</b>															
1996	100.0	100.0	:	:	100.0	100.0	100.0	100.0	:	100.0	:	100.0	100.0	100.0	100.0
1997	100.2	102.3	:	:	102.8	104.2	128.1	102.2	:	121.1	100.0	110.1	129.6	118.9	133.3
1998	110.3	109.7	:	:	109.5	113.1	145.3	106.9	:	129.9	115.1	128.7	174.6	136.0	138.3
1999	122.0	139.9	:	:	120.5	122.0	218.5	92.4	:	140.8	111.7	132.8	238.9	161.0	149.2
2000	156.5	148.9	:	:	136.1	145.7	304.2	119.2	:	162.9	111.3	139.5	361.4	229.0	175.0
<b>Value added at factor cost</b>															
1996	100.0	100.0	:	:	100.0	100.0	100.0	100.0	:	100.0	:	100.0	100.0	100.0	100.0
1997	106.9	99.2	:	:	93.5	100.8	134.5	96.4	:	102.0	100.0	114.7	141.1	196.3	127.8
1998	90.6	106.5	:	:	93.6	103.9	122.4	94.5	:	112.0	119.5	137.0	192.1	131.4	136.7
1999	117.9	137.5	:	:	100.4	111.8	215.9	85.1	:	117.3	124.2	130.3	241.4	146.7	143.9
2000	:	:	:	:	104.0	:	:	:	:	:	128.3	126.3	:	:	:
<b>Number of persons employed</b>															
1996	100.0	100.0	:	:	100.0	100.0	100.0	100.0	:	100.0	:	100.0	100.0	100.0	100.0
1997	93.3	106.8	:	:	98.4	100.2	123.6	96.0	:	100.1	100.0	102.2	109.8	107.6	102.7
1998	92.6	103.1	:	:	97.7	102.1	128.1	92.8	:	100.4	99.6	108.1	121.6	115.3	97.5
1999	96.6	110.5	:	:	105.6	103.7	141.9	90.9	:	108.2	97.8	106.8	135.9	123.3	98.4
2000	102.9	114.2	:	:	109.1	105.7	153.7	96.2	:	116.2	99.4	83.5	144.0	123.7	:
<b>Apparent labour productivity</b>															
1996	100.0	100.0	:	:	100.0	100.0	100.0	100.0	:	100.0	:	100.0	100.0	100.0	100.0
1997	114.6	92.9	:	:	95.0	100.6	108.8	100.4	:	101.9	100.0	112.3	128.6	182.4	124.4
1998	97.8	103.3	:	:	95.8	101.8	95.5	101.9	:	111.6	120.0	126.7	158.0	114.0	140.3
1999	122.0	124.4	:	:	95.1	107.7	152.2	93.7	:	108.4	127.0	122.0	177.7	119.0	146.2
2000	:	:	:	:	95.3	:	:	:	:	:	129.0	151.2	:	:	:

(1) Excluding NACE Groups 31.3 and 33.3. (2) Excluding NACE Groups 32.2 and 32.3. (3) 1997 = 100.  
Source: Structural business statistics (NewCronos Theme4/SBS/Enterpr/enter\_ms), Eurostat

Table 2.10b: Developments in ICT manufacturing (1996 = 100)

	IS	NO	CH (1)	BG	CY (2)	CZ	EE (3)	HU (4)	LV (5)	LT (6)	MT	PL	RO (7)	SK (8)	SI (9)	TR
<b>Turnover</b>																
1996	:	100.0	:	100.0	100.0	:	100.0	:	:	100.0	:	100.0	:	100.0	100.0	:
1997	:	105.6	100.0	101.8	132.7	:	103.8	:	100.0	112.8	:	122.3	100.0	135.0	110.5	:
1998	:	107.5	114.5	112.2	105.5	:	164.2	100.0	109.3	117.8	:	142.1	89.5	135.7	119.0	:
1999	:	:	112.5	122.5	:	:	153.8	144.5	:	129.9	:	:	79.2	123.7	:	:
2000	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
<b>Value added at factor cost</b>																
1996	:	100.0	:	:	100.0	:	100.0	:	:	100.0	:	100.0	:	100.0	100.0	:
1997	:	106.4	100.0	:	120.0	:	138.5	:	100.0	107.6	:	111.0	100.0	131.9	107.0	:
1998	:	96.7	109.6	:	113.3	:	154.8	100.0	130.1	121.1	:	129.5	79.4	155.8	112.9	:
1999	:	:	115.7	:	:	:	195.2	114.8	:	118.3	:	:	79.6	135.1	:	:
2000	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
<b>Number of persons employed</b>																
1996	:	100.0	:	100.0	100.0	100.0	100.0	:	:	100.0	:	100.0	:	100.0	100.0	:
1997	:	102.9	100.0	86.0	96.5	109.3	89.3	:	100.0	81.4	:	99.8	100.0	109.6	98.2	:
1998	:	103.4	109.1	79.6	96.5	108.0	99.1	100.0	69.5	68.0	:	99.2	90.6	111.4	99.2	:
1999	:	:	109.8	64.3	:	107.0	117.4	121.8	:	64.7	:	:	77.8	137.4	:	:
2000	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
<b>Apparent labour productivity</b>																
1996	:	100.0	:	:	100.0	:	:	:	:	100.0	:	100.0	:	:	:	:
1997	:	103.4	100.0	:	124.4	:	:	:	:	132.2	:	111.3	100.0	:	:	:
1998	:	93.5	100.5	:	117.5	:	:	100.0	:	178.1	:	130.5	87.7	:	:	:
1999	:	:	105.3	:	:	:	:	94.2	:	183.1	:	:	102.3	:	:	:
2000	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:

(1) NACE Division 32 only; 1997 = 100. (2) Excluding NACE Division 30 and Groups 33.2 and 33.3. (3) Excluding NACE Groups 31.3, 33.2 and 33.3; number of employees instead of number of persons employed. (4) 1998 = 100. (5) Number of employees instead of number of persons employed; 1997 = 100. (6) Excluding NACE Groups 31.3, 33.2 and 33.3. (7) Excluding NACE Groups 31.3, 33.2 and 33.3; 1997 = 100. (8) Excluding NACE Groups 33.2 and 33.3; number of employees instead of number of persons employed. (9) Number of employees instead of number of persons employed.

Source: Structural business statistics (NewCronos Theme4/SBS/Enterpr/enter\_ms & enter\_cc), Eurostat

## 2. THE ICT SECTOR

**Table 2.11a: Developments in ICT services**

	B	DK (1)	D (2)	EL	E	F (3)	IRL (3)	I	L	NL (3)	A	P	FIN	S (3)	UK
<b>Turnover (million EUR)</b>															
1996	26,272	3,664	84,366	:	:	87,278	2,974	67,263	:	:	:	9,426	12,112	25,724	117,099
1997	27,874	4,355	82,592	:	:	92,989	4,067	71,401	2,033	55,278	21,638	10,479	13,794	28,071	168,677
1998	32,366	3,295	90,289	:	57,011	107,684	5,793	88,733	2,228	60,506	21,904	12,693	15,131	32,712	200,985
1999	35,892	3,816	98,022	:	66,990	120,536	:	91,067	3,052	:	23,490	12,922	16,548	35,797	222,727
<b>Value added at factor cost (million EUR)</b>															
1996	7,941	1,707	:	:	:	20,799	755	25,559	:	:	:	2,988	3,511	5,894	:
1997	7,625	2,123	:	:	:	21,691	1,119	26,467	643	10,542	7,059	3,160	3,910	6,657	61,210
1998	8,766	2,230	:	:	19,364	24,696	1,598	30,203	725	12,023	6,417	3,675	4,501	7,855	75,520
1999	9,731	2,330	20,495	:	16,650	28,411	:	30,180	1,080	:	6,861	4,122	5,024	8,986	82,379
<b>Number of persons employed</b>															
1996	104,366	17,686	241,822	:	:	417,766	17,461	430,362	:	:	:	67,127	56,759	:	:
1997	107,340	15,262	238,389	:	:	431,114	20,672	400,617	6,456	191,638	125,637	68,326	60,443	126,145	:
1998	114,050	19,550	234,577	:	306,590	464,741	29,982	444,247	7,290	216,011	95,828	72,356	66,965	143,432	939,579
1999	126,688	20,538	230,165	:	321,637	503,693	:	482,645	7,941	:	95,707	72,254	71,824	155,230	1,033,058
<b>Apparent labour productivity (thousand EUR)</b>															
1996	76.1	96.5	:	:	:	49.8	43.2	59.4	:	:	:	44.5	61.9	:	:
1997	71.0	139.1	:	:	:	50.3	54.1	66.1	99.5	55.0	56.2	46.3	64.7	52.8	:
1998	76.9	114.1	:	:	63.2	53.1	53.3	68.0	99.5	55.7	67.0	50.8	67.2	54.8	80.4
1999	76.8	113.4	89.0	:	51.8	56.4	:	62.5	136.0	:	71.7	57.0	69.9	57.9	79.7

(1) NACE Group 64.2 only. (2) Excluding NACE Group 64.2 and Division 72. (3) Excluding NACE Group 64.2.

Source: Structural business statistics (NewCronos Theme4/SBS/Enterpr/enter\_ms), Eurostat

**Table 2.11b: Developments in ICT services**

	IS	NO (1)	CH (2)	BG (1)	CY (3)	CZ (2)	EE (4)	HU (5)	LV (6)	LT (2)	MT	PL (1)	RO	SK (6)	SI (6)	TR
<b>Turnover (million EUR)</b>																
1996	:	12,066	:	325	179	1,499	39	:	:	30	:	3,080	:	817	677	:
1997	:	14,100	4,742	327	171	1,325	59	:	413	59	:	3,814	1,221	1,047	782	:
1998	:	:	6,285	531	194	1,290	73	2,648	690	50	:	4,277	1,802	1,300	1,000	:
1999	:	17,226	7,264	630	:	1,389	76	3,139	:	62	:	:	2,110	1,259	1,301	:
<b>Value added at factor cost (million EUR)</b>																
1996	:	2,407	:	:	39	:	11	:	:	9	:	528	:	313	146	:
1997	:	3,052	3,022	:	34	:	15	:	165	13	:	774	456	379	172	:
1998	:	:	3,310	:	37	:	21	1,248	291	19	:	938	730	449	214	:
1999	:	3,994	3,835	:	:	:	21	1,479	:	24	:	:	896	447	260	:
<b>Number of persons employed</b>																
1996	:	47,485	:	15,318	1,530	36,770	2,033	:	:	2,269	:	45,930	:	22,624	6,736	:
1997	:	50,305	32,396	15,895	1,616	38,027	1,912	:	11,692	2,424	:	58,101	92,989	23,439	7,596	:
1998	:	:	37,637	16,004	1,692	36,329	1,952	33,338	12,679	2,656	:	64,402	98,112	25,307	8,503	:
1999	:	67,297	44,038	17,980	:	35,284	1,903	33,983	:	3,117	:	:	103,489	24,113	9,745	:
<b>Apparent labour productivity (thousand EUR)</b>																
1996	:	50.7	:	:	25.6	:	5.4	:	:	4.1	:	11.5	:	13.8	21.6	:
1997	:	60.7	93.3	:	20.8	:	7.7	:	14.1	5.5	:	13.3	4.9	16.2	22.7	:
1998	:	:	88.0	:	22.0	:	10.9	37.4	23.0	7.0	:	14.6	7.4	17.7	25.2	:
1999	:	59.3	87.1	:	:	:	11.0	43.5	:	7.8	:	:	8.7	18.5	26.7	:

(1) Excluding NACE Group 64.2. (2) NACE Division 72 only. (3) Excluding NACE Group 64.2 and Division 72. (4) NACE Division 72 only; number of employees instead of number of persons employed. (5) NACE Group 64.2 and Division 72 only. (6) Number of employees instead of number of persons employed.

Source: Structural business statistics (NewCronos Theme4/SBS/Enterpr/enter\_ms & enter\_cc), Eurostat

Between 1996 and 1998 value added in current prices more than doubled in Irish ICT services and Ireland also recorded a large increase in ICT services employment. Large increases in activity in the ICT services sector were also recorded in Luxembourg (1997 to 1999) and in Sweden (1996 to 1999).

It should be noted that the fall in value added and employment in Austria is mainly for methodological reasons linked to a restructuring of the national post and telecommunications enterprise in this country - up to 1997 (inclusive) the combined post and telecommunication enterprise was classified by its principal activity to NACE Group 64.2 but, following a reorganisation, the postal services part has been separated and is recorded in NACE Group 64.1. Leaving aside telecommunications, the ICT services sector in Austria grew in employment and value added terms in 1998 and 1999.

ICT services value added increased in most Candidate countries, Norway and Switzerland at some point in the second half of the 1990's. Between 1996 and 1999 growth was particularly high in percentage terms in Lithuania, Romania (1997 to 1999), Estonia and Slovenia among the Candidate countries and also in Norway. See tables 2.11 and 2.12.

Table 2.12a: Developments in ICT services (1996 = 100)

	B	DK (1)	D (2)	EL	E (3)	F (4)	IRL (4)	I	L (5)	NL (6)	A (5)	P	FIN	S (4)	UK
<b>Turnover</b>															
1996	100.0	100.0	100.0	:	:	100.0	100.0	100.0	:	:	:	100.0	100.0	100.0	100.0
1997	106.1	118.9	97.9	:	:	106.5	136.7	106.2	100.0	100.0	100.0	111.2	113.9	109.1	144.0
1998	123.2	89.9	107.0	:	100.0	123.4	194.8	131.9	109.6	109.5	101.2	134.7	124.9	127.2	171.6
1999	136.6	104.1	116.2	:	117.5	138.1	:	135.4	150.1	:	108.6	137.1	136.6	139.2	190.2
<b>Value added at factor cost</b>															
1996	100.0	100.0	:	:	:	100.0	100.0	100.0	:	:	:	100.0	100.0	100.0	:
1997	96.0	124.4	:	:	:	104.3	148.3	103.6	100.0	100.0	100.0	105.8	111.3	112.9	:
1998	110.4	130.6	:	:	100.0	118.7	211.8	118.2	112.9	114.1	90.9	123.0	128.2	133.3	:
1999	122.5	136.5	:	:	86.0	136.6	:	118.1	168.1	:	97.2	138.0	143.1	152.5	:
<b>Number of persons employed</b>															
1996	100.0	100.0	100.0	:	:	100.0	100.0	100.0	:	:	:	100.0	100.0	:	:
1997	102.8	86.3	98.6	:	:	103.2	118.4	93.1	100.0	100.0	100.0	101.8	106.5	:	:
1998	109.3	110.5	97.0	:	100.0	111.2	171.7	103.2	112.9	112.7	76.3	107.8	118.0	:	:
1999	121.4	116.1	95.2	:	104.9	120.6	:	112.1	123.0	:	76.2	107.6	126.5	:	:
<b>Apparent labour productivity</b>															
1996	100.0	100.0	:	:	:	100.0	100.0	100.0	:	:	:	100.0	100.0	:	:
1997	93.4	144.2	:	:	:	101.1	125.3	111.2	100.0	100.0	100.0	103.9	104.6	:	:
1998	101.0	118.2	:	:	100.0	106.7	123.4	114.5	100.0	101.2	119.2	114.1	108.7	:	:
1999	100.9	117.5	:	:	82.0	113.3	:	105.3	136.7	:	127.6	128.2	113.1	:	:

(1) NACE Group 64.2 only. (2) Excluding NACE Group 64.2 and Division 72. (3) 1998 = 100. (4) Excluding NACE Group 64.2. (5) 1997 = 100. (6) Excluding NACE Group 64.2; 1997 = 100.

Source: Structural business statistics (NewCronos Theme4/SBS/Enterpr/enter\_ms), Eurostat

Table 2.12b: Developments in ICT services (1996 = 100)

	IS	NO (1)	CH (2)	BG (1)	CY (3)	CZ (4)	EE (5)	HU (6)	LV (7)	LT (4)	MT	PL (1)	RO (8)	SK (9)	SI (9)	TR
<b>Turnover</b>																
1996	:	100.0	:	100.0	100.0	100.0	100.0	:	:	100.0	:	100.0	:	100.0	100.0	:
1997	:	116.9	100.0	100.6	95.6	88.4	150.9	:	100.0	195.4	:	123.8	100.0	128.0	115.5	:
1998	:	:	132.5	163.5	108.2	86.1	187.1	100.0	167.0	164.2	:	138.9	147.5	159.1	147.7	:
1999	:	142.8	153.2	194.1	:	92.7	194.3	118.5	:	205.0	:	:	172.8	154.1	192.2	:
<b>Value added at factor cost</b>																
1996	:	100.0	:	:	100.0	:	100.0	:	:	100.0	:	100.0	:	100.0	100.0	:
1997	:	126.8	100.0	:	85.9	:	135.8	:	100.0	143.0	:	146.5	100.0	120.9	118.1	:
1998	:	:	109.6	:	95.4	:	195.4	100.0	176.3	198.9	:	177.5	160.0	143.3	146.8	:
1999	:	166.0	126.9	:	:	:	192.7	118.5	:	262.4	:	:	196.3	142.6	178.3	:
<b>Number of persons employed</b>																
1996	:	100.0	:	100.0	100.0	100.0	100.0	:	:	100.0	:	100.0	:	100.0	100.0	:
1997	:	105.9	100.0	103.8	105.6	103.4	94.0	:	100.0	106.8	:	126.5	100.0	103.6	112.8	:
1998	:	:	116.2	104.5	110.6	98.8	96.0	100.0	108.4	117.1	:	140.2	105.5	111.9	126.2	:
1999	:	141.7	135.9	117.4	:	96.0	93.6	101.9	:	137.4	:	:	111.3	106.6	144.7	:
<b>Apparent labour productivity</b>																
1996	:	100.0	:	:	100.0	:	100.0	:	:	100.0	:	100.0	:	100.0	100.0	:
1997	:	119.7	100.0	:	81.4	:	144.4	:	100.0	133.9	:	115.8	100.0	116.7	104.7	:
1998	:	:	94.3	:	86.3	:	203.5	100.0	162.5	169.9	:	126.6	151.7	128.1	116.3	:
1999	:	117.1	93.4	:	:	:	205.8	116.3	:	191.0	:	:	176.3	133.8	123.2	:

(1) Excluding NACE Group 64.2. (2) NACE Division 72 only; 1997 = 100. (3) Excluding NACE Group 64.2 and Division 72. (4) NACE Division 72 only.

(5) NACE Division 72 only; number of employees instead of number of persons employed. (6) NACE Group 64.2 and Division 72 only; 1998 = 100.

(7) Number of employees instead of number of persons employed; 1997 = 100. (8) 1997 = 100. (9) Number of employees instead of number of persons employed.

Source: Structural business statistics (NewCronos Theme4/SBS/Enterpr/enter\_ms & enter\_cc), Eurostat



## 2. THE ICT SECTOR

Table 2.13a: ICT manufacturing, 1999 (1)

	B	DK	D	EL	E (2)	F	IRL	I	L	NL	A (2)	P (2)	FIN	S	UK
<b>Turnover (million EUR)</b>															
NACE 30	190	305	14,993	:	4,001	15,141	14,628	8,305	:	3,198	418	86	1,149	706	23,731
NACE 30.01	22	21	2,009	:	65	1,409	:	624	:	:	38	0	7	316	2,379
NACE 30.02	168	284	12,984	:	3,936	13,732	:	7,681	:	:	380	86	1,142	390	21,352
NACE 31.3	317	:	4,479	:	1,481	2,803	420	2,160	0	753	445	390	367	889	2,726
NACE 32	3,983	2,230	37,296	:	6,553	34,517	5,221	10,947	:	:	7,306	2,784	14,251	17,972	34,248
NACE 32.1	797	399	10,875	:	1,252	13,375	3,834	3,101	0	579	1,955	959	455	1,036	9,209
NACE 32.2	1,338	1,060	15,805	:	2,627	17,687	1,229	6,797	0	121	4,131	893	13,645	16,107	18,395
NACE 32.3	1,849	772	10,617	:	2,673	3,455	158	1,049	:	:	1,220	932	150	829	6,644
NACE 33.2	304	643	15,604	:	1,632	9,708	368	3,002	129	1,248	477	63	521	2,581	9,931
NACE 33.3	207	46	1,671	:	443	2,577	49	2,014	:	225	78	81	306	399	1,368
<b>ICT manufacturing</b>	<b>5,001</b>	<b>:</b>	<b>74,044</b>	<b>:</b>	<b>14,110</b>	<b>64,746</b>	<b>20,687</b>	<b>26,427</b>	<b>:</b>	<b>:</b>	<b>8,723</b>	<b>3,403</b>	<b>16,593</b>	<b>22,546</b>	<b>72,004</b>
<b>Value added at factor cost (million EUR)</b>															
NACE 30	53	110	3,915	:	557	3,365	1,922	1,512	:	508	56	12	34	226	4,378
NACE 30.01	4	10	634	:	21	308	:	78	:	:	11	0	1	104	463
NACE 30.02	49	100	3,282	:	536	3,057	:	1,434	:	:	45	12	33	121	3,915
NACE 31.3	86	:	1,126	:	340	898	91	436	0	249	166	79	104	293	773
NACE 32	1,495	758	9,839	:	1,388	8,258	2,486	3,555	:	:	2,345	601	4,594	3,578	10,205
NACE 32.1	376	165	3,850	:	490	3,204	2,209	1,219	0	204	778	244	195	294	2,686
NACE 32.2	643	318	3,592	:	635	4,530	257	2,096	0	40	1,267	203	4,352	3,046	6,141
NACE 32.3	477	275	2,396	:	263	525	20	240	:	:	301	154	47	237	1,378
NACE 33.2	102	312	6,377	:	649	3,240	148	1,207	58	513	219	28	225	1,011	4,018
NACE 33.3	88	19	684	:	120	939	19	634	:	77	32	24	108	110	587
<b>ICT manufacturing</b>	<b>1,824</b>	<b>:</b>	<b>21,941</b>	<b>:</b>	<b>3,055</b>	<b>16,700</b>	<b>4,666</b>	<b>7,345</b>	<b>:</b>	<b>:</b>	<b>2,818</b>	<b>744</b>	<b>5,066</b>	<b>5,218</b>	<b>19,961</b>
<b>Number of persons employed</b>															
NACE 30	1,032	1,924	45,424	:	8,092	45,521	20,154	26,437	:	7,622	870	367	2,091	4,381	58,592
NACE 30.01	117	210	10,003	:	627	5,229	:	1,857	:	:	294	3	85	1,811	12,213
NACE 30.02	915	1,714	35,421	:	7,465	40,292	:	24,580	:	:	576	364	2,006	2,570	46,379
NACE 31.3	1,748	:	24,161	:	8,134	16,766	3,466	10,909	0	3,614	3,053	2,705	2,096	4,459	19,944
NACE 32	17,840	13,942	163,732	:	30,063	144,797	13,388	99,071	:	36,789	30,414	16,578	35,456	47,993	141,869
NACE 32.1	4,271	3,297	60,680	:	11,138	59,660	8,457	30,820	0	4,517	10,729	6,482	4,475	7,266	49,389
NACE 32.2	7,291	4,777	60,257	:	10,962	72,523	3,922	60,872	0	1,124	15,069	4,562	29,793	36,233	57,164
NACE 32.3	6,278	5,868	42,796	:	7,963	12,614	1,009	7,379	:	31,148	4,616	5,534	1,188	4,494	35,316
NACE 33.2	1,964	5,503	115,406	:	12,512	60,068	1,954	25,452	1,245	9,734	4,258	1,221	4,141	15,044	77,796
NACE 33.3	1,273	436	10,853	:	2,932	20,663	452	13,949	:	1,431	578	847	1,888	2,091	9,654
<b>ICT manufacturing</b>	<b>23,857</b>	<b>:</b>	<b>359,576</b>	<b>:</b>	<b>61,733</b>	<b>287,815</b>	<b>39,414</b>	<b>175,818</b>	<b>:</b>	<b>59,190</b>	<b>39,173</b>	<b>21,718</b>	<b>45,672</b>	<b>73,968</b>	<b>307,855</b>
<b>Apparent labour productivity (thousand EUR)</b>															
NACE 30	51.2	57.1	86.2	:	68.9	73.9	95.3	57.2	:	66.6	64.7	33.5	16.5	51.5	74.7
NACE 30.01	34.2	46.7	63.3	:	33.3	58.9	:	42.1	:	:	37.4	0.0	14.1	57.5	37.9
NACE 30.02	53.3	58.3	92.7	:	71.9	75.9	:	58.3	:	:	78.6	33.8	16.6	47.2	84.4
NACE 31.3	49.0	:	46.6	:	41.8	53.5	26.3	40.0	:	69.0	54.4	29.4	49.7	65.8	38.7
NACE 32	83.8	54.4	60.1	:	46.2	57.0	185.7	35.9	:	:	77.1	36.2	129.6	74.5	71.9
NACE 32.1	88.0	50.2	63.4	:	44.0	53.7	261.2	39.5	:	45.1	72.5	37.7	43.6	40.5	54.4
NACE 32.2	88.2	66.5	59.6	:	57.9	62.5	65.6	34.4	:	35.9	84.1	44.5	146.1	84.1	107.4
NACE 32.3	75.9	46.9	56.0	:	33.1	41.6	20.2	32.5	:	:	65.2	27.8	39.3	52.8	39.0
NACE 33.2	52.0	56.8	55.3	:	51.9	53.9	75.7	47.4	46.7	52.7	51.4	23.0	54.4	67.2	51.6
NACE 33.3	69.0	42.7	63.0	:	41.0	45.5	41.2	45.5	:	53.9	54.7	28.0	57.1	52.7	60.8
<b>ICT manufacturing</b>	<b>76.4</b>	<b>:</b>	<b>61.0</b>	<b>:</b>	<b>49.5</b>	<b>58.0</b>	<b>118.4</b>	<b>41.8</b>	<b>:</b>	<b>:</b>	<b>71.9</b>	<b>34.3</b>	<b>110.9</b>	<b>70.5</b>	<b>64.8</b>

(1) For a list of NACE Divisions, Groups and Classes please refer to page 78. (2) 2000.

Source: Structural business statistics (NewCronos Theme4/SBS/Enterpr/enter\_ms), Eurostat

Several Member States, notably the smaller ones, show a high degree of specialisation in specific ICT manufacturing activities. Most notable are the importance of radio and television transmitters (NACE Group 32.2) in Finland, Sweden and Austria and of electronic components (NACE Group 32.1) and office machinery and computers (NACE Division 30) in Ireland.

Among the Candidate countries and Norway there is less evidence of a specialisation within ICT manufacturing. Radio and television transmitters (NACE Group 32.2) was one example in Latvia and the manufacture of insulated wire and cable in Slovakia another; in both cases these activities accounted for more than two-fifths of ICT manufacturing value added and office machinery and computers (NACE Division 30) was close to this level in Hungary. See tables 2.13 and 2.14.

Table 2.13b: ICT manufacturing, 1999 (1)

	IS	NO (2)	CH	BG	CY (2)	CZ	EE (3)	HU	LV (2)	LT	MT	PL (2)	RO	SK (3)	SI (4)	TR
<b>Turnover (million EUR)</b>																
NACE 30	:	241	:	39	:	127	29	2,805	15	8	:	383	106	27	161	:
NACE 30.01	:	:	:	:	:	:	:	14	0	:	:	35	:	:	3	:
NACE 30.02	:	:	:	:	:	:	:	2,791	15	:	:	348	:	:	158	:
NACE 31.3	:	319	:	50	6	278	:	183	0	:	:	710	:	164	5	:
NACE 32	:	708	3,503	34	0	795	40	2,820	30	134	:	2,035	232	144	335	:
NACE 32.1	:	270	:	11	:	322	:	811	:	:	:	147	:	78	130	:
NACE 32.2	:	349	:	19	0	245	:	347	13	:	:	763	:	38	148	:
NACE 32.3	:	89	:	4	:	229	:	1,662	:	:	:	1,126	:	28	57	:
NACE 33.2	:	436	:	17	:	326	:	244	10	:	:	482	:	106	186	:
NACE 33.3	:	334	:	4	:	99	:	60	0	:	:	294	:	69	44	:
<b>ICT manufacturing</b>	:	<b>2,038</b>	:	<b>143</b>	:	<b>1,625</b>	:	<b>6,113</b>	<b>55</b>	:	:	<b>3,904</b>	:	<b>510</b>	<b>731</b>	:
<b>Value added at factor cost (million EUR)</b>																
NACE 30	:	50	:	7	:	:	2	332	3	1	:	65	12	6	19	:
NACE 30.01	:	:	:	:	:	:	:	6	0	:	:	9	:	:	1	:
NACE 30.02	:	:	:	:	:	:	:	326	3	:	:	56	:	:	18	:
NACE 31.3	:	79	:	8	2	:	:	59	0	:	:	205	:	43	2	:
NACE 32	:	236	1,337	13	0	:	19	360	9	38	:	553	74	24	86	:
NACE 32.1	:	98	:	4	:	:	:	178	:	:	:	64	:	15	42	:
NACE 32.2	:	102	:	7	0	:	:	93	7	:	:	270	:	8	36	:
NACE 32.3	:	35	:	1	:	:	:	89	:	:	:	219	:	1	8	:
NACE 33.2	:	164	:	6	:	:	:	75	4	:	:	274	:	18	68	:
NACE 33.3	:	86	:	1	:	:	:	16	0	:	:	114	:	14	12	:
<b>ICT manufacturing</b>	:	<b>614</b>	:	<b>35</b>	:	:	:	<b>842</b>	<b>16</b>	:	:	<b>1,209</b>	:	<b>104</b>	<b>186</b>	:
<b>Number of persons employed</b>																
NACE 30	:	814	:	4,026	:	2,609	167	11,418	120	578	:	4,865	3,022	1,417	1,021	:
NACE 30.01	:	34	:	:	:	:	:	525	0	:	:	339	:	:	66	:
NACE 30.02	:	780	:	:	:	:	:	10,893	120	:	:	4,526	:	:	955	:
NACE 31.3	:	1,488	:	2,384	75	7,364	:	6,251	0	:	:	13,716	:	7,685	134	:
NACE 32	:	4,243	19,038	6,147	7	27,054	3,542	29,818	3,292	8,071	:	40,139	12,664	8,593	6,280	:
NACE 32.1	:	2,031	:	2,460	:	16,942	:	18,863	:	:	:	9,342	:	4,442	3,846	:
NACE 32.2	:	1,487	:	2,867	7	6,824	:	2,829	2,112	:	:	14,641	:	2,433	1,743	:
NACE 32.3	:	725	:	820	:	3,288	:	8,126	:	:	:	16,156	:	1,718	691	:
NACE 33.2	:	2,892	:	2,839	:	12,893	:	5,681	262	:	:	15,293	:	3,250	4,645	:
NACE 33.3	:	1,031	:	760	:	2,146	:	985	44	:	:	12,232	:	1,448	581	:
<b>ICT manufacturing</b>	:	<b>10,468</b>	:	<b>16,156</b>	<b>82</b>	<b>52,066</b>	:	<b>54,153</b>	<b>3,718</b>	:	:	<b>86,245</b>	:	<b>22,393</b>	<b>12,661</b>	:
<b>Apparent labour productivity (thousand EUR)</b>																
NACE 30	:	61.8	:	1.8	:	:	:	29.1	25.8	0.9	:	13.4	3.9	:	:	:
NACE 30.01	:	:	:	:	:	:	:	10.9	:	:	:	27.7	:	:	:	:
NACE 30.02	:	:	:	:	:	:	:	29.9	25.8	:	:	12.3	:	:	:	:
NACE 31.3	:	52.9	:	3.3	21.3	:	:	9.4	:	:	:	14.9	:	:	:	:
NACE 32	:	55.5	70.2	2.0	14.3	:	:	12.1	2.7	4.7	:	13.8	5.9	:	:	:
NACE 32.1	:	48.3	:	1.5	:	:	:	9.4	:	:	:	6.9	:	:	:	:
NACE 32.2	:	68.7	:	2.6	14.3	:	:	33.0	3.1	:	:	18.4	:	:	:	:
NACE 32.3	:	48.7	:	1.6	:	:	:	11.0	:	:	:	13.5	:	:	:	:
NACE 33.2	:	56.6	:	2.2	:	:	:	13.1	14.9	:	:	17.9	:	:	:	:
NACE 33.3	:	83.3	:	1.4	:	:	:	16.5	0.0	:	:	9.3	:	:	:	:
<b>ICT manufacturing</b>	:	<b>58.7</b>	:	<b>2.2</b>	:	:	:	<b>15.5</b>	<b>4.3</b>	:	:	<b>14.0</b>	:	:	:	:

(1) For a list of NACE Divisions, Groups and Classes please refer to page 78. (2) 1998. (3) Number of employees instead of number of persons employed. (4) Number of employees instead of number of persons employed; 1998.

Source: Structural business statistics (NewCronos Theme4/SBS/Enterpr/enter\_ms & enter\_cc), Eurostat

## 2. THE ICT SECTOR

Table 2.14a: Share of activities in ICT manufacturing, 1999 (%) (1)

	B	DK	D	EL	E (2)	F	IRL	I	L	NL	A (2)	P (2)	FIN	S	UK
<b>Turnover</b>															
NACE 30	3.8	:	20.2	:	28.4	23.4	70.7	31.4	:	:	4.8	2.5	6.9	3.1	33.0
NACE 30.01	0.4	:	2.7	:	0.5	2.2	:	2.4	:	:	0.4	0.0	0.0	1.4	3.3
NACE 30.02	3.4	:	17.5	:	27.9	21.2	:	29.1	:	:	4.4	2.5	6.9	1.7	29.7
NACE 31.3	6.3	:	6.0	:	10.5	4.3	2.0	8.2	:	:	5.1	11.4	2.2	3.9	3.8
NACE 32	79.7	:	50.4	:	46.4	53.3	25.2	41.4	:	:	83.7	81.8	85.9	79.7	47.6
NACE 32.1	15.9	:	14.7	:	8.9	20.7	18.5	11.7	:	:	22.4	28.2	2.7	4.6	12.8
NACE 32.2	26.7	:	21.3	:	18.6	27.3	5.9	25.7	:	:	47.4	26.2	82.2	71.4	25.5
NACE 32.3	37.0	:	14.3	:	18.9	5.3	0.8	4.0	:	:	14.0	27.4	0.9	3.7	9.2
NACE 33.2	6.1	:	21.1	:	11.6	15.0	1.8	11.4	:	:	5.5	1.8	3.1	11.4	13.8
NACE 33.3	4.1	:	2.3	:	3.1	4.0	0.2	7.6	:	:	0.9	2.4	1.8	1.8	1.9
<b>ICT manufacturing</b>	<b>100.0</b>	<b>:</b>	<b>100.0</b>	<b>:</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>:</b>	<b>:</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Value added at factor cost</b>															
NACE 30	2.9	:	17.8	:	18.2	20.2	41.2	20.6	:	:	2.0	1.7	0.7	4.3	21.9
NACE 30.01	0.2	:	2.9	:	0.7	1.8	:	1.1	:	:	0.4	0.0	0.0	2.0	2.3
NACE 30.02	2.7	:	15.0	:	17.6	18.3	:	19.5	:	:	1.6	1.7	0.7	2.3	19.6
NACE 31.3	4.7	:	5.1	:	11.1	5.4	2.0	5.9	:	:	5.9	10.7	2.1	5.6	3.9
NACE 32	82.0	:	44.8	:	45.4	49.4	53.3	48.4	:	:	83.2	80.7	90.7	68.6	51.1
NACE 32.1	20.6	:	17.5	:	16.0	19.2	47.3	16.6	:	:	27.6	32.8	3.9	5.6	13.5
NACE 32.2	35.2	:	16.4	:	20.8	27.1	5.5	28.5	:	:	44.9	27.3	85.9	58.4	30.8
NACE 32.3	26.1	:	10.9	:	8.6	3.1	0.4	3.3	:	:	10.7	20.7	0.9	4.5	6.9
NACE 33.2	5.6	:	29.1	:	21.3	19.4	3.2	16.4	:	:	7.8	3.8	4.4	19.4	20.1
NACE 33.3	4.8	:	3.1	:	3.9	5.6	0.4	8.6	:	:	1.1	3.2	2.1	2.1	2.9
<b>ICT manufacturing</b>	<b>100.0</b>	<b>:</b>	<b>100.0</b>	<b>:</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>:</b>	<b>:</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Number of persons employed</b>															
NACE 30	4.3	:	12.6	:	13.1	15.8	51.1	15.0	:	12.9	2.2	1.7	4.6	5.9	19.0
NACE 30.01	0.5	:	2.8	:	1.0	1.8	:	1.1	:	:	0.8	0.0	0.2	2.4	4.0
NACE 30.02	3.8	:	9.9	:	12.1	14.0	:	14.0	:	:	1.5	1.7	4.4	3.5	15.1
NACE 31.3	7.3	:	6.7	:	13.2	5.8	8.8	6.2	:	6.1	7.8	12.5	4.6	6.0	6.5
NACE 32	74.8	:	45.5	:	48.7	50.3	34.0	56.3	:	62.2	77.6	76.3	77.6	64.9	46.1
NACE 32.1	17.9	:	16.9	:	18.0	20.7	21.5	17.5	:	7.6	27.4	29.8	9.8	9.8	16.0
NACE 32.2	30.6	:	16.8	:	17.8	25.2	10.0	34.6	:	1.9	38.5	21.0	65.2	49.0	18.6
NACE 32.3	26.3	:	11.9	:	12.9	4.4	2.6	4.2	:	52.6	11.8	25.5	2.6	6.1	11.5
NACE 33.2	8.2	:	32.1	:	20.3	20.9	5.0	14.5	:	16.4	10.9	5.6	9.1	20.3	25.3
NACE 33.3	5.3	:	3.0	:	4.7	7.2	1.1	7.9	:	2.4	1.5	3.9	4.1	2.8	3.1
<b>ICT manufacturing</b>	<b>100.0</b>	<b>:</b>	<b>100.0</b>	<b>:</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>:</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Apparent labour productivity (ICT manufacturing = 100)</b>															
NACE 30	66.9	:	141.3	:	139.2	127.4	80.5	136.9	:	:	90.0	97.8	14.8	73.0	115.2
NACE 30.01	44.7	:	103.8	:	67.4	101.5	:	100.7	:	:	52.0	0.0	12.7	81.6	58.4
NACE 30.02	69.8	:	151.8	:	145.2	130.8	:	139.7	:	:	109.3	98.6	14.9	67.0	130.2
NACE 31.3	64.1	:	76.4	:	84.4	92.3	22.3	95.7	:	:	75.6	85.6	44.8	93.2	59.8
NACE 32	109.6	:	98.5	:	93.3	98.3	156.9	85.9	:	:	107.2	105.7	116.8	105.7	110.9
NACE 32.1	115.2	:	104.0	:	88.9	92.5	220.6	94.7	:	:	100.8	109.9	39.3	57.4	83.9
NACE 32.2	115.3	:	97.7	:	117.1	107.6	55.4	82.4	:	:	116.8	129.8	131.7	119.2	165.7
NACE 32.3	99.3	:	91.8	:	66.8	71.7	17.1	77.9	:	:	90.6	81.0	35.4	74.9	60.2
NACE 33.2	68.1	:	90.6	:	104.9	93.0	63.9	113.5	:	:	71.5	67.2	49.1	95.3	79.7
NACE 33.3	90.3	:	103.3	:	82.9	78.3	34.8	108.8	:	:	76.0	81.6	51.5	74.6	93.8
<b>ICT manufacturing</b>	<b>100.0</b>	<b>:</b>	<b>100.0</b>	<b>:</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>:</b>	<b>:</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(1) For a list of NACE Divisions, Groups and Classes please refer to page 78. (2) 2000.

Source: Structural business statistics (NewCronos Theme4/SBS/Enterpr/enter\_ms), Eurostat

Table 2.14b: Share of activities in ICT manufacturing, 1999 (%) (1)

	IS	NO (2)	CH	BG	CY (2)	CZ	EE	HU	LV (2)	LT	MT	PL (2)	RO	SK (3)	SI (4)	TR
<b>Turnover</b>																
NACE 30	:	11.8	:	27.3	:	7.8	:	45.9	27.8	:	:	9.8	:	5.4	22.0	:
NACE 30.01	:	:	:	:	:	:	:	0.2	0.0	:	:	0.9	:	:	0.4	:
NACE 30.02	:	:	:	:	:	:	:	45.7	27.8	:	:	8.9	:	:	21.6	:
NACE 31.3	:	15.7	:	34.6	:	17.1	:	3.0	0.0	:	:	18.2	:	32.2	0.7	:
NACE 32	:	34.7	:	23.4	:	48.9	:	46.1	54.5	:	:	52.1	:	28.2	45.8	:
NACE 32.1	:	13.2	:	7.7	:	19.8	:	13.3	:	:	:	3.8	:	15.3	17.7	:
NACE 32.2	:	17.1	:	13.0	:	15.1	:	5.7	22.9	:	:	19.5	:	7.4	20.3	:
NACE 32.3	:	4.3	:	2.7	:	14.1	:	27.2	:	:	:	28.8	:	5.5	7.8	:
NACE 33.2	:	21.4	:	11.7	:	20.0	:	4.0	17.6	:	:	12.3	:	20.7	25.4	:
NACE 33.3	:	16.4	:	2.9	:	6.1	:	1.0	0.0	:	:	7.5	:	13.5	6.1	:
<b>ICT manufacturing</b>	:	<b>100.0</b>	:	<b>100.0</b>	:	<b>100.0</b>	:	<b>100.0</b>	<b>100.0</b>	:	:	<b>100.0</b>	:	<b>100.0</b>	<b>100.0</b>	:
<b>Value added at factor cost</b>																
NACE 30	:	8.2	:	20.7	:	:	:	39.4	19.4	:	:	5.4	:	5.6	10.0	:
NACE 30.01	:	:	:	:	:	:	:	0.7	0.0	:	:	0.8	:	:	0.5	:
NACE 30.02	:	:	:	:	:	:	:	38.7	19.4	:	:	4.6	:	:	9.5	:
NACE 31.3	:	12.8	:	22.4	:	:	:	7.0	0.0	:	:	16.9	:	41.0	1.0	:
NACE 32	:	38.4	:	35.9	:	:	:	42.8	56.3	:	:	45.7	:	23.1	46.1	:
NACE 32.1	:	16.0	:	10.9	:	:	:	21.1	:	:	:	5.3	:	14.0	22.4	:
NACE 32.2	:	16.6	:	21.3	:	:	:	11.1	40.6	:	:	22.3	:	7.8	19.4	:
NACE 32.3	:	5.7	:	3.7	:	:	:	10.6	:	:	:	18.1	:	1.3	4.4	:
NACE 33.2	:	26.6	:	17.8	:	:	:	8.9	24.4	:	:	22.6	:	16.8	36.6	:
NACE 33.3	:	14.0	:	3.2	:	:	:	1.9	0.0	:	:	9.4	:	13.6	6.3	:
<b>ICT manufacturing</b>	:	<b>100.0</b>	:	<b>100.0</b>	:	:	:	<b>100.0</b>	<b>100.0</b>	:	:	<b>100.0</b>	:	<b>100.0</b>	<b>100.0</b>	:
<b>Number of persons employed</b>																
NACE 30	:	7.8	:	24.9	:	5.0	:	21.1	3.2	:	:	5.6	:	6.3	8.1	:
NACE 30.01	:	0.3	:	:	:	:	:	1.0	0.0	:	:	0.4	:	:	0.5	:
NACE 30.02	:	7.5	:	:	:	:	:	20.1	3.2	:	:	5.2	:	:	7.5	:
NACE 31.3	:	14.2	:	14.8	91.5	14.1	:	11.5	0.0	:	:	15.9	:	34.3	1.1	:
NACE 32	:	40.5	:	38.0	8.5	52.0	:	55.1	88.5	:	:	46.5	:	38.4	49.6	:
NACE 32.1	:	19.4	:	15.2	:	32.5	:	34.8	:	:	:	10.8	:	19.8	30.4	:
NACE 32.2	:	14.2	:	17.7	8.5	13.1	:	5.2	56.8	:	:	17.0	:	10.9	13.8	:
NACE 32.3	:	6.9	:	5.1	:	6.3	:	15.0	:	:	:	18.7	:	7.7	5.5	:
NACE 33.2	:	27.6	:	17.6	:	24.8	:	10.5	7.0	:	:	17.7	:	14.5	36.7	:
NACE 33.3	:	9.8	:	4.7	:	4.1	:	1.8	1.2	:	:	14.2	:	6.5	4.6	:
<b>ICT manufacturing</b>	:	<b>100.0</b>	:	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	:	<b>100.0</b>	<b>100.0</b>	:	:	<b>100.0</b>	:	<b>100.0</b>	<b>100.0</b>	:
<b>Apparent labour productivity (ICT manufacturing = 100)</b>																
NACE 30	:	105.3	:	83.0	:	:	:	186.9	600.3	:	:	95.3	:	:	:	:
NACE 30.01	:	:	:	:	:	:	:	69.9	:	:	:	197.8	:	:	:	:
NACE 30.02	:	:	:	:	:	:	:	192.6	600.3	:	:	87.6	:	:	:	:
NACE 31.3	:	90.2	:	151.9	:	:	:	60.4	:	:	:	106.3	:	:	:	:
NACE 32	:	94.7	:	94.4	:	:	:	77.7	63.5	:	:	98.2	:	:	:	:
NACE 32.1	:	82.3	:	71.7	:	:	:	60.7	:	:	:	48.9	:	:	:	:
NACE 32.2	:	117.2	:	119.8	:	:	:	212.2	71.5	:	:	131.6	:	:	:	:
NACE 32.3	:	83.0	:	73.6	:	:	:	70.6	:	:	:	96.5	:	:	:	:
NACE 33.2	:	96.4	:	101.4	:	:	:	84.5	345.9	:	:	127.6	:	:	:	:
NACE 33.3	:	142.0	:	67.2	:	:	:	106.5	0.0	:	:	66.2	:	:	:	:
<b>ICT manufacturing</b>	:	<b>100.0</b>	:	<b>100.0</b>	:	:	:	<b>100.0</b>	<b>100.0</b>	:	:	<b>100.0</b>	:	:	:	:

(1) For a list of NACE Divisions, Groups and Classes please refer to page 78. (2) 1998. (3) Number of employees instead of number of persons employed. (4) Number of employees instead of number of persons employed; 1998.

Source: Structural business statistics (NewCronos Theme4/SBS/Enterpr/enter\_ms & enter\_cc), Eurostat

## 2. THE ICT SECTOR

Table 2.15a: ICT services, 1999 (1)

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
<b>Turnover (million EUR)</b>															
NACE 51.43	4,997	3,261	35,125	:	11,706	9,143	1,126	20,196	191	5,105	3,091	2,334	858	6,054	23,946
NACE 51.64	8,089	7,887	40,893	:	9,180	27,938	1,255	12,157	611	40,167	5,062	2,224	3,568	9,615	41,382
NACE 51.65	10,085	5,820	22,004	:	18,924	51,746	969	8,123	970	19,101	6,080	2,256	5,085	9,142	44,069
NACE 64.2	7,219	3,816	40,065	:	18,230	:	:	28,094	818	:	5,583	4,632	4,094	:	55,067
NACE 72	5,503	4,571	34,293	:	8,949	31,710	:	22,498	461	:	3,674	1,477	2,942	10,986	58,264
<b>ICT services</b>	<b>35,892</b>	<b>25,355</b>	<b>172,380</b>	:	<b>66,990</b>			<b>91,067</b>	<b>3,052</b>		<b>23,490</b>	<b>12,922</b>	<b>16,548</b>		<b>222,727</b>
<b>Value added at factor cost (million EUR)</b>															
NACE 51.43	431	321	5,060	:	1,175	806	197	2,365	37	627	480	280	83	718	3,707
NACE 51.64	1,424	1,283	10,525	:	899	3,933	331	1,810	129	4,869	995	300	517	1,609	8,210
NACE 51.65	1,784	1,276	4,910	:	3,522	8,286	184	1,625	152	3,911	1,269	432	1,057	1,683	10,114
NACE 64.2	3,744	2,330	29,099	:	7,455	:	:	14,441	567	:	2,555	2,514	1,886	:	26,402
NACE 72	2,348	2,122	27,229	:	3,599	15,387	:	9,939	196	:	1,562	595	1,480	4,977	33,945
<b>ICT services</b>	<b>9,731</b>	<b>7,331</b>	<b>76,823</b>	:	<b>16,650</b>			<b>30,180</b>	<b>1,080</b>		<b>6,861</b>	<b>4,122</b>	<b>5,024</b>		<b>82,379</b>
<b>Number of persons employed</b>															
NACE 51.43	7,847	4,509	77,852	:	32,130	14,300	3,105	45,889	406	11,243	8,251	9,801	1,557	12,460	46,711
NACE 51.64	20,231	22,254	77,352	:	24,009	72,194	5,230	36,526	1,520	:	13,214	8,922	8,133	25,972	109,620
NACE 51.65	28,073	22,008	74,961	:	77,833	155,102	3,386	31,240	1,697	:	22,117	17,327	17,229	30,082	139,434
NACE 64.2	31,041	20,538	:	:	74,372	:	:	105,296	907	49,633	24,441	21,225	19,444	:	230,077
NACE 72	39,496	34,724	349,000	:	113,293	262,097	:	263,694	3,411	:	27,684	14,979	25,461	86,716	507,216
<b>ICT services</b>	<b>126,688</b>	<b>104,033</b>			<b>321,637</b>			<b>482,645</b>	<b>7,941</b>		<b>95,707</b>	<b>72,254</b>	<b>71,824</b>		<b>1,033,058</b>
<b>Apparent labour productivity (thousand EUR)</b>															
NACE 51.43	54.9	71.1	65.0	:	36.6	56.4	63.5	51.5	90.1	55.8	58.2	28.6	53.4	57.6	79.4
NACE 51.64	70.4	57.6	136.1	:	37.4	54.5	63.4	49.6	84.9	:	75.3	33.6	63.6	61.9	74.9
NACE 51.65	63.5	58.0	65.5	:	45.3	53.4	54.3	52.0	89.5	:	57.4	24.9	61.4	56.0	72.5
NACE 64.2	120.6	113.4	:	:	100.2	:	:	137.1	624.7	:	104.5	118.4	97.0	:	114.8
NACE 72	59.5	61.1	78.0	:	31.8	58.7	:	37.7	57.5	:	56.4	39.7	58.1	57.4	66.9
<b>ICT services</b>	<b>76.8</b>	<b>70.5</b>			<b>51.8</b>			<b>62.5</b>	<b>136.0</b>		<b>71.7</b>	<b>57.0</b>	<b>69.9</b>		<b>79.7</b>

(1) For a list of NACE Divisions, Groups and Classes please refer to page 78.

Source: Structural business statistics (NewCronos Theme4/SBS/Enterpr/enter\_ms), Eurostat

Table 2.15b: ICT services, 1999 (1)

	IS	NO	CH	BG	CY (2)	CZ	EE (3)	HU (2)	LV (2)	LT	MT	PL (2)	RO	SK (3)	SI (3)	TR
<b>Turnover (million EUR)</b>																
NACE 51.43	:	2,223	:	127	110	:	:	266	126	:	:	1,304	245	130	149	:
NACE 51.64	:	5,525	:	192	54	:	:	191	142	:	:	701	187	144	120	:
NACE 51.65	:	5,057	:	243	30	:	:	173	82	:	:	815	113	105	53	:
NACE 64.2	:	:	:	:	:	:	:	2,032	291	:	:	:	1,398	701	636	:
NACE 72	:	4,421	7,264	69	:	1,389	76	617	48	62	:	1,457	167	179	343	:
<b>ICT services</b>	:							<b>3,278</b>	<b>690</b>				<b>2,110</b>	<b>1,259</b>	<b>1,301</b>	
<b>Value added at factor cost (million EUR)</b>																
NACE 51.43	:	224	:	7	18	:	:	27	34	:	:	136	38	10	15	:
NACE 51.64	:	878	:	14	11	:	:	30	23	:	:	101	25	14	15	:
NACE 51.65	:	947	:	13	8	:	:	21	14	:	:	153	5	8	8	:
NACE 64.2	:	:	:	:	:	:	:	1,084	193	:	:	:	777	345	125	:
NACE 72	:	1,944	3,835	19	:	:	21	164	27	24	:	548	51	69	98	:
<b>ICT services</b>	:							<b>1,326</b>	<b>291</b>				<b>896</b>	<b>447</b>	<b>260</b>	
<b>Number of persons employed</b>																
NACE 51.43	:	3,201	:	2,398	907	:	:	1,459	1,150	:	:	9,197	9,493	784	577	:
NACE 51.64	:	15,250	:	3,699	449	:	:	1,300	826	:	:	4,513	3,917	1,434	653	:
NACE 51.65	:	16,797	:	4,178	336	:	:	1,337	920	:	:	5,377	2,287	719	354	:
NACE 64.2	:	11,300	:	:	:	:	:	22,600	7,518	:	:	:	68,383	16,484	3,980	:
NACE 72	:	32,049	44,038	7,705	:	35,284	1,903	10,738	2,327	3,117	:	45,315	19,409	4,692	4,181	:
<b>ICT services</b>	:	<b>78,597</b>						<b>37,434</b>	<b>12,741</b>				<b>103,489</b>	<b>24,113</b>	<b>9,745</b>	
<b>Apparent labour productivity (thousand EUR)</b>																
NACE 51.43	:	70.1	:	3.0	20.3	:	:	18.8	29.3	:	:	14.7	4.0	:	:	:
NACE 51.64	:	57.6	:	3.7	23.6	:	:	22.8	28.2	:	:	22.5	6.4	:	:	:
NACE 51.65	:	56.4	:	3.1	24.7	:	:	15.9	15.5	:	:	28.5	2.2	:	:	:
NACE 64.2	:	:	:	:	:	:	:	47.9	25.7	:	:	:	11.4	:	:	:
NACE 72	:	60.7	87.1	2.4	:	:	:	15.3	11.4	7.8	:	12.1	2.6	:	:	:
<b>ICT services</b>	:							<b>35.4</b>	<b>22.9</b>				<b>8.7</b>			

(1) For a list of NACE Divisions, Groups and Classes please refer to page 78. (2) 1998. (3) Number of employees instead of number of persons employed.

Source: Structural business statistics (NewCronos Theme4/SBS/Enterpr/enter\_ms & enter\_cc), Eurostat

Specialisation in particular ICT services in EU Member States is less clear than in ICT manufacturing because data are not available or less complete for several Member States. Nevertheless it is clear that telecommunications services (NACE Group 64.2) is the largest sector in value added terms in nearly all of the Member States for which data are available.

The only exception to this is the United Kingdom where computer services (NACE Division 72) accounts for nearly half of ICT services value added.

Table 2.16a: Share of activities in ICT services, 1999 (%) (1)

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
<b>Turnover</b>															
NACE 51.43	13.9	12.9	20.4	:	17.5	:	:	22.2	6.2	:	13.2	18.1	5.2	:	10.8
NACE 51.64	22.5	31.1	23.7	:	13.7	:	:	13.3	20.0	:	21.5	17.2	21.6	:	18.6
NACE 51.65	28.1	23.0	12.8	:	28.2	:	:	8.9	31.8	:	25.9	17.5	30.7	:	19.8
NACE 64.2	20.1	15.0	23.2	:	27.2	:	:	30.8	26.8	:	23.8	35.8	24.7	:	24.7
NACE 72	15.3	18.0	19.9	:	13.4	:	:	24.7	15.1	:	15.6	11.4	17.8	:	26.2
<b>ICT services</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>:</b>	<b>100.0</b>	<b>:</b>	<b>:</b>	<b>100.0</b>	<b>100.0</b>	<b>:</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>:</b>	<b>100.0</b>
<b>Value added at factor cost</b>															
NACE 51.43	4.4	4.4	6.6	:	7.1	:	:	7.8	3.4	:	7.0	6.8	1.7	:	4.5
NACE 51.64	14.6	17.5	13.7	:	5.4	:	:	6.0	12.0	:	14.5	7.3	10.3	:	10.0
NACE 51.65	18.3	17.4	6.4	:	21.2	:	:	5.4	14.1	:	18.5	10.5	21.0	:	12.3
NACE 64.2	38.5	31.8	37.9	:	44.8	:	:	47.9	52.5	:	37.2	61.0	37.6	:	32.0
NACE 72	24.1	28.9	35.4	:	21.6	:	:	32.9	18.1	:	22.8	14.4	29.5	:	41.2
<b>ICT services</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>:</b>	<b>100.0</b>	<b>:</b>	<b>:</b>	<b>100.0</b>	<b>100.0</b>	<b>:</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>:</b>	<b>100.0</b>
<b>Number of persons employed</b>															
NACE 51.43	6.2	4.3	:	:	10.0	:	:	9.5	5.1	:	8.6	13.6	2.2	:	4.5
NACE 51.64	16.0	21.4	:	:	7.5	:	:	7.6	19.1	:	13.8	12.3	11.3	:	10.6
NACE 51.65	22.2	21.2	:	:	24.2	:	:	6.5	21.4	:	23.1	24.0	24.0	:	13.5
NACE 64.2	24.5	19.7	:	:	23.1	:	:	21.8	11.4	:	25.5	29.4	27.1	:	22.3
NACE 72	31.2	33.4	:	:	35.2	:	:	54.6	43.0	:	28.9	20.7	35.4	:	49.1
<b>ICT services</b>	<b>100.0</b>	<b>100.0</b>	<b>:</b>	<b>:</b>	<b>100.0</b>	<b>:</b>	<b>:</b>	<b>100.0</b>	<b>100.0</b>	<b>:</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>:</b>	<b>100.0</b>
<b>Apparent labour productivity (ICT services = 100)</b>															
NACE 51.43	71.5	100.9	:	:	70.6	:	:	82.4	66.3	:	81.2	50.1	76.4	:	99.5
NACE 51.64	91.7	81.8	:	:	72.3	:	:	79.3	62.4	:	105.0	59.0	90.9	:	93.9
NACE 51.65	82.7	82.3	:	:	87.4	:	:	83.2	65.8	:	80.0	43.7	87.7	:	91.0
NACE 64.2	157.0	161.0	:	:	193.6	:	:	219.3	459.2	:	145.8	207.6	138.7	:	143.9
NACE 72	77.4	86.7	:	:	61.4	:	:	60.3	42.2	:	78.7	69.7	83.1	:	83.9
<b>ICT services</b>	<b>100.0</b>	<b>100.0</b>	<b>:</b>	<b>:</b>	<b>100.0</b>	<b>:</b>	<b>:</b>	<b>100.0</b>	<b>100.0</b>	<b>:</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>:</b>	<b>100.0</b>

(1) For a list of NACE Divisions, Groups and Classes please refer to page 78.

Source: Structural business statistics (NewCronos Theme4/SBS/Enterpr/enter\_ms), Eurostat

Table 2.16b: Share of activities in ICT services, 1999 (%) (1)

	IS	NO	CH	BG	CY	CZ	EE	HU (2)	LV (2)	LT	MT	PL	RO	SK (3)	SI (3)	TR
<b>Turnover</b>																
NACE 51.43	:	:	:	:	:	:	:	8.1	18.3	:	:	:	11.6	10.3	11.4	:
NACE 51.64	:	:	:	:	:	:	:	5.8	20.6	:	:	:	8.9	11.5	9.2	:
NACE 51.65	:	:	:	:	:	:	:	5.3	11.9	:	:	:	5.3	8.3	4.1	:
NACE 64.2	:	:	:	:	:	:	:	62.0	42.2	:	:	:	66.3	55.6	48.9	:
NACE 72	:	:	:	:	:	:	:	18.8	7.0	:	:	:	7.9	14.2	26.4	:
<b>ICT services</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>100.0</b>	<b>100.0</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>:</b>
<b>Value added at factor cost</b>																
NACE 51.43	:	:	:	:	:	:	:	2.1	11.6	:	:	:	4.2	2.3	5.8	:
NACE 51.64	:	:	:	:	:	:	:	2.2	8.0	:	:	:	2.8	3.1	5.6	:
NACE 51.65	:	:	:	:	:	:	:	1.6	4.9	:	:	:	0.6	1.8	3.0	:
NACE 64.2	:	:	:	:	:	:	:	81.7	66.4	:	:	:	86.7	77.3	48.1	:
NACE 72	:	:	:	:	:	:	:	12.4	9.1	:	:	:	5.7	15.5	37.5	:
<b>ICT services</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>100.0</b>	<b>100.0</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>:</b>
<b>Number of persons employed</b>																
NACE 51.43	:	4.1	:	:	:	:	:	3.9	9.0	:	:	:	9.2	3.3	5.9	:
NACE 51.64	:	19.4	:	:	:	:	:	3.5	6.5	:	:	:	3.8	5.9	6.7	:
NACE 51.65	:	21.4	:	:	:	:	:	3.6	7.2	:	:	:	2.2	3.0	3.6	:
NACE 64.2	:	14.4	:	:	:	:	:	60.4	59.0	:	:	:	66.1	68.4	40.8	:
NACE 72	:	40.8	:	:	:	:	:	28.7	18.3	:	:	:	18.8	19.5	42.9	:
<b>ICT services</b>	<b>:</b>	<b>100.0</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>100.0</b>	<b>100.0</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>:</b>
<b>Apparent labour productivity (ICT services = 100)</b>																
NACE 51.43	:	:	:	:	:	:	:	53.0	128.2	:	:	:	46.0	:	:	:
NACE 51.64	:	:	:	:	:	:	:	64.5	123.4	:	:	:	73.4	:	:	:
NACE 51.65	:	:	:	:	:	:	:	44.8	68.0	:	:	:	25.3	:	:	:
NACE 64.2	:	:	:	:	:	:	:	135.4	112.5	:	:	:	131.2	:	:	:
NACE 72	:	:	:	:	:	:	:	43.1	50.0	:	:	:	30.6	:	:	:
<b>ICT services</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>100.0</b>	<b>100.0</b>	<b>:</b>	<b>:</b>	<b>:</b>	<b>100.0</b>	<b>:</b>	<b>:</b>	<b>:</b>

(1) For a list of NACE Divisions, Groups and Classes please refer to page 78. (2) 1998. (3) Number of employees instead of number of persons employed.

Source: Structural business statistics (NewCronos Theme4/SBS/Enterpr/enter\_ms &amp; enter\_cc), Eurostat

An analysis of ICT services specialisation in the Candidate and EFTA countries is also difficult because of the limited data availability. For those countries for which data were available, the dominance of telecommunications services (NACE Group 64.2) was however even more evident than among Member

States, this sector's share of ICT services value added reaching 86.7% in Romania. See tables 2.15 and 2.16.

### 3. THE ICT MARKET AND EXTERNAL TRADE

## 3. THE ICT MARKET AND EXTERNAL TRADE

EITO estimated the total ICT market for equipment, software and services in the EU at just over 600 billion EUR in 2001 (at 2000 exchange rates). This was almost equally split between information technology (IT) and telecommunications. See table 3.1.

The largest markets in absolute size were Germany and the United Kingdom. Taking account of the population of each country, the markets of Sweden, Denmark, the United Kingdom and the Netherlands were the largest. Telecommunications dominated the ICT market in most of the Southern Member States: Greece 76.1%, Portugal 69.1%, Spain 66.5% and Italy 59.7%. For those Member States with a large ICT market relative to population size, IT accounted for a larger share of the total, indicating that it is high IT expenditure that leads to the high overall market size. This is notably the case in Denmark (59.2%) and Sweden (56.0%) although the share of IT was also high in France (57.2%) despite ICT market value per capita being only slightly higher than the EU average.

Among the Candidate countries the largest ICT markets were in Poland and Turkey, both more than double the size of the next largest markets in the Czech Republic and Hungary. Compared to their population size Slovenia had the largest market followed by the Czech Republic and Hungary. It should be noted that data are not available from EITO for the ICT markets of Cyprus or Malta. In all of the Candidate countries the telecommunications market is larger than the IT market. This is most evident in Bulgaria and Romania where telecommunications accounts for over 80% of ICT. Among the Candidate countries IT accounted for more than 30% of ICT only in the Czech and Slovak Republics and in Hungary.

Relative to GDP the ICT market was more important than the EU average in several of the Candidate countries, notably Estonia (10.4% relative to GDP), Bulgaria (8.6%) and Latvia (8.0%). See tables 3.2 and 3.4.

Growth in the ICT market in all Member States was lower in 2001 than in 2000 (in current prices at 2000 exchange rates). Across the EU as a whole 13.4% growth was recorded in 2000 and 5.2% in 2001. In 2000 all Member States recorded double digit growth rates, reaching 18.1% and 16.8% in Spain and Greece respectively. In comparison, in 2001 none of the Member States recorded growth in the ICT market exceeding 7%, and in Denmark growth was just 1%.

**Table 3.1: ICT market in the EU, 1999-2001  
(billion EUR at 2000 exchange rates)**

		EU-15
<b>Total ICT market value</b>		
1999		510.7
2000		579.1
2001		609.1
<b>Share in total ICT market, 2001 (%)</b>		
IT		50.2
Telecommunications		49.8

Source: EITO

As with the Member States all of the Candidate countries, Norway and Switzerland recorded growth in 2000 in the ICT market (in current prices at 2000 exchange rates). Growth of 20% or more was recorded in Bulgaria (31.1%), Turkey (25.9%), Romania (24.9%) and Poland (20.2%). In 2001 the Turkish market contracted by 27.0% to a level below that of 1999. All of the other Candidate countries, Norway and Switzerland recorded growth in 2001, with Bulgaria (23.2%) and Romania (21.6%) again growing by more than 20%, this time accompanied by the Slovak Republic (22.2%). See table 3.3.

In 2000 the EU recorded growth in the market value of portable computers of 36%, compared to just 2% for desktop computers. In 2001 the growth in the portable computers' market had fallen to 1% while the value of the market for desktop computers had contracted by 13%.

Spain (18%), Italy (14%), Austria (13%) and Ireland (11%) were the only Member States to record double-digit growth in the portable computers market in 2001 whereas the smallest growth in any Member State in 2000 had been 15%. In 2001 no EU Member State recorded an increase in the market for desktop computers. See table 3.5.



Table 3.2a: ICT market value by product group, 2001 (million EUR at 2000 exchange rates)

	EU-15	B/L	DK	D	EL	E	F	IRL	I	NL	A	P	FIN	S	UK
Computer hardware	89,960	2,619	2,147	22,205	838	4,534	13,701	1,241	8,900	5,184	2,197	1,233	1,745	3,850	19,567
End-user communication equipment	41,842	1,120	674	6,782	1,135	3,634	6,205	379	7,251	2,078	1,101	1,206	804	1,477	7,998
Office equipment	9,430	315	197	2,060	114	523	1,728	162	752	760	186	140	128	232	2,133
Datacom and network equipment	45,788	1,293	953	11,654	602	3,297	6,172	455	5,215	2,612	1,161	545	788	1,516	9,525
of which LAN hardware	10,915	337	237	2,625	91	483	1,243	95	975	713	189	101	206	436	3,186
of which cellular mobile radio infrastructure	10,423	318	173	2,056	223	1,322	1,452	136	1,572	432	374	186	219	329	1,632
Software products	62,626	1,708	1,417	15,215	344	2,391	11,214	480	4,978	4,724	1,419	482	1,094	2,325	14,836
IT services	125,889	3,423	2,960	28,302	561	4,557	26,609	716	11,926	6,646	2,610	698	1,799	5,565	29,518
Carrier services	233,562	7,338	3,700	50,850	4,768	19,677	31,466	2,806	31,067	12,260	5,876	4,498	3,254	7,659	48,342
of which telephone services (1)	123,563	3,712	1,727	22,721	3,052	8,944	14,618	1,644	13,453	6,519	2,909	2,497	1,571	3,889	22,448
of which mobile telephone services	88,760	2,520	1,204	18,355	1,640	8,700	12,485	900	14,595	4,191	2,302	1,649	1,103	2,615	16,500
of which Internet and online services	:	:	:	5,341	:	856	1,932	:	1,380	:	:	:	:	:	4,352
<b>Total ICT market</b>	<b>609,098</b>	<b>17,815</b>	<b>12,049</b>	<b>137,069</b>	<b>8,362</b>	<b>38,612</b>	<b>97,094</b>	<b>6,239</b>	<b>70,088</b>	<b>34,265</b>	<b>14,549</b>	<b>8,802</b>	<b>9,612</b>	<b>22,623</b>	<b>131,919</b>
IT (% of total)	50.2	48.4	59.2	52.8	23.9	33.5	57.2	44.3	40.3	53.8	46.5	30.9	52.6	56.0	53.4
Telecommunications (% of total)	49.8	51.6	40.8	47.2	76.1	66.5	42.8	55.7	59.7	46.2	53.5	69.1	47.4	44.0	46.6

(1) All countries except D, E, F, I and UK, telephone services include Internet and online services.

Source: EITO

Table 3.2b: ICT market value by product group, 2001 (million EUR at 2000 exchange rates)

	IS	NO	CH	BG	CY	CZ	EE	HU	LV	LT	MT	PL	RO	SK	SI	TR	JP	US
Computer hardware	: 1,818	4,046	111	:	625	69	452	58	59	:	1,322	180	201	160	1,067	:	:	:
End-user communication equipment	: 698	1,234	66	:	290	32	227	32	55	:	747	214	117	48	681	:	:	:
Office equipment	: 137	343	19	:	62	16	49	13	14	:	100	47	21	23	194	:	:	:
Datacom and network equipment	: 743	1,727	269	:	833	117	676	120	183	:	2,621	623	290	261	1,200	:	:	:
of which LAN hardware	: 183	477	10	:	121	11	60	8	9	:	158	14	26	25	137	:	:	:
of which cellular mobile radio infrastructure	: 155	318	143	:	452	67	299	60	82	:	976	283	120	151	507	:	:	:
Software products	: 1,153	2,729	28	:	336	28	300	26	26	:	472	42	94	66	304	17,992	104,952	
IT services	: 2,601	4,842	39	:	653	44	465	44	44	:	695	48	154	72	765	60,379	216,525	
Carrier services	: 3,193	8,419	769	:	2,164	337	2,372	386	425	:	6,086	1,472	765	636	6,538	97,302	261,526	
of which telephone services (1)	: 1,709	4,502	344	:	849	125	1,045	183	214	:	3,201	613	352	232	3,505	:	:	:
of which mobile telephone services	: 1,140	2,627	348	:	1,124	186	1,030	174	187	:	2,217	644	307	344	2,690	:	:	:
of which Internet and online services	:	:	:	:	:	:	:	:	:	:	:	:	:	:	220	:	:	:
<b>Total ICT market</b>	<b>: 10,343</b>	<b>23,340</b>	<b>1,300</b>	<b>:</b>	<b>4,964</b>	<b>644</b>	<b>4,541</b>	<b>679</b>	<b>806</b>	<b>:</b>	<b>12,044</b>	<b>2,626</b>	<b>1,640</b>	<b>1,266</b>	<b>10,749</b>	<b>283,798</b>	<b>783,389</b>	
IT (% of total)	: 58.1	54.2	18.8	:	38.2	28.3	31.7	24.4	22.6	:	26.5	16.1	32.7	29.8	23.0	:	:	:
Telecommunications (% of total)	: 41.9	45.8	81.2	:	61.8	71.6	68.3	75.6	77.4	:	73.5	83.9	67.3	70.2	77.0	:	:	:

(1) All countries except TR, telephone services include Internet and online services.

Source: EITO

Across the EU the market for mobile phones had recorded similar levels of growth as the market for portables in 2000 and also saw this collapse in 2001, the market in fact contracted by 3%. This was due mainly to a strong contraction in the large German (-25%) and Spanish (-18%) markets and a smaller contraction in France and Italy (both -3%) more than cancelling out the growth in the other Member States in 2001.

Of the five products shown in table 3.5, the market for software products stands out as every Member State recorded growth in both 2000 and 2001.

Unlike the Member States many Candidate countries recorded increases in the market for desktop and portable computers in 2000 and 2001; only Slovenia recorded a fall in both years, although it should be noted that the fall in the Turkish market in 2001 (-54%) was particularly large and more than outweighed the increase in 2000 (29%).

Like the smaller Member States and the United Kingdom, the Candidate countries recorded growth in the market for mobile telephones in 2000 and in 2001, the exceptions being the Czech Republic whose mobile telephone market more than doubled in 2000 but contracted slightly in 2001 and the Slovenian and Turkish markets which contracted by more than 20% each year.

The market for software products sustained growth in 2001 in all Candidate countries, except in Turkey. See table 3.5.

### 3. THE ICT MARKET AND EXTERNAL TRADE

**Table 3.3a: Total ICT market value, 1999-2001 (million EUR at 2000 exchange rates)**

	EU-15	B/L	DK	D	EL	E	F	IRL	I	NL	A	P	FIN	S	UK
1999	510,725	14,884	10,816	119,160	6,715	31,207	80,872	5,030	58,019	28,666	11,953	7,305	8,535	19,347	108,215
2000	579,122	16,650	11,961	133,292	7,842	36,841	90,766	5,834	65,916	32,667	13,885	8,225	9,362	21,695	124,185
2001	609,098	17,815	12,049	137,069	8,362	38,612	97,094	6,239	70,088	34,265	14,549	8,802	9,612	22,623	131,919
Growth 2000 (%)	13.4	11.9	10.6	11.9	16.8	18.1	12.2	16.0	13.6	14.0	16.2	12.6	9.7	12.1	14.8
Growth 2001 (%)	5.2	7.0	0.7	2.8	6.6	4.8	7.0	6.9	6.3	4.9	4.8	7.0	2.7	4.3	6.2

Source: EITO

**Table 3.3b: Total ICT market value, 1999-2001 (million EUR at 2000 exchange rates)**

	IS	NO	CH	BG	CY	CZ	EE	HU	LV	LT	MT	PL	RO	SK	SI	TR	JP	US
1999	:	9,513	19,831	805	:	4,029	554	3,852	533	614	:	8,946	1,728	1,242	1,089	11,699	250,973	701,546
2000	:	10,081	22,403	1,055	:	4,556	601	4,034	611	723	:	10,752	2,159	1,342	1,168	14,726	269,493	779,124
2001	:	10,343	23,340	1,300	:	4,964	644	4,541	679	806	:	12,044	2,626	1,640	1,266	10,749	283,798	783,389
Growth 2000 (%)	:	6.0	13.0	31.1	:	13.1	8.5	4.7	14.6	17.8	:	20.2	24.9	8.1	7.3	25.9	7.4	11.1
Growth 2001 (%)	:	2.6	4.2	23.2	:	9.0	7.2	12.6	11.1	11.5	:	12.0	21.6	22.2	8.4	-27.0	5.3	0.5

Source: EITO

**Table 3.4a: Total ICT market value per capita and relative to GDP, 1999-2001 (1)**

	EU-15	B/L	DK	D	EL	E	F	IRL	I	NL	A	P	FIN	S	UK	
<b>Total ICT market value per capita (EUR)</b>																
1999		1,362	1,398	2,036	1,453	638	790	1,383	1,347	1,007	1,819	1,479	732	1,654	2,185	1,822
2000		1,538	1,560	2,244	1,622	743	927	1,545	1,545	1,143	2,059	1,714	807	1,810	2,448	2,083
2001		1,612	1,664	2,252	1,666	792	962	1,645	1,631	1,212	2,143	1,791	858	1,855	2,547	2,203
Growth 2000 (%)		13.0	11.5	10.2	11.7	16.4	17.4	11.8	14.7	13.5	13.2	15.9	10.2	9.4	12.0	14.3
Growth 2001 (%)		4.8	6.7	0.4	2.7	6.5	3.8	6.4	5.6	6.0	4.1	4.5	6.3	2.5	4.0	5.7
<b>ICT market value relative to GDP (%)</b>																
1999		6.4	5.9	6.6	6.0	5.7	5.5	6.0	5.6	5.2	7.7	6.1	6.8	7.1	8.5	7.9
2000		6.8	6.2	6.9	6.6	6.4	6.1	6.4	5.6	5.7	8.1	6.8	7.1	7.1	8.7	8.0
2001		6.9	6.4	6.7	6.6	6.4	5.9	6.6	5.4	5.8	8.1	6.9	7.2	7.1	9.7	8.3
Growth 2000 (% points)		0.4	0.3	0.3	0.5	0.7	0.5	0.4	0.0	0.4	0.5	0.7	0.4	0.1	0.2	0.1
Growth 2001 (% points)		0.1	0.2	-0.2	0.1	0.0	-0.1	0.2	-0.2	0.1	-0.1	0.1	0.0	-0.1	0.9	0.3

(1) ICT market value at 2000 exchange rates.

Source: EITO for ICT market data; Demography (NewCronos Theme3/demo/dgen/gind/jan), Eurostat, for population data; National accounts (NewCronos Theme2/aggs/aggs\_gdp/a\_gdp\_c), Eurostat, for GDP data

**Table 3.4b: Total ICT market value per capita and relative to GDP, 1999-2001 (1)**

	IS	NO	CH	BG	CY	CZ	EE	HU	LV	LT	MT	PL	RO	SK	SI	TR (2)	JP	US
<b>Total ICT market value per capita (EUR)</b>																		
1999	:	2,140	2,784	98	:	392	383	382	218	166	:	231	77	230	550	182	1,991	2,583
2000	:	2,251	3,127	129	:	443	438	402	257	195	:	278	96	249	588	218	2,130	2,827
2001	:	2,297	3,240	160	:	484	471	454	287	218	:	312	117	304	636	157	2,239	2,817
Growth 2000 (%)	:	5.2	12.3	31.7	:	13.2	14.3	5.2	17.5	17.8	:	20.2	25.1	7.9	6.7	20.1	7.0	9.5
Growth 2001 (%)	:	2.1	3.6	23.8	:	9.1	7.6	13.0	11.8	11.7	:	12.0	21.8	22.1	8.3	-28.2	5.1	-0.4
<b>ICT market value relative to GDP (%)</b>																		
1999	:	6.4	8.0	6.6	:	7.8	11.4	8.5	8.6	6.1	:	6.1	5.2	6.6	5.8	6.8	5.9	8.1
2000	:	5.7	8.6	7.7	:	8.2	10.8	8.0	7.9	5.9	:	6.3	5.4	6.3	6.0	6.8	5.2	7.3
2001	:	5.7	8.7	8.6	:	7.8	10.4	7.8	8.0	6.0	:	6.1	5.9	7.4	6.0	6.5	6.1	7.0
Growth 2000 (% points)	:	-0.7	0.7	1.1	:	0.4	-0.6	-0.6	-0.7	-0.2	:	0.1	0.2	-0.3	0.2	0.0	-0.7	-0.7
Growth 2001 (% points)	:	0.0	0.1	0.9	:	-0.3	-0.3	-0.1	0.1	0.1	:	-0.2	0.5	1.1	0.1	-0.3	0.9	-0.4

(1) ICT market value at 2000 exchange rates. (2) Population data, source: Auxiliary indicators (NewCronos Theme2/aux\_ind/aux\_pem), Eurostat.

Source: EITO for ICT market data; Demography (NewCronos Theme3/demo/dgen/gind/jan), Eurostat, for population data; National Accounts (NewCronos Theme2/aggs/aggs\_gdp/a\_gdp\_c), Eurostat, for GDP data

Table 3.5a: Market value of selected ICT products, 1999-2001 (million EUR at 2000 exchange rates)

	EU-15	B/L	DK	D	EL	E	F	IRL	I	NL	A	P	FIN	S	UK
<b>Workstations</b>															
1999	1,588	46	13	462	6	33	324	9	116	84	27	7	40	138	285
2000	1,450	43	12	397	5	31	303	8	109	78	25	6	37	129	266
2001	1,306	37	10	350	5	27	270	7	102	74	22	6	32	112	252
<b>Desktop</b>															
1999	33,427	953	1,000	9,089	298	1,433	5,121	468	2,510	2,181	824	444	635	1,505	6,966
2000	33,984	915	974	9,138	335	1,466	5,220	521	2,630	1,986	909	463	610	1,342	7,476
2001	29,701	800	726	7,340	314	1,413	4,783	445	2,564	1,858	674	448	542	1,300	6,492
Growth 2000 (%)	1.7	-4.0	-2.6	0.5	12.4	2.3	1.9	11.3	4.8	-8.9	10.3	4.3	-3.9	-10.8	7.3
Growth 2001 (%)	-12.6	-12.6	-25.5	-19.7	-6.3	-3.6	-8.4	-14.6	-2.5	-6.4	-25.9	-3.2	-11.1	-3.1	-13.2
<b>Portable</b>															
1999	9,758	341	297	2,236	91	442	1,233	122	677	748	308	137	198	577	2,351
2000	13,306	391	468	2,838	135	684	1,697	152	1,287	895	394	194	269	800	3,101
2001	13,453	378	378	2,744	133	809	1,813	169	1,462	802	444	192	242	701	3,186
Growth 2000 (%)	36.4	14.7	57.6	26.9	48.4	54.8	37.6	24.6	90.1	19.7	27.9	41.6	35.9	38.6	31.9
Growth 2001 (%)	1.1	-3.3	-19.2	-3.3	-1.5	18.3	6.8	11.2	13.6	-10.4	12.7	-1.0	-10.0	-12.4	2.7
<b>Mobile telephone sets</b>															
1999	25,388	576	421	3,951	691	2,495	3,415	202	5,180	1,152	703	757	600	864	4,381
2000	33,796	814	518	5,542	888	3,509	4,640	251	6,421	1,524	887	953	675	1,076	6,099
2001	32,867	952	569	4,157	1,018	2,877	4,501	291	6,228	1,716	950	1,055	706	1,198	6,648
Growth 2000 (%)	33.1	41.3	23.0	40.3	28.5	40.6	35.9	24.3	24.0	32.3	26.2	25.9	12.5	24.5	39.2
Growth 2001 (%)	-2.7	17.0	9.8	-25.0	14.6	-18.0	-3.0	15.9	-3.0	12.6	7.1	10.7	4.6	11.3	9.0
<b>Software products</b>															
1999	50,750	1,405	1,193	12,649	268	1,896	8,943	377	3,968	3,857	1,135	380	921	1,953	11,804
2000	57,995	1,573	1,366	14,441	310	2,169	10,238	434	4,527	4,403	1,300	434	1,053	2,234	13,513
2001	62,626	1,708	1,417	15,215	344	2,391	11,214	480	4,978	4,724	1,419	482	1,094	2,325	14,836
Growth 2000 (%)	14.3	12.0	14.5	14.2	15.7	14.4	14.5	15.1	14.1	14.2	14.5	14.2	14.3	14.4	14.5
Growth 2001 (%)	8.0	8.6	3.7	5.4	11.0	10.2	9.5	10.6	10.0	7.3	9.2	11.1	3.9	4.1	9.8

Source: EITO

Table 3.5b: Market value of selected ICT products, 1999-2001 (million EUR at 2000 exchange rates)

	IS	NO	CH	BG	CY	CZ	EE	HU	LV	LT	MT	PL	RO	SK	SI	TR	JP	US
<b>Workstations</b>																		
1999	:	30	65	1	:	9	0	3	0	1	:	8	1	1	1	19	:	:
2000	:	28	61	0	:	6	0	4	0	1	:	5	1	2	1	13	:	:
2001	:	24	46	0	:	5	0	4	0	1	:	4	1	1	1	13	:	:
<b>Desktop (1)</b>																		
1999	:	980	1,479	49	:	287	33	213	33	35	:	694	80	72	91	669	:	:
2000	:	756	1,431	54	:	306	40	221	32	30	:	754	92	80	82	863	:	:
2001	:	658	1,323	61	:	333	43	234	34	34	:	828	112	96	80	398	:	:
Growth 2000 (%)	:	-22.9	-3.2	10.2	:	6.6	21.2	3.8	-3.0	-14.3	:	8.6	15.0	11.1	-9.9	29.0	:	:
Growth 2001 (%)	:	-13.0	-7.5	13.0	:	8.8	7.5	5.9	6.3	13.3	:	9.8	21.7	20.0	-2.4	-53.9	:	:
<b>Portable</b>																		
1999	:	240	589	:	:	:	:	:	:	:	:	:	:	:	:	61	:	:
2000	:	357	735	:	:	:	:	:	:	:	:	:	:	:	:	144	:	:
2001	:	356	704	:	:	:	:	:	:	:	:	:	:	:	:	57	:	:
Growth 2000 (%)	:	48.8	24.8	:	:	:	:	:	:	:	:	:	:	:	:	136.1	:	:
Growth 2001 (%)	:	-0.3	-4.2	:	:	:	:	:	:	:	:	:	:	:	:	-60.4	:	:
<b>Mobile telephone sets</b>																		
1999	:	403	583	24	:	119	18	72	12	12	:	235	86	35	62	2,021	:	:
2000	:	507	760	32	:	253	21	156	15	20	:	332	115	37	46	1,540	:	:
2001	:	571	837	45	:	245	25	170	20	32	:	352	128	92	33	640	:	:
Growth 2000 (%)	:	25.8	30.4	33.3	:	112.6	16.7	116.7	25.0	66.7	:	41.3	33.7	5.7	-25.8	-23.8	:	:
Growth 2001 (%)	:	12.6	10.1	40.6	:	-3.2	19.0	9.0	33.3	60.0	:	6.0	11.3	148.6	-28.3	-58.4	:	:
<b>Software products</b>																		
1999	:	974	2,166	22	:	255	23	237	22	20	:	358	28	72	55	344	:	:
2000	:	1,116	2,479	25	:	292	24	267	23	23	:	412	34	82	60	410	:	:
2001	:	1,153	2,729	28	:	336	28	300	26	26	:	472	42	94	66	304	17,992	104,952
Growth 2000 (%)	:	14.6	14.5	13.6	:	14.5	4.3	12.7	4.5	15.0	:	15.1	21.4	13.9	9.1	19.2	:	:
Growth 2001 (%)	:	3.3	10.1	12.0	:	15.1	16.7	12.4	13.0	13.0	:	14.6	23.5	14.6	10.0	-25.9	:	:

(1) BG, CZ, EE, HU, LV, LT, PL, RO, SK and SI, desktop PCs include portable PCs.

Source: EITO

### 3. THE ICT MARKET AND EXTERNAL TRADE

In 2001, the EU's ICT exports amounted to 121 billion EUR. The EU's imports of ICT goods was estimated at 173 billion EUR in 2001, 52 billion EUR more than the level of ICT exports. The share of ICT in total imports was 17.0%, considerably higher than the ICT's share of exports (12.4%). See table 3.6.

ICT imports in 2001 were 8.9% lower than 2000, a much larger fall than the 3.2% fall in the value of the EU's ICT exports. This contrasted strongly to the growth in ICT trade up to 2000. As a result the trade deficit narrowed in 2001 which represented a reversal of the trend to ever larger trade deficits in ICT goods that had been observed for several years.

The trend of rising ICT export and import values in the second half of the 1990s was not simply a case of a general increase in external trade as the share of ICT in total imports and total exports also increased over the same period. This share also fell back in 2001 indicating that the fall in external trade of ICT goods had been more severe than experienced across all traded goods. In fact the share of ICT imports in total imports fell in 2001 below its 1999 level. See figures 3.1 and 3.2.

Among the six ICT product groups studied in the present publication, EU exports were concentrated in telecommunications, electronic components and computers. The EU's imports were also focused on the same product groupings but with computers alone accounting for over one-third of the total. As a result the EU recorded its largest ICT trade deficit in 2001 in the computers product group, totalling 31.3 billion EUR. Although consumer electronics was the second smallest of the six groups in terms of total trade (imports and exports) the EU's deficit in consumer electronics was the second largest, reaching 15.2 billion EUR in 2001. The EU only recorded a trade surplus in telecommunications products and instruments in 2001, totalling 8.1 billion EUR. See table 3.7.

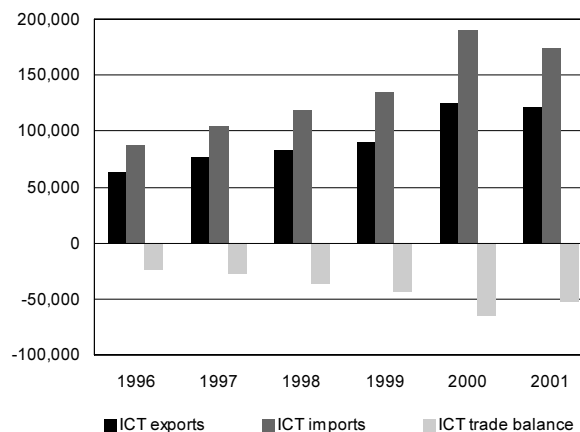
**Table 3.6: External trade overview, EU-15, (million EUR)**

	2001
ICT exports	121,024
ICT imports	173,299
ICT trade balance	-52,275
ICT share in total exports (%)	12.4
ICT share in total imports (%)	17.0

Source: Comext database, Eurostat

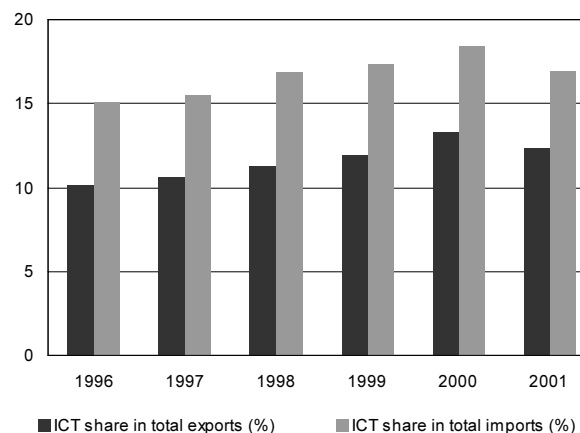
Although total ICT exports and imports both fell in 2001 this was not true of all products groupings. In fact only electronic components and telecommunication products recorded falls in both exports and imports. Concerning imports the largest falls were in electronic components (-10.2 billion EUR) and computers (-6.5 billion EUR). The trade deficit of both of these product groups contracted in 2001 for the first time in five years, falling below its 1998 level in the case of computers. Consumer electronics and office machinery however continued their long series of ever growing deficits. Although telecommunications products remained the product group for which the EU had its largest trade surplus this was 2.4 billion EUR lower in 2001 than in 2000 which was the fourth consecutive year of reduced surpluses. After three years of a falling trade surplus in instruments, the EU recorded a larger surplus in 2001 mainly due to a 1.5 billion EUR increase in exports. See table 3.8.

**Figure 3.1: External trade overview, EU-15 (million EUR)**



Source: Comext database, Eurostat

**Figure 3.2: Share of ICT in total trade, EU-15 (million EUR)**



Source: Comext database, Eurostat

Table 3.7: External trade by product groupings, EU-15, 2001 (million EUR)

	Computers	Consumer electronics	Electronic components	Instruments	Office machinery	Telecoms products
Exports	28,819	5,140	29,380	18,641	1,697	37,347
Imports	60,119	20,350	40,647	17,422	4,263	30,497
Trade balance	-31,300	-15,210	-11,268	1,219	-2,567	6,850
Share of product group in ICT total exports (%)	23.8	4.2	24.3	15.4	1.4	30.9
Share of product group in ICT total imports (%)	34.7	11.7	23.5	10.1	2.5	17.6

Source: Comext database, Eurostat

Table 3.8: External trade by product groupings, EU-15 (million EUR)

	Computers	Consumer electronics	Electronic components	Instruments	Office machinery	Telecoms products
<b>Exports</b>						
1996	14,144	3,478	14,072	10,410	1,346	20,156
1997	16,897	4,120	17,141	12,494	1,651	24,153
1998	18,976	4,066	18,542	13,226	1,416	26,624
1999	21,722	4,091	21,095	13,906	1,373	28,822
2000	28,422	5,009	31,599	17,066	1,794	41,196
2001	28,819	5,140	29,380	18,641	1,697	37,347
<b>Imports</b>						
1996	34,008	10,857	20,951	8,975	2,483	10,710
1997	42,458	11,846	24,166	10,151	2,799	12,837
1998	50,548	13,061	25,797	11,519	2,957	15,691
1999	55,881	14,950	29,096	12,403	3,412	19,646
2000	66,648	19,871	50,816	16,953	4,006	31,987
2001	60,119	20,350	40,647	17,422	4,263	30,497
<b>Trade balance</b>						
1996	-19,864	-7,379	-6,879	1,435	-1,137	9,446
1997	-25,561	-7,726	-7,025	2,343	-1,148	11,317
1998	-31,572	-8,995	-7,255	1,707	-1,541	10,933
1999	-34,159	-10,860	-8,001	1,503	-2,039	9,176
2000	-38,226	-14,862	-19,217	113	-2,211	9,209
2001	-31,300	-15,210	-11,268	1,219	-2,567	6,850
<b>Share of product group in ICT total exports (%)</b>						
1996	22.2	5.5	22.1	16.4	2.1	31.7
1997	22.1	5.4	22.4	16.3	2.2	31.6
1998	22.9	4.9	22.4	16.0	1.7	32.1
1999	23.9	4.5	23.2	15.3	1.5	31.7
2000	22.7	4.0	25.3	13.6	1.4	32.9
2001	23.8	4.2	24.3	15.4	1.4	30.9
<b>Share of product group in ICT total imports (%)</b>						
1996	38.7	12.3	23.8	10.2	2.8	12.2
1997	40.7	11.4	23.2	9.7	2.7	12.3
1998	42.3	10.9	21.6	9.6	2.5	13.1
1999	41.3	11.0	21.5	9.2	2.5	14.5
2000	35.0	10.4	26.7	8.9	2.1	16.8
2001	34.7	11.7	23.5	10.1	2.5	17.6

Source: Comext database, Eurostat

### 3. THE ICT MARKET AND EXTERNAL TRADE

Table 3.9a: External trade, 2001 (million EUR)

	EU-15	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
ICT exports	121,024	11,982	5,322	66,233	536	6,866	38,252	32,575	15,153	3,456	53,362	7,704	2,471	10,607	11,001	62,736
ICT imports	173,299	14,203	6,920	74,739	2,423	14,619	43,639	20,519	25,004	2,721	51,711	10,355	4,159	6,438	10,302	65,717
ICT trade balance	-52,275	-2,221	-1,598	-8,506	-1,888	-7,754	-5,387	12,056	-9,851	735	1,652	-2,651	-1,688	4,169	699	-2,982
ICT share in total exports (%)	12.4	6.0	9.2	10.4	4.7	5.6	10.6	35.2	5.6	30.0	20.7	9.8	9.3	22.0	13.1	20.5
ICT share in total imports (%)	17.0	7.5	13.6	13.6	7.7	9.2	11.9	36.3	9.6	20.0	22.2	12.4	9.8	17.7	14.7	17.6
Country share in the sum of EU-15 total exports (%)	-	3.7	1.6	20.2	0.2	2.1	11.7	9.9	4.6	1.1	16.3	2.3	0.8	3.2	3.4	19.1
Country share in the sum of EU-15 total imports (%)	-	4.0	2.0	21.1	0.7	4.1	12.3	5.8	7.1	0.8	14.6	2.9	1.2	1.8	2.9	18.6

Source: Comext database, Eurostat

Table 3.9b: External trade, 2001 (million EUR)

	IS	NO	CH	BG (1)	CY	CZ (1)	EE	HU	LV	LT	MT	PL (1)	RO (1)	SK	SI	TR (1)	JP	US
ICT exports	4	1,891	5,725	80	1	2,637	1,051	8,881	34	279	1,177	1,785	613	690	790	1,544	116,155	145,439
ICT imports	227	4,249	9,790	395	299	4,591	982	9,452	323	484	1,050	5,786	1,735	1,471	501	6,730	68,209	221,703
ICT trade balance	-223	-2,358	-4,065	-315	-298	-1,953	68	-572	-288	-205	127	-4,001	-1,122	-781	290	-5,185	47,946	-76,265
ICT share in total exports (%)	0.2	2.9	6.2	1.5	0.1	8.4	23.4	26.1	1.5	5.5	59.9	5.2	5.5	4.9	7.0	5.2	25.8	19.6
ICT share in total imports (%)	9.0	11.7	10.4	5.6	6.8	13.1	16.8	25.1	8.2	6.8	34.5	10.9	12.3	8.9	4.8	11.5	17.5	16.8

(1) 2000.

Source: Comext database, Eurostat

Table 3.10a: External trade (million EUR)

	EU-15	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
<b>ICT exports</b>																
1996	63,606	:	2,923	36,049	210	4,499	24,449	11,322	11,036	:	22,468	2,599	1,327	4,734	9,559	35,979
1997	76,457	:	3,513	41,319	274	4,590	29,203	14,837	11,158	:	31,441	3,167	1,560	6,160	11,667	40,713
1998	82,850	:	3,848	45,061	286	5,623	33,201	17,958	12,023	:	35,009	3,734	1,810	7,782	12,345	45,386
1999	91,008	9,625	4,290	50,477	357	5,423	33,505	22,298	12,253	1,350	41,616	4,365	1,883	8,820	14,761	49,322
2000	125,087	13,982	5,428	68,941	613	7,376	43,293	28,746	14,840	1,885	53,906	6,962	2,286	12,658	18,657	63,283
2001	121,024	11,982	5,322	66,233	536	6,866	38,252	32,575	15,153	3,456	53,362	7,704	2,471	10,607	11,001	62,736
<b>ICT imports</b>																
1996	87,985	:	4,168	40,882	1,237	8,596	25,920	6,714	15,422	:	23,547	4,616	2,264	3,542	7,532	38,554
1997	104,257	:	4,751	44,647	1,430	8,757	30,349	8,672	17,826	:	31,466	5,435	2,546	4,232	8,776	43,139
1998	119,573	:	4,998	52,394	2,073	11,080	34,671	11,553	19,775	:	38,081	6,523	3,317	4,861	9,993	49,180
1999	135,388	12,005	5,727	59,103	2,576	11,941	36,647	13,978	21,614	1,375	43,625	7,731	3,584	5,160	10,252	55,514
2000	190,280	16,794	6,873	78,812	2,750	16,799	49,008	19,035	27,005	1,980	55,612	9,831	4,077	7,138	13,705	75,867
2001	173,299	14,203	6,920	74,739	2,423	14,619	43,639	20,519	25,004	2,721	51,711	10,355	4,159	6,438	10,302	65,717
<b>ICT trade balance</b>																
1996	-24,378	:	-1,245	-4,833	-1,026	-4,097	-1,471	4,608	-4,386	:	-1,078	-2,018	-937	1,193	2,027	-2,575
1997	-27,799	:	-1,238	-3,328	-1,156	-4,166	-1,145	6,165	-6,668	:	-25	-2,268	-986	1,928	2,891	-2,425
1998	-36,723	:	-1,150	-7,333	-1,787	-5,457	-1,469	6,404	-7,752	:	-3,072	-2,788	-1,507	2,922	2,352	-3,794
1999	-44,380	-2,379	-1,438	-8,625	-2,220	-8,519	-3,142	8,320	-9,361	-24	-2,010	-3,366	-1,701	3,660	4,510	-6,191
2000	-65,194	-2,811	-1,445	-9,871	-2,137	-9,423	-5,715	9,710	-12,165	-95	-1,706	-2,869	-1,791	5,520	4,952	-12,584
2001	-52,275	-2,221	-1,598	-8,506	-1,888	-7,754	-5,387	12,056	-9,851	735	1,652	-2,651	-1,688	4,169	699	-2,982
<b>ICT share in total exports (%)</b>																
1996	10.2	:	7.2	8.7	2.3	5.3	10.2	29.7	5.6	:	13.7	5.7	6.8	14.6	14.3	17.7
1997	10.6	:	8.1	9.1	2.7	5.2	11.0	31.5	5.3	:	17.2	6.0	7.4	16.8	16.0	16.5
1998	11.3	:	8.8	9.3	3.0	5.6	11.6	31.3	5.5	:	18.3	6.5	8.2	19.9	16.3	18.6
1999	12.0	5.7	9.1	9.9	3.4	5.5	11.0	33.4	5.5	17.5	20.3	7.0	8.2	22.3	18.5	19.3
2000	13.3	6.9	9.8	11.6	5.2	5.9	12.2	34.3	5.7	20.8	21.4	9.5	8.7	25.4	19.8	20.5
2001	12.4	6.0	9.2	10.4	4.7	5.6	10.6	35.2	5.6	30.0	20.7	9.8	9.3	22.0	13.1	20.5
<b>ICT share in total imports (%)</b>																
1996	15.1	:	11.7	11.3	5.6	9.0	11.2	24.8	9.4	:	15.7	8.6	8.2	14.3	14.3	17.0
1997	15.5	:	12.0	11.4	6.0	8.6	12.1	26.1	9.6	:	18.7	9.4	8.2	15.2	15.2	15.9
1998	16.8	:	12.0	12.5	7.7	9.1	12.6	30.0	10.1	:	21.8	10.5	9.7	16.5	16.4	17.2
1999	17.4	7.8	13.3	13.3	9.0	9.4	12.4	31.9	10.4	13.1	22.6	11.6	9.6	17.1	15.9	18.2
2000	18.4	8.7	13.9	14.6	8.6	9.9	13.4	34.4	10.4	16.2	23.5	12.5	9.4	19.1	17.4	20.4
2001	17.0	7.5	13.6	13.6	7.7	9.2	11.9	36.3	9.6	20.0	22.2	12.4	9.8	17.7	14.7	17.6
<b>Country share in the sum of EU-15 total exports (%)</b>																
1996	-	:	1.7	21.6	0.1	2.7	14.6	6.8	6.6	:	13.4	1.6	0.8	2.8	5.7	21.5
1997	-	:	1.8	20.7	0.1	2.3	14.6	7.4	5.6	:	15.8	1.6	0.8	3.1	5.8	20.4
1998	-	:	1.7	20.1	0.1	2.5	14.8	8.0	5.4	:	15.6	1.7	0.8	3.5	5.5	20.3
1999	-	3.7	1.6	19.4	0.1	2.1	12.9	8.6	4.7	0.5	16.0	1.7	0.7	3.4	5.7	18.9
2000	-	4.1	1.6	20.1	0.2	2.2	12.6	8.4	4.3	0.5	15.7	2.0	0.7	3.7	5.4	18.5
2001	-	3.7	1.6	20.2	0.2	2.1	11.7	9.9	4.6	1.1	16.3	2.3	0.8	3.2	3.4	19.1
<b>Country share in the sum of EU-15 total imports (%)</b>																
1996	-	:	2.3	22.3	0.7	4.7	14.2	3.7	8.4	:	12.9	2.5	1.2	1.9	4.1	21.1
1997	-	:	2.2	21.1	0.7	4.1	14.3	4.1	8.4	:	14.8	2.6	1.2	2.0	4.1	20.3
1998	-	:	2.0	21.1	0.8	4.5	14.0	4.6	8.0	:	15.3	2.6	1.3	2.0	4.0	19.8
1999	-	4.1	2.0	20.3	0.9	4.1	12.6	4.8	7.4	0.5	15.0	2.7	1.2	1.8	3.5	19.1
2000	-	4.4	1.8	20.5	0.7	4.4	12.7	4.9	7.0	0.5	14.4	2.6	1.1	1.9	3.6	19.7
2001	-	4.0	2.0	21.1	0.7	4.1	12.3	5.8	7.1	0.8	14.6	2.9	1.2	1.8	2.9	18.6

Source: Comext database, Eurostat

Table 3.10b: External trade (million EUR)

	IS	NO	CH	BG	CY	CZ	EE	HU	LV	LT	MT	PL	RO	SK	SI	TR	JP	US	
<b>ICT exports</b>																			
1996	1	1,125	3,898	55	0	799	139	614	12	137	699	643	26	153	317	657	87,870	86,119	
1997	2	1,346	4,042	59	0	960	314	3,159	27	205	683	946	27	318	333	823	100,556	111,779	
1998	2	1,452	4,228	43	0	1,553	443	.	28	152	885	1,312	57	369	344	1,192	91,158	110,009	
1999	2	1,509	4,741	50	0	1,489	440	5,928	28	147	990	1,335	165	414	326	1,121	105,174	124,633	
2000	5	1,718	5,814	80	1	2,637	1,146	8,938	34	230	1,684	1,785	613	540	471	1,544	147,432	171,875	
2001	4	1,891	5,725	.	1	.	1,051	8,881	34	279	1,177	.	.	690	790	.	116,155	145,439	
<b>ICT imports</b>																			
1996	139	2,752	6,106	161	176	2,493	292	1,316	92	153	703	2,443	450	418	478	2,091	39,140	123,157	
1997	159	3,232	6,707	174	175	2,540	468	3,422	185	370	669	3,272	737	949	545	3,024	43,162	149,634	
1998	204	3,501	7,386	230	213	3,009	595	.	241	351	828	4,054	995	1,090	607	3,512	38,183	156,491	
1999	224	3,618	8,550	349	236	3,031	607	5,791	234	300	985	4,534	930	930	718	4,508	48,235	187,123	
2000	310	4,224	10,512	395	311	4,591	1,165	8,745	282	363	1,662	5,786	1,735	1,171	829	6,730	75,898	266,524	
2001	227	4,249	9,790	.	299	.	982	9,452	323	484	1,050	.	.	1,471	501	.	68,209	221,703	
<b>ICT trade balance</b>																			
1996	-138	-1,627	-2,208	-106	-176	-1,694	-153	-702	-81	-16	-4	-1,801	-424	-265	-161	-1,434	48,730	-37,038	
1997	-157	-1,887	-2,665	-115	-175	-1,580	-155	-263	-158	-166	14	-2,326	-710	-631	-212	-2,201	57,394	-37,856	
1998	-202	-2,049	-3,158	-187	-212	-1,457	-152	.	-213	-200	57	-2,742	-938	-721	-263	-2,320	52,975	-46,482	
1999	-222	-2,109	-3,809	-299	-235	-1,542	-167	137	-206	-153	5	-3,200	-765	-515	-392	-3,386	56,939	-62,490	
2000	-305	-2,506	-4,699	-315	-310	-1,953	-19	193	-247	-133	23	-4,001	-1,122	-631	-358	-5,185	71,534	-94,648	
2001	-223	-2,358	-4,065	.	-298	.	68	-572	-288	-205	127	.	.	-781	290	.	47,946	-76,265	
<b>ICT share in total exports (%)</b>																			
1996	0.1	2.9	6.2	1.4	0.1	4.6	8.5	6.2	1.0	5.2	56.1	3.3	0.4	2.6	4.8	3.6	27.2	18.8	
1997	0.1	3.2	6.0	1.4	0.1	4.8	12.1	18.8	1.8	6.0	52.9	4.2	0.4	3.7	4.5	3.6	27.1	19.7	
1998	0.1	4.0	6.0	1.1	0.1	6.1	15.3	.	1.7	4.6	58.0	5.2	0.8	3.9	4.3	5.0	26.3	19.4	
1999	0.1	3.6	6.3	1.4	0.1	5.9	15.5	25.3	1.7	5.2	59.1	5.2	2.1	4.4	4.1	4.5	26.8	20.7	
2000	0.2	2.7	6.7	1.5	0.2	8.4	27.6	29.3	1.7	5.6	69.9	5.2	5.5	4.2	5.0	5.2	28.4	22.2	
2001	0.2	2.9	6.2	.	0.1	.	23.4	26.1	1.5	5.5	59.9	.	.	4.9	7.0	.	25.8	19.6	
<b>ICT share in total imports (%)</b>																			
1996	8.7	10.2	9.9	4.0	5.6	11.4	11.5	10.4	5.1	4.2	31.9	8.4	5.0	5.6	6.4	6.2	14.2	19.1	
1997	8.9	10.4	10.0	4.0	5.4	10.6	12.0	18.3	7.7	7.4	29.7	8.8	7.4	9.2	6.6	7.1	14.4	18.9	
1998	9.2	10.7	10.3	5.2	6.5	11.1	13.9	.	8.5	6.8	34.8	9.7	9.4	9.4	6.7	8.6	15.3	18.6	
1999	9.5	11.4	11.4	6.9	6.9	11.2	15.7	22.0	8.5	6.6	37.0	10.5	9.5	8.9	7.6	11.8	16.6	18.8	
2000	11.1	11.5	11.7	5.6	7.5	13.1	21.3	25.1	8.1	6.1	45.1	10.9	12.3	8.5	7.6	11.5	18.4	19.5	
2001	9.0	11.7	10.4	.	6.8	.	16.8	25.1	8.2	6.8	34.5	.	.	8.9	4.8	.	17.5	16.8	

Source: Comext database, Eurostat

In absolute terms the largest exporters of ICT goods (intra and extra-EU combined) among the Member States were Germany, the United Kingdom and the Netherlands. When considering the size of the Member States, the share of Ireland (9.9% of the total of the fifteen Member States) stands out as being particularly large and the share of Italy (4.6%) was noticeably low.

Most of the Member States recorded trade deficits in ICT products in 2001, ranging from 1.7 billion EUR in Portugal to 9.9 billion EUR in Italy. Five of the Member States recorded ICT trade surpluses, Ireland recording the largest at 12.1 billion EUR.

In relative terms, ICT imports far exceeded ICT exports in Greece, Spain, Italy and Portugal. In all of these Member States as well as in Belgium ICT products represented less than 10% of all exports and imports.

Most of the EFTA and Candidate countries recorded ICT trade deficits in 2001, with only Slovenia, Malta and Estonia recording surpluses. The importance of ICT products in external trade was extremely high in Malta, these products accounting for over one-third of all imports and nearly three-fifths of exports. In Hungary ICT accounted for more than one-

quarter of both exports and imports. Trade in ICT goods was below 10% of all exports and imports in Bulgaria, Cyprus, Latvia, Lithuania and the Slovak Republic. See table 3.9.

Most of the large Member States recorded lower levels of ICT trade in 2001 than in 2000 after several years of growing trade. Greece, Finland and Sweden recorded particularly large reductions in the level of ICT exports. Only Ireland, Austria and Portugal recorded increases in both ICT exports and ICT imports in 2001 and unsurprisingly all of them saw their share of the total trade (intra and extra-EU) by the fifteen Member States increase, particularly Luxembourg's share of exports. In the case of Ireland and to a lesser extent Austria this continued a series of several years growth; for ICT exports this increased share during the second half of the 1990's has come at the expense of several Member States, notably the largest ones.

The situation in 2001 for the Candidate countries is less clear because of weaker data availability, however it can already be seen that some of the countries have recorded a fall in ICT export and import levels as seen in many of the Member States. See table 3.10.

### 3. THE ICT MARKET AND EXTERNAL TRADE

Table 3.11a: External trade by product groupings, 2001

	EU-15	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
<b>Exports (million EUR)</b>																
Computers	28,819	4,042	1,025	15,285	82	1,483	8,994	21,174	3,006	1,963	26,979	1,308	268	381	701	19,567
Consumer electronics	5,140	2,643	895	4,364	30	1,339	3,057	520	609	417	3,636	535	776	167	551	2,936
Electronic components	29,380	1,957	448	16,054	123	1,560	9,478	6,986	4,255	310	11,384	2,896	1,128	628	1,030	13,137
Instruments	18,641	642	1,090	12,654	45	749	5,206	336	2,171	88	2,355	851	123	662	1,257	7,424
Office machinery	1,697	231	63	791	2	127	455	379	194	1	2,278	46	6	17	115	1,192
Telecoms products	37,347	2,467	1,801	17,085	255	1,607	11,062	3,180	4,918	677	6,731	2,068	170	8,752	7,348	18,480
<b>Total ICT exports</b>	<b>121,024</b>	<b>11,982</b>	<b>5,322</b>	<b>66,233</b>	<b>536</b>	<b>6,866</b>	<b>38,252</b>	<b>32,575</b>	<b>15,153</b>	<b>3,456</b>	<b>53,362</b>	<b>7,704</b>	<b>2,471</b>	<b>10,607</b>	<b>11,001</b>	<b>62,736</b>
<b>Total exports (all products)</b>	<b>975,633</b>	<b>199,853</b>	<b>57,855</b>	<b>636,668</b>	<b>11,425</b>	<b>121,666</b>	<b>361,056</b>	<b>92,643</b>	<b>268,908</b>	<b>11,530</b>	<b>257,764</b>	<b>78,975</b>	<b>26,566</b>	<b>48,277</b>	<b>84,243</b>	<b>305,624</b>
<b>Imports (million EUR)</b>																
Computers	60,119	5,129	2,232	27,514	657	4,205	14,913	11,269	7,626	1,335	24,442	2,520	1,094	1,388	2,920	25,393
Consumer electronics	20,350	2,348	845	8,368	396	2,344	4,500	452	2,919	216	4,773	1,050	566	459	1,157	6,262
Electronic components	40,647	2,357	1,040	17,597	251	2,120	8,990	5,437	4,976	257	10,130	2,594	1,167	1,918	1,966	13,162
Instruments	17,422	1,439	570	7,491	168	1,612	5,257	387	3,188	56	2,726	1,081	376	466	1,219	6,637
Office machinery	4,263	343	173	1,571	86	398	1,260	179	657	16	1,885	190	97	105	182	1,512
Telecoms products	30,497	2,587	2,060	12,199	866	3,941	8,718	2,795	5,640	842	7,753	2,919	858	2,102	2,858	12,752
<b>Total ICT imports</b>	<b>173,299</b>	<b>14,203</b>	<b>6,920</b>	<b>74,739</b>	<b>2,423</b>	<b>14,619</b>	<b>43,639</b>	<b>20,519</b>	<b>25,004</b>	<b>2,721</b>	<b>51,711</b>	<b>10,355</b>	<b>4,159</b>	<b>6,438</b>	<b>10,302</b>	<b>65,717</b>
<b>Total imports (all products)</b>	<b>1,022,323</b>	<b>188,367</b>	<b>50,858</b>	<b>550,224</b>	<b>31,507</b>	<b>159,373</b>	<b>366,906</b>	<b>56,519</b>	<b>260,052</b>	<b>13,594</b>	<b>232,958</b>	<b>83,333</b>	<b>42,426</b>	<b>36,444</b>	<b>69,970</b>	<b>373,608</b>
Share of ICT in total exports (%)	12.4	6.0	9.2	10.4	4.7	5.6	10.6	35.2	5.6	30.0	20.7	9.8	9.3	22.0	13.1	20.5
Share of ICT in total imports (%)	17.0	7.5	13.6	13.6	7.7	9.2	11.9	36.3	9.6	20.0	22.2	12.4	9.8	17.7	14.7	17.6
<b>Trade balance (million EUR)</b>																
Computers	-31,300	-1,086	-1,207	-12,229	-575	-2,722	-5,920	9,906	-4,620	629	2,536	-1,213	-827	-1,006	-2,219	-5,826
Consumer electronics	-15,210	295	50	-4,003	-366	-1,005	-1,444	68	-2,310	200	-1,137	-515	210	-292	-606	-3,326
Electronic components	-11,268	-401	-592	-1,543	-128	-560	489	1,548	-721	53	1,253	302	-39	-1,290	-937	-25
Instruments	1,219	-796	520	5,163	-123	-863	-52	-52	-1,017	32	-371	-229	-252	196	38	788
Office machinery	-2,567	-112	-110	-780	-84	-270	-804	200	-462	-15	392	-144	-91	-88	-67	-319
Telecoms products	6,850	-121	-259	4,885	-611	-2,334	2,344	385	-722	-165	-1,023	-852	-688	6,650	4,489	5,727
<b>Total ICT</b>	<b>-52,275</b>	<b>-2,221</b>	<b>-1,598</b>	<b>-8,506</b>	<b>-1,888</b>	<b>-7,754</b>	<b>-5,387</b>	<b>12,056</b>	<b>-9,851</b>	<b>735</b>	<b>1,652</b>	<b>-2,651</b>	<b>-1,688</b>	<b>4,169</b>	<b>699</b>	<b>-2,982</b>
<b>Share of total ICT exports (%)</b>																
Computers	23.8	33.7	19.3	23.1	15.3	21.6	23.5	65.0	19.8	56.8	50.6	17.0	10.8	3.6	6.4	31.2
Consumer electronics	4.2	22.1	16.8	6.6	5.6	19.5	8.0	1.6	4.0	12.1	6.8	6.9	31.4	1.6	5.0	4.7
Electronic components	24.3	16.3	8.4	24.2	22.9	22.7	24.8	21.4	28.1	9.0	21.3	37.6	45.7	5.9	9.4	20.9
Instruments	15.4	5.4	20.5	19.1	8.3	10.9	13.6	1.0	14.3	2.5	4.4	11.0	5.0	6.2	11.4	11.8
Office machinery	1.4	1.9	1.2	1.2	0.4	1.9	1.2	1.2	1.3	0.0	4.3	0.6	0.2	0.2	1.0	1.9
Telecoms products	30.9	20.6	33.8	25.8	47.5	23.4	28.9	9.8	32.5	19.6	12.6	26.8	6.9	82.5	66.8	29.5
<b>Share of total ICT imports (%)</b>																
Computers	34.7	36.1	32.3	36.8	27.1	28.8	34.2	54.9	30.5	49.0	47.3	24.3	26.3	21.6	28.3	38.6
Consumer electronics	11.7	16.5	12.2	11.2	16.3	16.0	10.3	2.2	11.7	8.0	9.2	10.1	13.6	7.1	11.2	9.5
Electronic components	23.5	16.6	15.0	23.5	10.3	14.5	20.6	26.5	19.9	9.4	19.6	25.1	28.1	29.8	19.1	20.0
Instruments	10.1	10.1	8.2	10.0	6.9	11.0	12.0	1.9	12.7	2.0	5.3	10.4	9.0	7.2	11.8	10.1
Office machinery	2.5	2.4	2.5	2.1	3.5	2.7	2.9	0.9	2.6	0.6	3.6	1.8	2.3	1.6	1.8	2.3
Telecoms products	17.6	18.2	29.8	16.3	35.7	27.0	20.0	13.6	22.6	30.9	15.0	28.2	20.6	32.7	27.7	19.4
<b>Export specialisation among EU-15 (100 = average for 15 Member States)</b>																
Computers	-	104.2	59.5	71.3	47.3	66.7	72.6	200.8	61.3	175.5	156.2	52.4	33.4	11.1	19.7	96.4
Consumer electronics	-	322.2	245.6	96.2	82.0	284.8	116.7	23.3	58.7	176.1	99.5	101.5	458.7	23.0	73.1	68.3
Electronic components	-	75.1	38.7	111.5	105.2	104.5	114.0	98.6	129.1	41.3	98.1	172.9	210.0	27.2	43.0	96.3
Instruments	-	49.4	188.6	175.9	76.5	100.4	125.3	9.5	131.9	23.5	40.6	101.7	46.0	57.4	105.2	109.0
Office machinery	-	107.5	65.9	66.4	20.3	103.3	66.2	64.8	71.4	2.2	237.5	33.1	12.9	9.1	58.1	105.8
Telecoms products	-	78.0	128.3	97.8	180.2	88.7	109.6	37.0	123.0	74.2	47.8	101.7	26.1	312.8	253.2	111.7
<b>Import specialisation among EU-15 (100 = average for 15 Member States)</b>																
Computers	-	96.2	86.0	98.1	72.2	76.6	91.1	146.4	81.3	130.7	126.0	64.9	70.1	57.4	75.5	103.0
Consumer electronics	-	159.4	117.8	108.0	157.7	154.6	99.4	21.2	112.6	76.7	89.0	97.8	131.2	68.8	108.3	91.9
Electronic components	-	79.3	71.8	112.5	49.4	69.3	98.4	126.6	95.1	45.1	93.6	119.7	134.2	142.4	91.2	95.7
Instruments	-	109.6	89.1	108.4	75.0	119.3	130.3	20.4	137.9	22.1	57.0	112.9	97.8	78.3	128.0	109.3
Office machinery	-	98.7	102.2	85.9	144.6	111.2	117.9	35.6	107.3	24.2	148.9	75.0	95.5	66.6	72.0	94.0
Telecoms products	-	93.5	152.7	83.7	183.3	138.3	102.5	69.9	115.7	158.7	76.9	144.7	105.9	167.5	142.4	99.6

Source: Comext database, Eurostat

The export and import specialisation ratios show clearly the product groups that are most important in trade terms for each Member State. Values above 100 show that a country trades more in the product groups concerned as a proportion of ICT trade than is typical for all of the fifteen Member States together. For methodological and economic reasons such ratios tend to highlight extreme positions in smaller Member States. The export specialisation ratio shows clearly the importance of telecommunication products in Finland and Sweden, of computers in Ireland and of consumer electronics in several of the smaller Member States as well as Spain.

Most of the Candidate countries derived at least one-third of their ICT exports from one single product group in 2001 (2000 for some countries). This was as much as 95.2% in Malta in the case of electronic components and 87.8% in Estonia for telecommunications products. See table 3.11.



Table 3.11b: External trade by product groupings, 2001

	IS	NO	CH	BG (1)	CY (2)	CZ (1)	EE	HU	LV	LT	MT	PL (1)	RO (1)	SK	SI	TR (1)	JP	US
<b>Exports (million EUR)</b>																		
Computers	1	350	1,062	9	0	513	12	2,815	10	21	38	97	141	91	237	63	24,883	41,476
Consumer electronics	0	179	143	3	0	310	12	1,853	4	23	1	769	27	178	70	906	18,173	6,291
Electronic components	0	264	1,147	37	0	1,281	64	1,453	4	160	1,121	586	87	226	200	422	42,267	47,823
Instruments	2	406	2,305	15	0	193	37	287	8	32	2	94	18	60	88	41	12,945	23,708
Office machinery	0	51	126	5	0	34	3	17	0	3	3	7	1	14	15	3	6,429	1,788
Telecoms products	1	641	942	11	0	305	923	2,456	8	40	12	232	340	122	182	110	11,458	24,353
<b>Total ICT exports</b>	<b>4</b>	<b>1,891</b>	<b>5,725</b>	<b>80</b>	<b>1</b>	<b>2,637</b>	<b>1,051</b>	<b>8,881</b>	<b>34</b>	<b>279</b>	<b>1,177</b>	<b>1,785</b>	<b>613</b>	<b>690</b>	<b>790</b>	<b>1,544</b>	<b>116,155</b>	<b>145,439</b>
<b>Total exports (all products)</b>	<b>2,246</b>	<b>64,788</b>	<b>91,668</b>	<b>5,230</b>	<b>428</b>	<b>31,513</b>	<b>4,481</b>	<b>34,052</b>	<b>2,234</b>	<b>5,117</b>	<b>1,964</b>	<b>34,290</b>	<b>11,244</b>	<b>14,094</b>	<b>11,325</b>	<b>29,813</b>	<b>449,526</b>	<b>743,614</b>
<b>Imports (million EUR)</b>																		
Computers	84	1,726	4,296	119	109	1,149	105	2,173	95	131	62	1,598	282	362	19	1,502	24,950	82,270
Consumer electronics	32	538	942	39	47	333	59	1,184	49	67	17	731	83	163	45	490	8,264	34,864
Electronic components	20	459	1,334	66	19	1,492	185	4,316	42	82	888	1,154	630	432	128	1,216	20,056	44,437
Instruments	32	366	1,279	39	20	448	52	502	26	47	35	498	160	221	154	565	6,415	16,842
Office machinery	4	137	235	9	11	80	10	50	8	11	4	105	40	21	5	152	1,022	3,038
Telecoms products	55	1,024	1,704	124	93	1,088	571	1,228	102	146	43	1,700	541	271	150	2,804	7,502	40,251
<b>Total ICT imports</b>	<b>227</b>	<b>4,249</b>	<b>9,790</b>	<b>395</b>	<b>299</b>	<b>4,591</b>	<b>982</b>	<b>9,452</b>	<b>323</b>	<b>484</b>	<b>1,050</b>	<b>5,786</b>	<b>1,735</b>	<b>1,471</b>	<b>501</b>	<b>6,730</b>	<b>68,209</b>	<b>221,703</b>
<b>Total imports (all products)</b>	<b>2,525</b>	<b>36,251</b>	<b>93,932</b>	<b>7,055</b>	<b>4,381</b>	<b>34,973</b>	<b>5,839</b>	<b>37,607</b>	<b>3,913</b>	<b>7,093</b>	<b>3,045</b>	<b>52,969</b>	<b>14,160</b>	<b>16,487</b>	<b>10,330</b>	<b>58,735</b>	<b>389,238</b>	<b>1,317,591</b>
Share of ICT in total exports (%)	0.2	2.9	6.2	1.5	0.1	8.4	23.4	26.1	1.5	5.5	59.9	5.2	5.5	4.9	7.0	5.2	25.8	19.6
Share of ICT in total imports (%)	9.0	11.7	10.4	5.6	6.8	13.1	16.8	25.1	8.2	6.8	34.5	10.9	12.3	8.9	4.8	11.5	17.5	16.8
<b>Trade balance (million EUR)</b>																		
Computers	-83	-1,376	-3,235	-110	-108	-635	-93	642	-85	-110	-24	-1,501	-141	-271	218	-1,439	-67	-40,795
Consumer electronics	-32	-360	-799	-36	-47	-23	-47	669	-45	-44	-16	37	-57	15	25	416	9,909	-28,573
Electronic components	-20	-195	-187	-28	-19	-211	-121	-2,863	-38	78	233	-567	-543	-206	72	-794	22,211	3,386
Instruments	-30	40	1,026	-24	-20	-255	-15	-215	-19	-15	-33	-404	-141	-162	-67	-524	6,530	6,865
Office machinery	-3	-85	-109	-4	-11	-46	-8	-33	-8	-8	-1	-98	-39	-8	10	-149	5,407	-1,250
Telecoms products	-55	-383	-762	-113	-93	-782	352	1,228	-94	-106	-32	-1,467	-201	-149	32	-2,694	3,955	-15,898
<b>Total ICT</b>	<b>-223</b>	<b>-2,358</b>	<b>-4,065</b>	<b>-315</b>	<b>-298</b>	<b>-1,953</b>	<b>68</b>	<b>-572</b>	<b>-288</b>	<b>-205</b>	<b>127</b>	<b>-4,001</b>	<b>-1,122</b>	<b>-781</b>	<b>290</b>	<b>-5,185</b>	<b>47,946</b>	<b>-76,265</b>
<b>Share of total ICT exports (%)</b>																		
Computers	22.7	18.5	18.5	11.2	77.7	19.5	1.1	31.7	29.2	7.6	3.2	5.4	22.9	13.2	30.0	4.1	21.4	28.5
Consumer electronics	2.9	9.4	2.5	4.1	3.8	11.8	1.2	20.9	11.1	8.3	0.1	43.1	4.3	25.8	8.8	58.7	15.6	4.3
Electronic components	3.7	14.0	20.0	46.6	3.3	48.6	6.1	16.4	13.1	57.4	95.2	32.8	14.2	32.8	25.3	27.3	36.4	32.9
Instruments	53.0	21.5	40.3	18.5	11.4	7.3	3.5	3.2	22.7	11.3	0.2	5.3	3.0	8.7	11.1	2.6	11.1	16.3
Office machinery	3.7	2.7	2.2	5.8	3.5	1.3	0.3	0.2	0.8	1.1	0.2	0.4	0.2	2.0	1.8	0.2	5.5	1.2
Telecoms products	13.9	33.9	16.5	13.7	0.2	11.6	87.8	27.7	23.2	14.3	1.0	13.0	55.4	17.7	23.0	7.1	9.9	16.7
<b>Share of total ICT imports (%)</b>																		
Computers	37.0	40.6	43.9	30.1	36.4	25.0	10.7	23.0	29.5	27.1	5.9	27.6	16.2	24.6	3.9	22.3	36.6	37.1
Consumer electronics	14.1	12.7	9.6	9.8	15.7	7.3	6.0	12.5	15.1	13.9	1.7	12.6	4.8	11.1	8.9	7.3	12.1	15.7
Electronic components	8.8	10.8	13.6	16.7	6.2	32.5	18.8	45.7	13.1	17.0	84.6	19.9	36.3	29.4	25.5	18.1	29.4	20.0
Instruments	14.1	8.6	13.1	9.8	6.7	9.8	5.3	5.3	8.2	9.6	3.4	8.6	9.2	15.1	30.8	8.4	9.4	7.6
Office machinery	1.6	3.2	2.4	2.3	3.8	1.7	1.1	0.5	2.6	2.2	0.4	1.8	2.3	1.4	1.0	2.3	1.5	1.4
Telecoms products	24.3	24.1	17.4	31.3	31.2	23.7	58.1	13.0	31.5	30.1	4.1	29.4	31.2	18.4	29.9	41.7	11.0	18.2

(1) 2000. (2) Electronic components and office machinery, 2000.

Source: Comext database, Eurostat

ICT exports more than tripled in several Member States between 1996 and 2001 in one or more of the product groups. Ireland recorded such growth in electronic components and telecommunication products while Greece and Austria have more than tripled their exports of computers and telecommunication products. Two in three of the Member States recorded a doubling of imports of telecommunication products between 1996 and 2001 and Ireland has recorded strong growth in the imports of all ICT product groups except consumer electronics and instruments. See tables 3.12 and 3.13.

Table 3.14 shows at a more detailed product level (6-digit level of the Combined Nomenclature) which are the most traded products for each Member State. There is a strong concentration in computers and telephones and parts for these products. The only consumer electronics product in the list is television receivers.

Table 3.15 shows similar information for EFTA and Candidate countries and the list of products is quite similar to that for the Member States. The main difference is the larger number of electronic components in the list as well as the appearance of some instruments.

### 3. THE ICT MARKET AND EXTERNAL TRADE

Table 3.12a: Exports by product groupings (million EUR)

	EU-15	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
<b>Computers</b>																
1996	14,144	:	744	8,351	19	1,260	7,155	7,837	3,503	:	11,723	422	48	791	617	13,402
1997	16,897	:	745	9,558	29	1,024	8,332	10,179	3,100	:	17,371	542	86	1,005	637	17,066
1998	18,976	:	783	11,130	35	1,383	9,075	12,306	3,113	:	19,978	596	82	926	646	16,899
1999	21,722	3,052	882	12,226	65	1,336	9,118	14,797	2,996	246	23,461	791	85	821	542	19,013
2000	28,422	4,491	1,073	17,123	95	1,882	10,430	18,441	3,251	586	27,557	1,436	80	459	613	21,543
2001	28,819	4,042	1,025	15,285	82	1,483	8,994	21,174	3,006	1,963	26,979	1,308	268	381	701	19,567
<b>Consumer electronics</b>																
1996	3,478	:	636	3,518	16	957	2,003	425	673	:	1,775	227	503	172	247	3,428
1997	4,120	:	743	3,285	31	1,100	2,186	525	555	:	1,807	282	545	251	250	3,820
1998	4,066	:	731	3,459	33	1,287	2,478	445	523	:	2,019	457	663	246	378	3,360
1999	4,091	2,421	737	3,702	18	1,049	2,580	594	497	347	2,580	525	799	134	591	2,979
2000	5,009	2,825	840	4,163	14	1,332	3,014	561	545	213	3,068	685	955	135	832	3,179
2001	5,140	2,643	895	4,364	30	1,339	3,057	520	609	417	3,636	535	776	167	551	2,936
<b>Electronic components</b>																
1996	14,072	:	266	8,091	78	850	6,013	1,786	3,041	:	4,225	1,112	595	298	984	6,939
1997	17,141	:	343	9,670	96	978	7,045	2,316	2,968	:	6,587	1,240	698	382	1,108	7,349
1998	18,542	:	348	10,626	69	1,189	8,036	2,412	3,004	:	6,643	1,491	833	566	1,121	7,505
1999	21,095	1,670	349	11,686	77	1,157	8,349	3,214	3,071	435	8,220	1,807	770	585	1,135	8,619
2000	31,599	2,900	514	18,235	120	1,703	10,714	5,613	4,637	441	12,770	2,545	985	829	1,751	13,157
2001	29,380	1,957	448	16,054	123	1,560	9,478	6,986	4,255	310	11,384	2,896	1,128	628	1,030	13,137
<b>Instruments</b>																
1996	10,410	:	546	7,411	43	479	3,246	207	1,551	:	1,318	502	92	328	843	4,279
1997	12,494	:	632	8,097	47	459	3,611	192	1,656	:	1,657	590	126	428	868	5,560
1998	13,226	:	675	9,064	38	513	3,708	313	1,647	:	1,877	619	130	454	899	5,751
1999	13,906	614	753	10,112	39	516	3,915	237	1,723	82	1,822	615	94	520	978	5,855
2000	17,066	730	1,100	12,018	44	705	4,780	336	1,974	89	2,431	775	90	626	1,147	6,830
2001	18,641	642	1,090	12,654	45	749	5,206	336	2,171	88	2,355	851	123	662	1,257	7,424
<b>Office machinery</b>																
1996	1,346	:	39	881	4	66	689	445	265	:	1,860	44	5	14	106	716
1997	1,651	:	40	935	2	75	740	641	243	:	2,120	58	7	16	111	936
1998	1,416	:	42	942	2	102	537	669	245	:	1,992	44	4	23	107	943
1999	1,373	235	37	746	3	114	424	146	164	3	2,115	45	4	16	82	1,138
2000	1,794	249	79	829	3	108	447	420	212	3	2,075	44	4	12	86	1,413
2001	1,697	231	63	791	2	127	455	379	194	1	2,278	46	6	17	115	1,192
<b>Telecoms products</b>																
1996	20,156	:	692	7,797	51	887	5,343	621	2,002	:	1,567	291	85	3,131	6,763	7,215
1997	24,153	:	1,010	9,774	68	954	7,290	984	2,637	:	1,899	455	98	4,078	8,693	5,983
1998	26,624	:	1,269	9,840	110	1,149	9,367	1,813	3,491	:	2,500	527	98	5,567	9,194	10,928
1999	28,822	1,633	1,531	12,005	155	1,250	9,120	3,310	3,802	236	3,418	581	131	6,745	11,434	11,717
2000	41,196	2,788	1,821	16,573	337	1,646	13,908	3,374	4,221	553	6,005	1,477	170	10,597	14,227	17,162
2001	37,347	2,467	1,801	17,085	255	1,607	11,062	3,180	4,918	677	6,731	2,068	170	8,752	7,348	18,480

Source: Comext database, Eurostat

Table 3.12b: Exports by product groupings (million EUR)

	IS	NO	CH	BG	CY	CZ	EE	HU	LV	LT	MT	PL	RO	SK	SI	TR	JP	US
<b>Computers</b>																		
1996	0	273	644	6	0	142	49	27	4	3	11	47	1	6	9	11	22,145	29,586
1997	0	340	688	8	0	162	34	1,475	10	14	23	39	2	23	10	22	26,959	36,441
1998	1	368	772	3	0	296	21	:	10	11	17	67	6	69	13	34	24,100	34,140
1999	0	423	1,096	6	0	250	13	3,114	6	8	20	72	97	122	17	53	24,271	36,152
2000	1	429	1,308	9	1	513	12	4,198	7	14	30	97	141	111	19	63	30,078	48,135
2001	1	350	1,062	:	0	:	12	2,815	10	21	38	:	:	91	237	:	24,883	41,476
<b>Consumer electronics</b>																		
1996	0	32	122	9	0	26	21	165	2	12	1	133	1	3	40	244	11,064	5,411
1997	0	48	122	9	0	52	43	964	4	51	1	312	2	25	44	416	12,222	6,463
1998	0	55	121	2	0	186	12	:	3	21	0	507	1	48	36	711	13,704	5,431
1999	0	53	120	4	0	108	4	1,637	2	20	1	568	3	59	32	650	16,129	5,590
2000	0	82	135	3	0	310	17	1,962	2	26	1	769	27	95	57	906	21,214	6,530
2001	0	179	143	:	0	:	12	1,853	4	23	1	:	:	178	70	:	18,173	6,291
<b>Electronic components</b>																		
1996	0	150	725	21	0	391	6	273	1	93	666	308	11	43	58	318	33,131	24,685
1997	0	111	761	25	0	517	16	512	4	92	645	358	11	100	67	300	35,640	33,332
1998	0	113	843	20	0	770	34	:	3	77	854	454	11	91	77	316	31,225	33,954
1999	0	125	939	20	0	823	30	788	4	82	955	440	16	106	81	312	38,257	43,405
2000	0	170	1,277	37	0	1,281	64	1,247	4	142	1,643	586	87	176	148	422	57,982	62,080
2001	0	264	1,147	:	:	:	64	1,453	4	160	1,121	:	:	226	200	:	42,267	47,823
<b>Instruments</b>																		
1996	1	220	1,713	8	0	101	12	60	1	14	1	57	8	39	119	16	7,199	11,428
1997	1	254	1,650	8	0	113	21	75	2	24	4	61	9	52	130	24	8,675	15,171
1998	1	287	1,676	11	0	181	33	:	5	20	4	63	13	37	131	31	7,460	15,501
1999	2	296	1,752	11	0	149	30	109	11	19	3	67	12	35	136	31	9,869	17,454
2000	3	324	2,089	15	0	193	40	190	16	26	2	94	18	47	151	41	15,798	26,210
2001	2	406	2,305	:	0	:	37	287	8	32	2	:	:	60	88	:	12,945	23,708
<b>Office machinery</b>																		
1996	:	23	108	5	:	30	7	8	0	2	1	3	0	3	1	3	5,009	1,109
1997	0	16	119	3	:	16	2	10	0	3	0	3	0	7	2	2	6,046	1,415
1998	:	35	126	3	0	20	2	:	0	2	:	4	1	12	2	2	5,403	1,568
1999	0	43	121	2	0	19	1	5	0	1	0	5	1	11	3	2	6,475	1,377
2000	0	62	94	5	0	34	1	11	0	2	1	7	1	13	4	3	7,641	1,733
2001	0	51	126	:	:	:	3	17	0	3	3	:	:	14	15	:	6,429	1,788
<b>Telecoms products</b>																		
1996	0	427	585	5	0	108	44	83	4	13	20	95	5	59	88	65	9,322	13,899
1997	0	576	702	5	:	100	197	122	7	21	10	172	3	111	80	60	11,015	18,958
1998	0	593	690	5	0	101	341	:	6	21	9	217	24	112	84	96	9,265	19,415
1999	0	570	713	7	0	140	362	276	4	17	11	183	35	82	57	73	10,172	20,655
2000	1	651	911	11	:	305	1,012	1,331	5	20	6	232	340	97	93	110	14,719	27,188
2001	1	641	942	:	0	:	923	2,456	8	40	12	:	:	122	182	:	11,458	24,353

Source: Comext database, Eurostat

### 3. THE ICT MARKET AND EXTERNAL TRADE

Table 3.13a: Imports by product groupings (million EUR)

	EU-15	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
<b>Computers</b>																
1996	34,008	:	1,746	15,336	319	2,667	9,681	4,105	5,300	:	12,301	1,426	617	1,091	2,548	14,155
1997	42,458	:	1,821	17,367	381	2,833	10,927	5,375	5,648	:	17,810	1,612	668	1,289	2,687	18,406
1998	50,548	:	1,736	21,631	493	3,431	12,710	7,360	6,295	:	23,371	1,772	825	1,534	3,188	21,513
1999	55,881	4,197	2,269	24,857	736	3,230	13,270	8,236	7,173	468	25,919	2,207	932	1,521	2,966	24,176
2000	66,648	5,511	2,350	30,047	770	4,588	16,290	10,685	8,336	778	28,095	2,594	962	1,414	3,361	29,773
2001	60,119	5,129	2,232	27,514	657	4,205	14,913	11,269	7,626	1,335	24,442	2,520	1,094	1,388	2,920	25,393
<b>Consumer electronics</b>																
1996	10,857	:	628	6,143	320	1,391	3,218	455	1,731	:	2,666	756	409	285	673	3,727
1997	11,846	:	687	5,440	332	1,583	3,307	514	1,935	:	2,787	991	434	296	729	4,053
1998	13,061	:	680	5,939	384	1,911	3,708	447	2,168	:	3,002	1,014	521	380	794	4,376
1999	14,950	2,055	669	6,691	367	1,810	3,812	405	2,260	188	3,327	1,027	525	392	931	4,832
2000	19,871	2,477	745	8,285	394	2,330	4,757	523	2,683	152	4,416	1,126	591	546	1,242	5,914
2001	20,350	2,348	845	8,368	396	2,344	4,500	452	2,919	216	4,773	1,050	566	459	1,157	6,262
<b>Electronic components</b>																
1996	20,951	:	464	9,606	74	1,150	5,580	1,463	3,702	:	3,872	1,016	606	1,159	1,520	9,599
1997	24,166	:	614	10,599	86	1,242	6,537	1,902	3,852	:	5,264	1,245	609	1,474	1,921	9,806
1998	25,797	:	702	11,965	151	1,563	7,734	2,504	3,757	:	5,285	1,465	744	1,576	1,913	9,066
1999	29,096	2,016	666	13,201	167	1,493	8,210	3,260	3,889	335	6,039	1,691	832	1,631	2,336	10,068
2000	50,816	4,037	1,053	20,401	240	2,451	12,599	4,616	5,601	343	11,300	2,294	989	2,322	3,558	16,751
2001	40,647	2,357	1,040	17,597	251	2,120	8,990	5,437	4,976	257	10,130	2,594	1,167	1,918	1,966	13,162
<b>Instruments</b>																
1996	8,975	:	333	3,952	143	1,042	3,292	237	1,935	:	1,565	653	204	315	887	3,570
1997	10,151	:	402	4,280	168	1,098	3,370	282	2,215	:	1,864	698	242	339	908	4,095
1998	11,519	:	419	4,941	177	1,356	3,726	338	2,307	:	1,945	758	314	355	948	4,568
1999	12,403	1,193	435	5,245	202	1,424	4,115	341	2,509	44	2,061	836	321	394	986	4,790
2000	16,953	1,467	509	7,046	199	1,615	5,104	522	3,077	57	2,608	995	422	438	1,234	6,355
2001	17,422	1,439	570	7,491	168	1,612	5,257	387	3,188	56	2,726	1,081	376	466	1,219	6,637
<b>Office machinery</b>																
1996	2,483	:	145	1,370	53	290	1,071	54	521	:	1,422	135	79	73	171	967
1997	2,799	:	171	1,370	61	280	1,181	67	545	:	1,499	140	82	99	197	1,143
1998	2,957	:	181	1,383	66	356	1,021	99	577	:	1,293	149	86	101	184	1,252
1999	3,412	364	175	1,430	84	346	1,066	72	607	18	1,505	148	84	108	166	1,249
2000	4,006	377	152	1,681	78	381	1,179	202	699	18	1,607	164	78	87	208	1,523
2001	4,263	343	173	1,571	86	398	1,260	179	657	16	1,885	190	97	105	182	1,512
<b>Telecoms products</b>																
1996	10,710	:	853	4,476	329	2,056	3,078	402	2,233	:	1,720	631	349	619	1,734	6,537
1997	12,837	:	1,055	5,590	401	1,722	5,026	532	3,633	:	2,242	748	510	737	2,333	5,635
1998	15,691	:	1,279	6,536	802	2,463	5,772	806	4,671	:	3,185	1,365	826	915	2,966	8,405
1999	19,646	2,180	1,515	7,678	1,021	3,638	6,175	1,664	5,176	321	4,774	1,822	890	1,115	2,866	10,398
2000	31,987	2,923	2,065	11,350	1,069	5,434	9,079	2,488	6,609	631	7,586	2,659	1,035	2,331	4,101	15,551
2001	30,497	2,587	2,060	12,199	866	3,941	8,718	2,795	5,640	842	7,753	2,919	858	2,102	2,858	12,752

Source: Comext database, Eurostat

Table 3.13b: Imports by product groupings (million EUR)

	IS	NO	CH	BG	CY	CZ	EE	HU	LV	LT	MT	PL	RO	SK	SI	TR	JP	US
<b>Computers</b>																		
1996	51	1,097	2,757	55	50	699	90	254	24	16	45	771	46	44	150	516	14,461	48,159
1997	57	1,380	2,959	53	57	682	135	1,066	63	78	45	932	154	273	163	678	16,075	61,240
1998	73	1,454	3,328	68	65	832	91	:	74	79	36	1,133	209	305	190	790	14,174	63,949
1999	86	1,521	4,019	110	74	809	83	1,694	71	81	50	1,324	220	260	220	960	18,151	75,733
2000	110	1,694	4,678	119	112	1,149	95	2,378	90	100	60	1,598	282	296	218	1,502	28,755	97,084
2001	84	1,726	4,296	:	109	:	105	2,173	95	131	62	:	:	362	19	:	24,950	82,270
<b>Consumer electronics</b>																		
1996	23	304	658	17	36	281	59	173	7	18	17	277	26	38	46	232	4,410	17,282
1997	26	341	684	16	30	267	70	688	19	67	16	370	39	76	59	324	4,567	20,301
1998	35	361	728	12	42	294	54	:	28	50	14	516	70	105	66	299	4,329	23,338
1999	37	377	757	31	48	304	48	1,426	31	36	15	622	50	80	71	293	5,309	26,539
2000	47	471	898	39	48	333	56	1,396	38	40	17	731	83	116	74	490	7,661	36,103
2001	32	538	942	:	47	:	59	1,184	49	67	17	:	:	163	45	:	8,264	34,864
<b>Electronic components</b>																		
1996	11	301	832	16	14	560	19	378	12	25	580	439	99	71	115	497	11,519	34,743
1997	17	350	917	19	14	644	88	1,002	24	51	559	583	112	189	123	778	12,725	39,601
1998	16	356	937	27	22	942	203	:	24	55	719	809	155	247	128	803	10,907	37,295
1999	16	352	1,044	40	22	922	230	1,718	22	50	856	807	239	251	139	864	14,287	43,852
2000	21	457	1,518	66	19	1,492	567	3,349	32	66	1,449	1,154	630	362	224	1,216	24,123	65,729
2001	20	459	1,334	:	21	:	185	4,316	42	82	888	:	:	432	128	:	20,056	44,437
<b>Instruments</b>																		
1996	20	287	766	27	13	323	20	128	14	27	40	286	90	94	69	310	3,557	6,876
1997	19	320	793	28	12	312	32	180	18	43	27	372	121	121	72	405	4,301	8,848
1998	27	336	913	31	15	360	33	:	23	38	32	401	107	159	81	375	3,925	10,006
1999	26	337	1,007	34	14	350	44	300	21	38	38	396	106	152	84	340	4,749	12,053
2000	44	332	1,211	39	18	448	50	477	26	37	89	498	160	184	86	565	6,712	18,216
2001	32	366	1,279	:	20	:	52	502	26	47	35	:	:	221	154	:	6,415	16,842
<b>Office machinery</b>																		
1996	4	112	198	6	7	99	14	45	5	9	4	82	20	31	12	55	741	3,986
1997	4	118	206	5	7	81	8	48	6	13	4	101	17	26	12	77	860	4,743
1998	4	125	213	6	9	76	8	:	8	13	4	121	22	24	14	93	743	4,444
1999	5	117	234	8	8	68	6	48	9	9	4	106	19	20	16	105	833	3,821
2000	5	129	246	9	11	80	7	48	8	10	5	105	40	19	14	152	919	3,825
2001	4	137	235	:	9	:	10	50	8	11	4	:	:	21	5	:	1,022	3,038
<b>Telecoms products</b>																		
1996	30	650	894	40	56	531	90	338	31	58	16	587	170	140	86	481	4,452	12,112
1997	36	723	1,148	54	55	554	135	437	55	118	18	914	294	265	116	763	4,635	14,901
1998	48	870	1,266	86	61	505	206	:	84	115	24	1,075	432	251	129	1,151	4,106	17,458
1999	54	914	1,490	125	69	579	197	605	81	86	22	1,280	296	167	186	1,945	4,906	25,124
2000	82	1,141	1,960	124	104	1,088	390	1,097	86	110	42	1,700	541	194	213	2,804	7,729	45,566
2001	55	1,024	1,704	:	93	:	571	1,228	102	146	43	:	:	271	150	:	7,502	40,251

Source: Comext database, Eurostat

### 3. THE ICT MARKET AND EXTERNAL TRADE

**Table 3.14: ICT products most traded between EU-15 Member States and the rest of the world, 2001**

Product (1)	Exporters (2)	Importers (2)
Data-processing machines	L (40.4)	L (24.2)
Input or output units for digital automatic data-processing machines	B (11.3)	
Parts and accessories for automatic data-processing machines or similar machines	EU-15 (10.9), IRL (32.2), I (12.2), NL (15.4)	EU-15 (14.0), B (8.6), D (13.0), F (12.7), IRL (30.6), I (10.1), NL (15.3), UK (13.6)
Parts of electrical apparatus for line telephony and line telegraphy	EL (29.5)	
Transmission apparatus incorporating reception apparatus	DK (21.4), D (13.7), F (9.9), A (19.1), FIN (48.9), S (23.0), UK (14.6)	DK (11.9), EL (15.2), E (8.7), A (18.0), FIN (11.3)
Radio-broadcast receivers not capable of operating without an external source of power	P (27.2)	
Television receivers	E (14.2)	
Parts suitable for use solely or principally with transmission and reception apparatus for radio-telephony		S (8.0)
<b>Monolithic digital integrated circuits as metal oxide semiconductor circuits</b>		<b>P (15.1)</b>

(1) Products at 6-digit CN level. (2) Figures in brackets are the shares of the given product in the country's total ICT exports/imports.

Source: Comext database, Eurostat

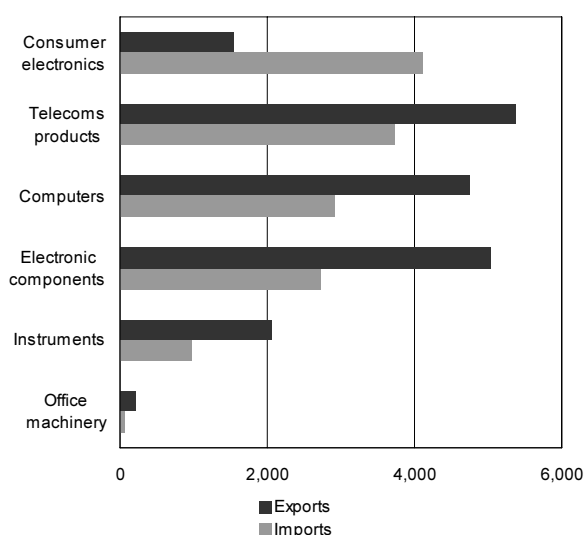
**Table 3.15: ICT products most traded between EFTA and Candidate Countries and the rest of the world, 2001 (1)**

Product (2)	Exporters (3)	Importers (3)
Processing units for automatic data-processing machines		CH (9.4)
Units for digital automatic data-processing machines (excl. processing units)	CY (39.0)	
Parts and accessories for automatic data-processing machines or similar machines	CH (7.3), LV (13.7)	NO (14.4), CY (11.4), HU (15.5), LV (10.7)
Parts of electrical apparatus for line telephony and line telegraphy		RO (14.5)
Transmission apparatus incorporating reception apparatus	NO (9.8), EE (49.6), HU (17.1), SI (10.6)	IS (7.5), BG (14.7), CZ (11.2), LT (12.2), PL (13.9), SK (7.8), TR (24.9)
Television receivers	PL (38.6), SK (15.3), TR (58.3)	
Parts suitable for use solely or principally with transmission and reception apparatus for radio-telephony	RO (24.6)	EE (41.5)
Fixed electrical capacitors	CZ (15.7)	
Cathode-ray television picture tubes	LT (41.2)	
Monolithic digital integrated circuits as metal oxide semiconductor circuits	MT (92.7)	MT (75.9)
Electric conductors	BG (22.9)	
Electricity meters		SI (16.0)
Parts and accessories for revolution counters	IS (12.3)	

(1) BG, CZ, PL, RO and TR, 2000. (2) Products at 6-digit CN level. (3) Figures in brackets are the shares of the given product in the country's total ICT exports/imports.

Source: Comext database, Eurostat

**Figure 3.3: EU's external trade with Candidate Countries, broken down by product groupings, 2001 (million EUR)**



Source: Comext database, Eurostat

The US was the largest destination for EU ICT exports in 2001, accounting for one-fifth of all such exports. Comparing with the situation five years earlier the share of the US has decreased slightly. The most notable change in the ranking of the selected countries and groups of countries was the increased share of Candidate countries (3.8 percentage points) over-taking the share of the first wave of Asian newly industrialising countries (NIC). The second wave of Asian newly industrialising countries as well as Japan have both seen their share of EU exports fall and China has moved above Japan in the ranking. The share of EU ICT exports to Euro-Med countries and other countries in the Middle East also increased during this five year period.

The origin of EU ICT imports is much more concentrated than for ICT exports, with the US, Asian countries and the Candidate countries accounting for over four-fifths of the total. China and the Candidate countries have both increased their share of the EU's ICT imports by more than 5 percentage points and this has mainly been at the expense of the US and Japan. See tables 3.16 and 3.17.

EU ICT exports to the growing Candidate countries' markets have been concentrated in telecommunication products, electronic components and computers and the EU recorded a trade surplus with the Candidate countries in all ICT product groups in 2001 except consumer electronics. See figure 3.3.

Table 3.16: ICT exports by partner

	1996 (%)	2001 (%)	2001/1996 (% points)
US	21.1	20.0	-1.0
Candidate countries (13)	12.2	16.0	3.8
NIC1 (Hong Kong, South Korea, Singapore, Taiwan)	12.6	11.4	-1.2
EFTA (IS, NO, CH, LI)	9.2	9.0	-0.2
NIC2 (Malaysia, Philippines, Thailand, Indonesia)	8.0	7.1	-1.0
China	3.2	4.9	1.7
JP	6.0	4.8	-1.2
Other Middle East (Bahrain, Iraq, Iran, Kuwait, Oman, Qatar, Saudi Arabia, UAE, Yemen)	2.9	4.6	1.6
Mexico, Central and South America (Mexico, Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica, Panama, Colombia, Venezuela, Ecuador, Peru, Brazil, Chile, Bolivia, Paraguay, Uruguay, Argentina, Belize, Suriname, Guyana)	4.6	4.5	-0.1
Other Euro-med (Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, the Palestinian Authority, Syria, Tunisia)	3.5	4.2	0.7
Russian Federation	2.5	3.0	0.5
South Africa	1.9	1.9	0.0
Canada	1.3	1.5	0.2
Australia	2.1	1.3	-0.8
Other	8.8	5.7	-3.0
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>-</b>

Source: Comext database, Eurostat

Table 3.17: ICT imports by partner

	1996 (%)	2001 (%)	2001/1996 (% points)
US	30.9	26.4	-4.5
NIC1 (Hong Kong, South Korea, Singapore, Taiwan)	22.1	20.5	-1.6
JP	18.9	14.0	-4.9
China	5.3	10.9	5.6
NIC2 (Malaysia, Philippines, Thailand, Indonesia)	10.5	10.6	0.1
Candidate countries (13)	3.5	8.8	5.3
EFTA (IS, NO, CH, LI)	3.6	2.7	-0.9
Other Euro-med (Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, the Palestinian Authority, Syria, Tunisia)	1.4	1.7	0.3
Canada	1.8	1.7	-0.1
Mexico, Central and South America (Mexico, Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica, Panama, Colombia, Venezuela, Ecuador, Peru, Brazil, Chile, Bolivia, Paraguay, Uruguay, Argentina, Belize, Suriname, Guyana)	0.6	1.3	0.7
Other Middle East (Bahrain, Iraq, Iran, Kuwait, Oman, Qatar, Saudi Arabia, UAE, Yemen)	0.5	0.4	-0.1
Australia	0.3	0.2	-0.1
South Africa	0.1	0.2	0.1
Russian Federation	0.1	0.1	0.0
Other	0.6	0.6	0.0
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>-</b>

Source: Comext database, Eurostat

### 3. THE ICT MARKET AND EXTERNAL TRADE

ICT exports to the US, the EU's biggest export market, were concentrated in computers, instruments, telecommunication products and electronic components. For instruments the US accounted for nearly one-third of the EU's exports. Computers were the main ICT products exported by the EU to the US and Japan, electronic components were the main EU ICT exports to the Asian newly industrialising countries and telecommunication products were the main ICT products exported to China and the Candidate countries. The EU's imports from these selected partners were generally concentrated in computers except from Candidate countries where consumer electronics and telecommunication products were more important. See table 3.18.

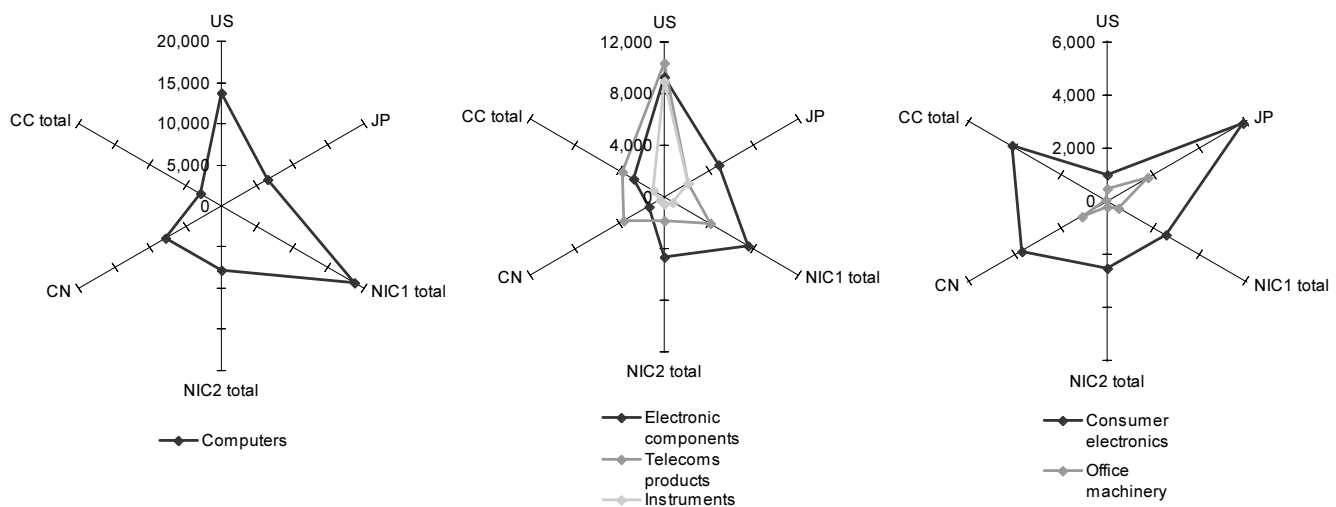
The three parts of figure 3.4 show the origin of EU imports for the six ICT product groups. Computers stand out from the others because of the relatively low level of imports of these products from Candidate countries combined with the particularly high level of imports from the first wave of Asian newly industrialising countries. The US was still clearly the primary source of EU imports for electronic components, telecommunication products and to an even greater extent instruments. Consumer electronics and office machinery are the two product groups where Japan in the leading source of EU imports and in both cases, but particularly in the larger consumer electronics group, the US has a relatively low share. Note that the three parts of figure 3.4 have different scales.

**Table 3.18: EU's external trade with selected partner countries, broken down by product groupings, 2001 (million EUR)**

	Computers	Consumer electronics	Electronic components	Instruments	Office machinery	Telecoms products	ICT total
<b>Exports</b>							
US	6,527	874	4,713	5,945	417	5,229	23,706
JP	2,275	102	1,113	1,136	35	1,051	5,713
NIC1 total	1,888	334	5,800	1,714	208	3,535	13,479
NIC2 total	782	114	4,651	439	27	2,332	8,346
CN	617	81	1,158	702	88	3,148	5,793
CC total	4,749	1,550	5,031	2,051	204	5,370	18,955
<b>Imports</b>							
US	13,739	972	9,290	8,939	480	10,367	43,786
JP	6,390	5,857	4,888	2,139	1,762	2,130	23,166
NIC1 total	18,613	2,520	7,507	705	455	4,098	33,897
NIC2 total	7,751	2,506	4,701	525	194	1,812	17,489
CN	7,812	3,723	1,452	426	1,095	3,623	18,132
CC total	2,908	4,123	2,724	974	65	3,736	14,531
<b>Trade balance</b>							
US	-7,212	-98	-4,576	-2,994	-63	-5,138	-20,080
JP	-4,115	-5,754	-3,775	-1,003	-1,727	-1,079	-17,453
NIC1 total	-16,725	-2,185	-1,707	1,009	-247	-563	-20,418
NIC2 total	-6,969	-2,391	-51	-86	-167	520	-9,143
CN	-7,196	-3,643	-294	275	-1,007	-475	-12,338
CC total	1,841	-2,573	2,307	1,077	138	1,634	4,424

Source: Comext database, Eurostat

**Figure 3.4: EU's imports from selected partner countries, by product groupings, 2001 (million EUR)**



Source: Comext database, Eurostat



## 4. ICT PENETRATION

## 4. ICT PENETRATION

Over the 5 years to 2001 the total number of personal computers (not just those in households) increased in all Member States. Sweden, Luxembourg, Denmark, the Netherlands and Finland came out at the top of a ranking of EU Member States in terms of the PC penetration rate, with between 42 and 56 PCs per 100 inhabitants in 2001. Greece and Portugal remained at the other end of this ranking in 2001 with 8 and 12 PCs per 100 inhabitants respectively.

Equally, all of the EFTA and Candidate countries recorded an increase in the number of personal computers in the five years to 2001. The number of PCs per 100 inhabitants was highest among the Candidate countries in Slovenia, Cyprus and Malta and in all three of these countries the figure recorded was higher than in four of the Member States. The lowest rates of PCs per 100 inhabitants among the Candidate countries were recorded in Romania, Turkey and Bulgaria. See table 4.1.

Table 4.1a: Personal computers

	EU-15	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
<b>Total number of PCs (millions)</b>																
1991	:	1.0	0.7	7.5	0.2	1.3	4.2	0.4	2.6	:	1.7	0.6	0.3	0.6	1.1	7.2
1992	:	1.2	0.8	8.8	0.2	1.5	6.2	0.4	3.1	:	2.0	0.7	0.4	0.7	1.2	8.4
1993	:	1.4	0.9	10.2	0.3	1.7	6.7	0.5	3.5	:	2.2	0.8	0.4	0.7	1.3	9.6
1994	:	1.6	1.0	12.3	0.3	1.9	7.8	0.6	4.1	:	2.6	0.9	0.4	0.8	1.6	9.9
1995	:	1.8	1.4	14.6	0.4	2.4	8.5	0.7	4.8	:	3.1	1.3	0.6	1.2	2.2	11.8
1996	62.4	2.2	1.6	17.1	0.4	3.1	9.4	0.8	5.3	0.2	3.6	1.4	0.7	1.4	2.6	12.7
1997	72.6	2.5	1.9	19.6	0.5	3.8	11.3	0.9	6.5	0.2	4.4	1.7	0.7	1.6	3.0	14.1
1998	84.0	2.9	2.0	22.9	0.6	4.3	13.6	1.0	7.6	0.2	5.1	1.9	0.8	1.8	3.5	15.9
1999	93.9	3.2	2.2	24.4	0.6	4.8	15.7	1.2	9.0	0.2	5.7	2.1	0.9	1.9	4.0	18.0
2000	106.1	3.5	2.3	27.6	0.8	5.8	17.9	1.4	10.3	0.2	6.3	2.3	1.1	2.1	4.5	20.2
2001	115.6	3.7	2.4	29.0	0.9	6.8	20.0	1.5	11.3	0.2	6.9	2.5	1.2	2.2	5.0	22.0
<b>PCs per 100 inhabitants (units)</b>																
1991	:	10.0	13.4	9.8	1.9	3.3	7.4	10.2	4.6	:	11.3	7.7	3.0	11.3	12.7	12.5
1992	:	11.9	15.5	10.9	2.2	3.8	10.8	11.6	5.5	:	13.2	8.9	3.5	12.9	13.8	14.5
1993	:	13.9	18.0	12.5	2.6	4.3	11.7	13.5	6.1	:	14.4	10.0	4.0	14.2	14.9	16.5
1994	:	15.9	19.2	15.1	2.9	4.9	13.5	15.6	7.2	:	16.9	11.2	4.3	15.9	18.1	17.0
1995	:	17.8	27.1	17.8	3.3	6.1	14.7	18.3	8.4	:	20.0	16.2	5.5	23.2	24.9	20.1
1996	16.7	21.7	30.5	20.9	3.5	7.9	16.2	21.0	9.2	37.1	23.1	17.4	6.7	27.3	29.4	21.6
1997	19.4	24.5	36.0	23.9	4.5	9.7	19.4	24.0	11.3	37.7	28.1	21.1	7.4	31.1	33.9	23.9
1998	22.4	28.6	37.7	27.9	5.2	10.9	23.2	27.3	13.3	38.5	32.4	23.3	8.1	34.9	39.5	26.8
1999	25.0	31.5	41.4	29.7	6.0	11.9	26.7	31.6	15.7	38.6	35.9	25.7	9.3	36.0	45.1	30.3
2000	28.2	34.4	43.2	33.6	7.1	14.5	30.4	35.9	18.0	45.5	39.4	28.0	10.5	39.6	50.7	33.8
2001	30.5	36.0	44.7	35.2	8.1	16.8	33.7	39.1	19.5	51.1	42.9	30.7	11.7	42.3	56.1	36.6

Source: ITU estimates

Table 4.1b: Personal computers

	IS	NO	CH	BG	CY	CZ	EE	HU	LV	LT	MT	PL	RO	SK	SI	TR	JP	US
<b>Total number of PCs (millions)</b>																		
1991	0.0	0.6	0.8	:	0.0	0.2	:	0.1	:	:	0.0	0.4	0.1	:	0.1	0.4	8.1	59.0
1992	0.0	0.7	0.9	0.1	0.0	0.3	:	0.2	:	:	0.0	0.5	0.2	:	0.1	0.5	8.6	64.5
1993	0.0	0.8	1.2	0.1	0.0	0.3	:	0.3	:	:	0.0	0.7	0.2	:	0.1	0.7	9.7	70.2
1994	0.0	1.0	1.6	0.1	0.0	0.5	:	0.4	0.0	0.0	0.0	0.9	0.3	0.2	0.2	0.8	11.5	77.5
1995	0.1	1.2	2.0	0.1	0.0	0.6	:	0.4	0.0	0.0	0.0	1.1	0.3	0.2	0.2	0.9	15.1	86.3
1996	0.1	1.4	2.4	0.2	0.1	0.7	0.1	0.5	0.1	0.1	0.0	1.2	0.4	0.3	0.3	1.1	20.4	96.6
1997	0.1	1.6	2.8	0.2	0.1	0.9	0.1	0.6	0.1	0.1	0.1	1.5	0.4	0.4	0.4	1.3	25.5	109.0
1998	0.1	1.8	3.0	0.2	0.1	1.0	0.2	0.7	0.2	0.2	0.1	1.9	0.5	0.5	0.4	1.7	30.0	124.0
1999	0.1	2.0	3.3	0.2	0.1	1.1	0.2	0.8	0.2	0.2	0.1	2.4	0.6	0.6	0.5	2.2	36.3	141.0
2000	0.1	2.2	3.6	0.4	0.2	1.3	0.2	0.9	0.3	0.2	0.1	2.7	0.7	0.7	0.5	2.5	40.0	161.0
2001	0.1	2.3	:	0.4	0.2	1.4	0.3	1.0	0.4	0.3	0.1	3.3	0.8	0.8	0.6	2.7	44.4	178.0
<b>PCs per 100 inhabitants (units)</b>																		
1991	7.7	14.5	11.0	:	1.7	1.5	:	1.2	:	:	2.8	1.0	0.4	:	3.2	0.7	6.5	23.4
1992	11.5	16.2	13.0	1.1	2.4	2.4	:	1.9	:	:	4.1	1.3	0.7	:	4.3	0.9	6.9	25.3
1993	13.2	18.9	17.2	1.2	3.2	2.9	:	2.7	:	:	5.5	1.8	0.9	:	5.0	1.1	7.8	27.2
1994	16.9	22.9	22.8	1.4	3.9	4.4	:	3.4	0.3	0.5	6.8	2.2	1.1	2.8	7.5	1.3	9.2	29.7
1995	20.5	27.3	28.3	1.7	5.4	5.3	:	3.9	0.8	0.6	8.1	2.9	1.3	4.1	10.1	1.5	12.0	32.8
1996	25.9	31.7	33.9	1.9	7.7	6.8	6.8	4.4	2.0	2.7	10.7	3.1	1.5	4.6	12.6	1.7	16.2	36.4
1997	29.3	36.0	39.5	2.2	11.4	8.3	9.6	5.8	4.0	3.4	13.2	3.9	1.8	7.0	18.9	2.1	20.2	40.7
1998	32.7	40.5	42.1	2.4	13.5	9.7	11.4	6.5	6.1	5.4	15.6	4.9	2.1	8.7	21.1	2.7	23.7	45.9
1999	35.7	44.6	46.1	2.7	19.4	10.7	13.5	7.5	8.2	5.9	17.9	6.2	2.7	10.9	25.1	3.4	28.7	51.7
2000	39.3	49.0	50.0	4.4	22.4	12.1	15.3	8.7	14.0	6.5	20.5	6.9	3.2	13.7	27.5	3.8	31.5	58.5
2001	41.4	50.8	:	4.9	25.0	13.6	17.5	10.0	15.3	7.1	23.1	8.5	3.6	14.8	27.5	4.1	34.9	62.3

Source: ITU estimates

In 2001, just under one-third of the EU population accessed the Internet according to ITU data. The total number of Internet users in the EU was estimated at 119 million in 2001. Among the EU Member States the highest user rates were reported in the Nordic Member States: Sweden (51.6 per 100 inhabitants), Denmark (44.7) and Finland (43.0). The lowest rates were reported in Greece and Spain, with 13.2 and 18.3 Internet users per 100 inhabitants respectively. A comparison of usage rates in 1997 and in 2001 shows that the usage rates in Greece and Spain in 2001 were still below the Swedish level of 1997 and that it is only in 2001 that the usage rates in Belgium, France, Ireland, Italy and Luxembourg have managed to pass the 1997 Swedish rate.

Iceland, Norway and Switzerland all recorded a higher ratio of Internet users to population than the EU average with the Icelandic and Norwegian figures both higher than in Sweden. Among the Candidate countries the highest ratios were recorded in Estonia and Slovenia, both higher than in six of the fifteen Member States but just below the EU average. The lowest ratios were recorded in Turkey and Romania. See table 4.2.

Table 4.2a: Internet users

	EU-15	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
<b>Number of Internet users (thousands)</b>																
1991	689	2	10	200	5	10	60	2	20	:	80	20	10	70	100	100
1992	1,157	10	20	350	5	30	115	6	40	1	130	50	25	95	130	150
1993	1,646	20	30	375	20	50	225	10	70	1	160	60	45	130	150	300
1994	3,109	70	70	750	40	110	275	20	110	2	330	110	72	250	300	600
1995	6,427	100	200	1,500	80	150	950	40	300	7	600	150	90	710	450	1,100
1996	11,404	300	300	2,500	150	526	1,500	80	585	23	900	250	230	860	800	2,400
1997	20,920	500	600	5,500	200	1,100	2,500	150	1,300	30	1,000	360	270	1,000	2,100	4,310
1998	33,715	800	1,000	8,100	350	1,733	3,700	300	2,600	50	1,600	710	500	1,311	2,961	8,000
1999	58,087	1,200	1,500	14,400	750	2,830	5,370	679	8,200	75	3,000	1,250	1,000	1,667	3,666	12,500
2000	89,723	2,326	1,950	24,000	1,000	5,388	8,500	784	13,200	100	3,900	2,100	2,500	1,927	4,048	18,000
2001	119,102	2,881	2,400	30,000	1,400	7,388	15,653	895	16,000	150	5,300	2,600	3,600	2,235	4,600	24,000
<b>Internet users per 100 inhabitants (units)</b>																
1991	0.2	0.0	0.2	0.3	0.0	0.0	0.1	0.1	0.0	:	0.5	0.3	0.1	1.4	1.2	0.2
1992	0.3	0.1	0.4	0.4	0.0	0.1	0.2	0.2	0.1	0.2	0.9	0.6	0.3	1.9	1.5	0.3
1993	0.4	0.2	0.6	0.5	0.2	0.1	0.4	0.3	0.1	0.3	1.0	0.8	0.5	2.6	1.7	0.5
1994	0.8	0.7	1.3	0.9	0.4	0.3	0.5	0.6	0.2	0.5	2.1	1.4	0.7	4.9	3.4	1.0
1995	1.7	1.0	3.8	1.8	0.8	0.4	1.6	1.1	0.5	1.6	3.9	1.9	0.9	13.7	5.1	1.9
1996	3.1	3.0	5.7	3.0	1.4	1.3	2.6	2.2	1.0	5.5	5.8	3.1	2.3	16.8	9.0	4.1
1997	5.6	4.9	11.4	6.7	1.9	2.8	4.3	4.1	2.3	7.1	6.4	4.5	2.7	19.4	23.7	7.3
1998	9.0	7.9	18.9	9.9	3.3	4.4	6.3	8.1	4.5	11.7	10.2	8.7	5.0	25.4	33.4	13.5
1999	15.4	11.8	28.2	17.5	7.1	7.0	9.2	18.2	14.3	17.0	18.9	15.3	10.0	32.2	41.4	21.0
2000	23.8	22.9	36.6	29.2	9.5	13.4	14.4	20.7	23.0	22.7	24.4	25.9	25.0	37.2	45.6	30.1
2001	31.4	28.0	44.7	36.4	13.2	18.3	26.4	23.3	27.6	33.3	32.9	31.9	35.0	43.0	51.6	39.9

Source: ITU estimates

Table 4.2b: Internet users

	IS	NO	CH	BG	CY	CZ	EE	HU	LV	LT	MT	PL	RO	SK	SI	TR	JP	US
<b>Number of Internet users (thousands)</b>																		
1991	1	60	80	:	:	:	:	0	:	:	:	2	:	:	:	:	50	3,000
1992	4	95	120	:	0	:	1	5	:	:	:	20	:	:	:	:	120	4,500
1993	7	120	150	:	0	60	5	20	:	:	:	50	1	7	8	5	500	5,500
1994	18	180	190	2	1	130	17	50	:	:	:	150	6	17	21	30	1,000	8,500
1995	30	280	250	10	3	150	40	70	:	:	1	250	17	28	57	50	2,000	20,000
1996	40	800	322	60	5	200	50	100	20	10	4	500	50	100	100	120	5,500	30,000
1997	75	1,300	548	100	33	300	80	200	50	35	15	800	100	190	150	300	11,550	40,000
1998	100	1,600	1,200	150	68	400	150	400	80	70	25	1,581	500	500	200	450	16,940	60,000
1999	150	2,000	1,761	235	88	700	200	600	105	103	30	2,100	600	600	250	1,500	27,060	102,000
2000	168	2,200	2,134	430	120	1,000	392	715	150	225	61	2,800	800	650	300	2,000	37,200	124,000
2001	195	2,700	2,917	605	150	1,400	430	1,480	170	250	99	3,800	1,000	900	600	2,500	57,900	142,823
<b>Internet users per 100 inhabitants (units)</b>																		
1991	0.4	1.4	1.2	:	:	:	:	0.0	:	:	:	0.0	:	:	:	:	0.0	1.2
1992	1.5	2.2	1.7	:	0.1	:	0.1	0.0	:	:	:	0.1	:	:	:	:	0.1	1.8
1993	2.6	2.8	2.2	:	0.1	0.6	0.3	0.2	:	:	:	0.1	0.0	0.1	0.4	0.0	0.4	2.1
1994	6.7	4.1	2.7	0.0	0.1	1.3	1.1	0.5	:	:	:	0.4	0.0	0.3	1.1	0.0	0.8	3.3
1995	11.2	6.4	3.5	0.1	0.5	1.5	2.7	0.7	:	:	:	0.2	0.6	0.1	0.5	2.9	0.1	7.6
1996	14.8	18.2	4.5	0.7	0.8	1.9	3.4	1.0	0.8	0.3	1.1	1.3	0.2	1.9	5.0	0.2	4.4	11.3
1997	27.5	29.4	7.7	1.2	5.0	2.9	5.5	2.0	2.0	0.9	4.0	2.1	0.4	3.5	7.6	0.5	9.2	14.9
1998	36.4	36.0	16.8	1.8	10.2	3.9	10.3	3.9	3.3	1.9	6.5	4.1	2.2	9.3	10.0	0.7	13.4	22.2
1999	53.6	44.6	24.6	2.8	13.1	6.8	13.9	6.0	4.3	2.8	7.7	5.4	2.7	11.1	12.6	2.3	21.4	37.4
2000	60.0	49.0	29.6	5.3	17.9	9.7	27.2	7.1	6.2	6.1	15.6	7.2	3.6	12.0	15.1	3.1	29.3	45.1
2001	67.2	59.6	40.4	7.5	22.1	13.6	30.1	14.8	7.2	6.8	25.4	9.8	4.5	16.7	30.0	3.8	45.5	50.0

Source: ITU estimates

#### 4. ICT PENETRATION

Table 4.3a: Internet use

	EU-15	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
<b>Number of Internet subscriptions (thousands)</b>																
1997	:	200	:	5,500	:	:	:	150	:	:	:	:	89	:	653	:
1998 (1)	16,743	207	:	7,500	100	667	1,280	300	1,399	:	1,067	:	173	:	1,550	2,500
1999 (2)	36,342	735	1,135	11,100	193	3,100	3,030	444	3,950	:	2,835	:	474	466	1,880	7,000
2000 (3)	59,295	1,150	1,684	18,250	235	8,251	5,263	1,040	:	:	5,911	:	1,987	616	2,307	12,600
2001	:	:	:	24,770	:	10,740	:	:	:	:	:	:	3,459	930	2,849	:
<b>Internet, minutes of connection (millions)</b>																
1997	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	6,978
1998	:	:	:	:	:	:	:	8,923	:	:	:	:	1,100	:	:	20,262
1999	:	:	:	:	:	10,892	:	:	13,123	:	:	:	2,800	:	5,402	34,780
2000	:	:	:	:	:	30,363	:	5,813	:	:	:	:	5,630	:	12,711	72,653

(1) EU-15, excluding DK, L, A and FIN. (2) EU-15, excluding L and A. (3) EU-15, excluding I, L and A.

Source: Communications (NewCronos Theme4/coins/telecom/tel\_ser), Eurostat

Table 4.3b: Internet use

	IS	LI	NO	CH	BG	CY	CZ	EE	HU	LV	LT	MT	PL	RO	SK	SI	TR
<b>Number of Internet subscriptions (thousands)</b>																	
1997	:	:	:	:	:	5	57	:	:	2	:	:	:	:	5	18	1
1998	:	:	381	425	1	10	86	:	:	80	:	:	:	:	63	43	230
1999	:	:	716	992	3	17	199	:	137	:	:	:	:	:	83	72	437
2000	:	:	1,150	1,485	6	28	418	:	220	:	:	:	:	:	92	140	1,629
2001	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:

Source: Communications (NewCronos Theme4/coins/telecom/tel\_ser), Eurostat

In 2001, there were about 275 million mobile phone subscriptions in the EU. Mobile subscriptions are one of the most evenly spread of newer ICT in the Member States, with the number of subscriptions per 100 inhabitants in 2001 between 60.5 and 83.9 with only Luxembourg (96.7) outside of this range. The penetration of mobile phones in the Member States has increased over the last few years, but appears to be reaching saturation in some markets. The number of mobile phone subscriptions in Austria, Spain, Sweden, Finland and the United Kingdom grew by less than 10% in 2001. In comparison all of the EU Member States had recorded year on year growth in excess of this value in 2000 and the average growth in the EU has been in excess of 50% per year for several years. Mobile telephony has become sufficiently widespread in the EU that the number of subscriptions has surpassed the number of main telephone lines. This first occurred in 1998 in Finland and by 2001 had occurred in every Member State.

The number of mobile phone subscriptions per 100 inhabitants in Iceland and Norway was above the EU average in 2001 while in Switzerland the ratio was at the same level as the EU average. There was greater diversity in this ratio among the Candidate countries than was seen for the Member States. The highest ratio was recorded in Slovenia at 75.8 which was higher than the EU average. However the Czech Republic was the only other Candidate country where this ratio exceeded 50 mobile subscriptions per 100 inhabitants and in Romania and Bulgaria the ratio was below 20. Although recording lower levels of subscription relative to population, all of the Candidate countries recorded stronger growth in 2001 than the EU average with rates between 17% in Estonia and 93% in the Slovak Republic with Bulgaria outside of this range with growth of over 100%. See table 4.4.

Table 4.4a: Cellular mobile telephone subscribers

	EU-15	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
	<b>Number of subscribers (thousands)</b>															
1991	4,233	51	176	532	:	108	375	32	568	1	115	115	13	319	568	1,260
1992	5,613	61	211	972	:	180	437	44	783	1	166	172	37	386	656	1,507
1993	8,420	68	358	1,774	48	257	572	61	1,207	5	216	221	101	489	775	2,268
1994	13,682	128	504	2,491	153	412	883	88	2,240	13	321	278	174	676	1,381	3,940
1995	21,457	235	822	3,725	273	945	1,302	158	3,923	27	539	384	341	1,039	2,008	5,736
1996	33,577	478	1,317	5,512	532	2,998	2,463	289	6,422	45	1,016	599	664	1,502	2,492	7,248
1997	52,682	974	1,444	8,276	938	4,338	5,817	533	11,738	67	1,717	1,160	1,507	2,163	3,169	8,841
1998	90,026	1,756	1,931	13,913	2,047	7,051	11,210	946	20,489	131	3,351	2,293	3,075	2,846	4,109	14,878
1999	150,350	3,187	2,629	23,446	3,904	12,300	21,434	1,655	30,296	209	6,746	4,250	4,672	3,273	5,165	27,185
2000	238,884	5,336	3,364	48,202	5,932	24,736	29,052	2,490	42,246	303	10,755	6,253	6,665	3,729	6,369	43,452
2001	274,578	7,690	3,954	56,245	7,962	26,494	35,922	2,800	48,698	432	11,900	6,566	7,978	4,044	6,867	47,026
	<b>Subscribers per 100 inhabitants (units)</b>															
1991	1.2	0.5	3.4	0.7	:	0.3	0.7	0.9	1.0	0.3	0.8	1.5	0.1	6.3	6.6	2.2
1992	1.5	0.6	4.1	1.2	:	0.5	0.8	1.2	1.4	0.3	1.1	2.2	0.4	7.6	7.5	2.6
1993	2.3	0.7	6.9	2.2	0.5	0.7	1.0	1.7	2.1	1.3	1.4	2.8	1.0	9.6	8.9	3.9
1994	3.7	1.3	9.7	3.1	1.5	1.1	1.5	2.5	3.9	3.2	2.1	3.5	1.8	13.3	15.7	6.7
1995	5.8	2.3	15.8	4.6	2.6	2.4	2.3	4.4	6.8	6.5	3.5	4.8	3.4	20.1	22.7	9.8
1996	9.0	4.7	25.1	6.7	5.1	7.6	4.2	8.0	11.2	10.8	6.5	7.4	6.7	29.3	28.2	12.3
1997	14.1	9.6	27.4	10.1	8.9	11.0	10.0	14.6	20.5	15.9	11.0	14.4	15.1	42.0	35.8	15.0
1998	24.0	17.3	36.4	17.0	19.3	17.9	19.2	25.5	35.7	30.4	21.3	28.2	30.8	55.2	46.4	25.1
1999	40.0	31.4	49.5	28.5	36.7	30.6	36.6	44.3	52.8	47.5	42.5	52.0	46.7	63.3	58.3	45.7
2000	63.4	52.5	63.1	58.6	56.1	61.7	49.3	65.7	73.7	68.9	67.3	77.0	66.5	72.0	71.7	72.7
2001	72.4	74.7	73.6	68.3	75.1	65.5	60.5	72.9	83.9	96.1	73.9	80.7	77.5	77.8	77.1	78.3

Source: ITU estimates

Table 4.4b: Cellular mobile telephone subscribers

	IS	NO	CH	BG	CY	CZ	EE	HU	LV	LT	MT	PL	RO	SK	SI	TR	JP	US	
	<b>Number of subscribers (thousands)</b>																		
1991	13	234	175	:	5	1	1	8	:	:	2	:	:	0	1	48	1,378	7,557	
1992	15	283	215	:	10	5	2	23	1	0	4	2	:	2	4	61	1,713	11,033	
1993	17	371	258	1	15	14	7	46	4	1	5	16	1	3	7	84	2,131	16,009	
1994	22	588	332	7	23	30	14	143	8	5	8	39	3	6	16	175	4,331	24,134	
1995	31	981	447	21	44	49	30	265	15	15	11	75	9	12	27	437	11,712	33,786	
1996	47	1,261	663	27	71	200	70	473	29	51	13	217	17	29	41	806	26,907	44,043	
1997	65	1,677	1,044	70	92	526	144	706	77	165	18	812	201	200	94	1,610	38,254	55,312	
1998	104	2,106	1,699	127	116	965	247	1,070	167	268	23	1,928	643	473	162	3,506	47,308	69,209	
1999	173	2,745	3,058	350	152	1,945	387	1,628	274	332	38	3,957	1,356	664	631	8,122	56,846	86,047	
2000	216	3,368	4,639	738	218	4,346	557	3,076	401	524	114	6,747	2,499	1,110	1,216	16,133	66,784	109,478	
2001	235	3,737	5,226	1,550	314	6,769	651	4,968	657	932	139	10,050	3,860	2,147	1,516	20,000	72,796	127,000	
	<b>Subscribers per 100 inhabitants (units)</b>																		
1991	5.0	5.5	2.6	:	0.9	0.0	0.0	0.1	:	:	0.6	:	:	0.0	0.0	0.1	1.1	3.0	
1992	5.8	6.6	3.1	:	1.6	0.0	0.2	0.2	0.0	0.0	1.0	0.0	:	0.0	0.2	0.1	1.4	4.3	
1993	6.6	8.6	3.7	0.0	2.4	0.1	0.5	0.4	0.1	0.0	1.4	0.0	0.0	0.1	0.3	0.1	1.7	6.2	
1994	8.2	13.5	4.7	0.1	3.6	0.3	0.9	1.4	0.3	0.1	2.0	0.1	0.0	0.1	0.8	0.3	3.5	9.3	
1995	11.5	22.4	6.3	0.2	6.9	0.5	2.1	2.6	0.6	0.4	2.9	0.2	0.0	0.2	1.4	0.7	9.3	12.8	
1996	17.3	28.7	9.4	0.3	10.9	1.9	4.7	4.6	1.1	1.4	3.3	0.6	0.1	0.5	2.1	1.3	21.4	16.6	
1997	23.9	38.0	14.7	0.8	14.0	5.1	9.9	6.9	3.1	4.5	4.7	2.1	0.9	3.7	4.7	2.6	30.3	20.6	
1998	37.9	47.4	23.8	1.5	17.5	9.4	17.0	10.5	6.8	7.2	5.9	5.0	2.9	8.8	8.1	5.5	37.4	25.6	
1999	61.6	61.3	42.7	4.2	22.6	19.0	26.9	16.2	11.2	9.0	9.6	10.2	6.1	12.3	31.7	12.6	44.9	31.6	
2000	77.0	75.0	64.4	9.1	32.6	42.2	38.7	30.7	16.6	14.2	29.3	17.5	11.1	20.6	61.1	24.7	52.6	39.8	
2001	81.2	82.5	72.4	19.1	46.2	65.9	45.5	49.8	28.0	25.3	35.6	26.0	17.2	39.8	75.8	30.2	57.2	44.4	

Source: ITU estimates

#### 4. ICT PENETRATION

Table 4.5a: Main telephone lines

	EU-15	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
<b>Number of main telephone lines (thousands)</b>																
1990	153,000	3,913	2,911	32,000	3,949	12,603	28,085	983	22,350	184	6,940	3,223	2,379	2,670	5,850	25,400
1991	159,000	4,096	2,951	33,700	4,190	13,264	29,080	1,030	23,071	192	7,175	3,344	2,694	2,718	5,913	25,910
1992	165,000	4,264	3,005	35,800	4,497	13,792	29,905	1,096	23,709	207	7,395	3,466	3,014	2,742	5,922	26,514
1993	171,000	4,396	3,060	37,500	4,744	14,253	30,900	1,170	24,167	215	7,630	3,579	3,260	2,763	5,907	27,336
1994	177,000	4,526	3,123	39,900	4,976	14,685	31,600	1,240	24,542	222	7,830	3,681	3,444	2,801	5,967	28,358
1995	184,823	4,632	3,203	44,200	5,163	15,095	32,400	1,310	24,845	234	8,124	3,797	3,586	2,810	6,013	29,411
1996	188,432	4,725	3,251	44,200	5,329	15,413	32,900	1,390	25,259	258	8,431	3,902	3,822	2,842	6,032	30,678
1997	193,570	4,939	3,341	45,200	5,431	15,900	33,700	1,500	25,698	280	8,860	3,969	4,002	2,861	6,010	31,879
1998	197,725	5,056	3,496	46,530	5,536	16,300	34,099	1,600	25,968	293	9,337	3,997	4,117	2,855	5,995	32,547
1999	202,828	5,142	3,638	48,210	5,611	16,700	34,100	1,770	26,502	311	9,610	3,862	4,230	2,850	6,095	34,197
2000	207,133	5,061	3,826	50,220	5,659	17,453	33,983	1,590	27,153	331	9,879	3,833	4,314	2,849	6,031	34,766
2001	:	:	3,882	52,280	5,608	17,531	34,074	1,590	:	336	:	:	4,378	2,806	5,954	35,326
<b>Number of main telephone lines per 100 inhabitants (units)</b>																
1990	42	39	57	40	39	32	50	28	39	48	46	42	24	54	68	44
1991	43	41	57	42	41	34	51	29	41	50	48	43	27	54	69	45
1992	45	42	58	44	44	35	52	31	42	53	49	44	31	54	68	46
1993	46	44	59	46	46	36	54	33	42	54	50	45	33	55	68	47
1994	48	45	60	49	48	38	55	35	43	55	51	46	35	55	68	49
1995	49	46	61	51	49	38	56	36	43	57	53	47	36	55	68	50
1996	51	47	62	54	51	39	56	38	44	62	54	48	38	55	68	52
1997	52	49	63	55	52	40	57	41	45	66	57	49	40	56	68	54
1998	53	50	66	57	53	43	58	43	45	74	59	49	41	55	68	56
1999	54	50	68	59	53	43	58	48	46	72	61	48	42	55	67	57
2000	55	49	72	61	54	43	58	42	47	77	62	48	43	55	67	58
2001	:	:	73	64	53	44	58	42	:	76	:	:	43	54	67	59

Source: Communications (NewCronos Theme4/coins/telecom/tel\_ser), Eurostat

Table 4.5b: Main telephone lines

	IS	LI	NO	CH	BG	CY	CZ	EE	HU	LV	LT	MT	PL	RO	SK	SI	TR
<b>Number of main telephone lines (thousands)</b>																	
1990	131	17	2,132	3,943	:	:	:	:	:	:	:	:	:	:	:	:	:
1991	136	17	2,198	4,082	:	:	:	:	:	:	:	:	:	:	:	:	:
1992	140	18	2,268	4,185	:	:	:	:	:	:	:	:	:	:	:	:	:
1993	144	19	2,335	4,266	:	:	:	:	:	:	:	:	:	:	:	:	:
1994	148	19	2,392	4,258	:	:	:	:	:	:	:	:	:	:	:	:	:
1995	149	20	2,476	4,480	2,563	347	2,398	412	2,157	724	941	171	5,729	2,968	1,125	615	13,228
1996	154	20	2,589	4,571	2,647	366	2,816	439	2,651	750	993	181	6,532	3,161	1,246	665	14,286
1997	155	20	2,735	4,688	2,681	386	3,277	469	3,095	740	1,048	187	7,619	3,427	1,392	710	15,744
1998	178	20	2,935	4,884	2,758	405	3,741	499	3,385	742	1,110	192	8,808	3,627	1,539	723	16,960
1999	189	20	3,176	5,066	2,833	424	3,853	515	3,609	732	1,145	198	10,175	3,780	1,655	758	18,054
2000	197	:	3,302	5,235	2,882	440	3,871	522	3,801	735	1,180	207	10,947	3,899	1,698	785	18,395
2001	197	:	3,314	5,390	2,922	435	3,861	512	3,746	722	1,144	211	11,427	4,165	1,556	802	18,904
<b>Number of main telephone lines per 100 inhabitants (units)</b>																	
1990	51	58	50	59	:	:	:	:	:	:	:	:	:	:	:	:	:
1991	53	60	52	60	:	:	:	:	:	:	:	:	:	:	:	:	:
1992	54	62	53	61	:	:	:	:	:	:	:	:	:	:	:	:	:
1993	54	63	54	61	:	:	:	:	:	:	:	:	:	:	:	:	:
1994	56	61	55	61	:	:	:	:	:	:	:	:	:	:	:	:	:
1995	56	64	57	64	30	47	23	28	21	29	25	46	15	13	21	31	21
1996	58	64	59	65	32	50	27	30	26	30	27	48	17	14	23	33	22
1997	62	63	62	66	32	59	32	32	30	31	28	50	20	15	26	36	25
1998	65	63	66	69	33	54	36	34	33	33	30	51	23	16	29	37	25
1999	68	61	71	70	34	54	38	36	36	34	31	51	26	17	31	38	26
2000	71	:	70	72	35	57	38	36	38	34	32	54	28	17	32	39	27
2001	69	:	74	75	36	57	38	37	37	31	31	54	30	19	29	40	28

Source: Communications (NewCronos Theme4/coins/telecom/tel\_ser), Eurostat

Table 4.6a: Telephone use (million minutes)

	EU-15	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
<b>Calls from fixed to mobile networks</b>																
1998	:	:	:	4,420	:	2,826	:	:	:	:	:	:	632	:	:	5,638
1999	:	:	:	7,410	:	4,104	:	:	:	:	:	:	671	:	1,810	9,004
2000	:	:	:	10,760	:	5,854	:	:	:	:	:	:	1,939	:	:	12,179
<b>Calls from mobile to fixed networks</b>																
1998	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
1999	:	:	:	:	:	4,789	:	:	:	:	:	:	:	:	:	:
2000	:	:	:	:	:	5,190	:	3,595	:	:	:	:	1,069	:	:	:
<b>Calls from mobile to mobile networks</b>																
1998	:	:	:	:	:	:	:	:	:	:	:	:	318	:	:	:
1999	:	:	:	:	:	5,073	:	:	:	:	:	:	786	:	:	:
2000	:	:	:	:	:	10,489	:	354	:	:	:	:	1,420	:	:	:
<b>Calls within mobile networks</b>																
1998	:	:	:	:	:	:	:	:	:	:	:	:	1,152	:	:	:
1999	:	:	:	:	:	5,393	:	:	:	:	:	:	2,462	:	:	:
2000	:	:	:	:	:	:	:	583	:	:	:	:	3,699	:	:	:
<b>Short text messages (millions)</b>																
1998	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
1999	:	:	:	3,600	:	:	:	:	:	:	:	:	:	705	141	2,361
2000	:	:	753	11,400	:	2,665	:	550	:	:	:	:	:	993	494	8,041

Source: Communications (NewCronos Theme4/coins/telecom/tel\_ser), Eurostat

Table 4.6b: Telephone use (million minutes)

	IS	LI	NO	CH	BG	CY	CZ	EE	HU	LV	LT	MT	PL	RO	SK	SI	TR
<b>Calls from fixed to mobile networks</b>																	
1998	:	:	1,013	793	:	:	:	:	:	49	:	:	:	:	:	113	:
1999	:	:	1,454	1,124	:	:	667	:	:	60	:	:	:	:	:	206	:
2000	:	:	:	:	:	:	573	109	1,088	81	80	:	:	:	:	266	:
<b>Calls from mobile to fixed networks</b>																	
1998	:	:	1,118	:	:	:	421	:	:	:	:	:	:	:	:	:	:
1999	:	:	1,355	:	:	:	642	:	:	:	:	:	:	:	:	:	:
2000	:	:	:	:	:	:	468	:	686	:	:	:	:	:	696	:	:
<b>Calls from mobile to mobile networks</b>																	
1998	:	:	106	:	:	:	:	:	:	:	:	:	:	:	:	:	:
1999	:	:	252	:	:	:	304	:	:	:	:	:	:	:	:	:	:
2000	:	:	:	:	:	:	550	:	638	:	:	:	:	:	107	:	:
<b>Calls within mobile networks</b>																	
1998	:	:	561	:	:	:	:	:	:	:	:	:	:	:	:	:	:
1999	:	:	945	:	:	:	1,079	:	:	:	:	:	:	:	:	:	:
2000	:	:	:	:	:	:	1,316	:	1,334	:	:	:	:	:	854	:	:
<b>Short text messages (millions)</b>																	
1998	:	:	72	36	:	:	:	:	:	:	:	:	:	:	:	:	:
1999	:	:	515	288	:	:	:	:	:	:	:	:	:	:	:	:	:
2000	:	:	1,241	1,053	:	:	:	:	:	:	:	:	:	:	:	:	:

Source: Communications (NewCronos Theme4/coins/telecom/tel\_ser), Eurostat

Table 4.7a: Cellular mobile operators (units)

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
<b>Number of cellular mobile operators</b>															
1995	2	1	3	:	2	:	:	:	:	1	:	2	2	:	4
1996	2	1	3	:	2	:	:	:	:	1	:	2	2	:	4
1997	2	3	3	:	2	:	:	:	:	3	:	2	16	:	4
1998	3	4	4	:	3	6	:	2	:	3	:	3	:	7	4
1999	3	4	4	3	4	6	:	3	2	7	:	3	41	4	4
2000	:	4	6	3	4	6	2	:	2	:	:	3	41	5	4
2001	3	5	6	4	4	:	3	:	2	:	:	3	43	13	4

Source: Communications (NewCronos Theme4/coins/telecom/tel\_oper), Eurostat

Table 4.7b: Cellular mobile operators (units)

	IS	LI	NO	CH	BG	CY	CZ	EE	HU	LV	LT	MT	PL	RO	SK	SI	TR
<b>Number of cellular mobile operators</b>																	
1995	1	:	:	1	2	1	1	2	6	1	3	1	1	1	:	1	1
1996	1	:	:	1	2	1	2	3	6	1	3	1	3	1	:	1	1
1997	1	:	:	1	2	1	2	3	6	2	3	1	3	3	2	1	1
1998	2	:	:	2	2	1	2	3	4	2	3	1	3	3	2	1	2
1999	2	:	3	3	2	1	2	3	5	2	3	1	3	3	2	2	2
2000	2	:	11	4	2	1	3	3	5	2	4	2	3	4	2	2	2
2001	3	:	10	:	3	1	3	3	5	:	4	2	3	4	2	3	:

Source: Communications (NewCronos Theme4/coins/telecom/tel\_oper), Eurostat

Table 4.8a: Internet hosts

	Sum of EU-15	.be	.dk	.de	.gr	.es	.fr	.ie	.it	.lu	.nl	.at	.pt	.fi	.se	.uk
<b>Number of Internet hosts (thousands) (1)</b>																
1996	2,993	65	107	620	17	113	239	27	148	4	271	89	24	314	238	719
1997	4,652	107	169	1,132	28	196	355	40	254	5	391	108	42	487	349	988
1998	6,417	209	298	1,450	50	307	511	56	387	8	626	173	56	460	379	1,449
1999	8,489	339	338	1,635	75	470	1,233	64	302	10	959	263	78	462	523	1,739
2000	10,477	300	334	2,040	111	455	1,122	111	1,020	12	1,624	483	62	529	596	1,678
2001	12,690	352	561	2,426	143	539	789	128	680	14	2,632	326	247	887	735	2,231
2002	13,894	360	634	2,491	151	1,061	1,254	130	697	14	2,487	342	215	932	775	2,350
<b>Internet hosts per 100 inhabitants (units) (2)</b>																
1996	0.8	0.6	2.0	0.8	0.2	0.3	0.4	0.7	0.3	0.8	1.7	1.1	0.2	6.1	2.7	1.2
1997	1.2	1.1	3.2	1.4	0.3	0.5	0.6	1.1	0.4	1.1	2.5	1.3	0.4	9.5	3.9	1.7
1998	1.7	2.0	5.6	1.8	0.5	0.8	0.9	1.5	0.7	1.8	4.0	2.1	0.6	8.9	4.3	2.5
1999	2.3	3.3	6.4	2.0	0.7	1.2	2.1	1.7	0.5	2.2	6.1	3.2	0.8	8.9	5.9	2.9
2000	2.8	2.9	6.3	2.5	1.0	1.1	1.9	2.9	1.8	2.7	10.2	6.0	0.6	10.2	6.7	2.8
2001	3.4	3.4	10.5	3.0	1.4	1.3	1.3	3.3	1.2	3.2	16.5	4.0	2.4	17.1	8.3	3.7
2002	3.7	3.5	11.8	3.0	1.4	2.6	2.1	3.3	1.2	3.2	15.4	4.2	2.1	17.9	8.7	3.9

(1) Hosts account for country code Top Level Domains (TLDs) unless otherwise specified; December for all years except 2002 which is March. (2) All population data for January of the reference year.

Source: RIPE NCC; Demography (NewCronos Theme3/demo/dgen/gind) for population data.

Table 4.8b: Internet hosts

	.is	.no	.ch	.bg	.cy	.cz	.ee	.hu	.lv	.lt	.mt	.pl	.ro	.sk	.si	.tr (1)	.jp	.us (2)	Generic (3)
<b>Number of Internet hosts (thousands) (4)</b>																			
1996	12	150	133	3	1	41	8	30	6	2	0	53	8	8	14	:	496	865	7,362
1997	19	292	189	7	3	57	16	68	7	4	1	88	14	15	20	:	956	1,367	10,462
1998	25	319	245	10	5	86	24	96	14	10	2	131	24	22	23	:	1,352	2,661	23,079
1999	30	439	270	17	6	122	30	120	19	14	6	171	36	28	24	79	2,073	3,118	37,854
2000	40	453	263	18	8	159	41	104	20	18	7	340	42	38	22	70	3,413	4,167	64,731
2001	55	305	528	27	2	216	51	168	25	35	9	490	46	73	30	107	5,887	4,029	87,307
2002	55	293	525	28	2	228	54	171	31	30	9	484	48	79	33	118	7,118	4,033	102,161
<b>Internet hosts per 100 inhabitants (units) (5)</b>																			
1996	4.5	3.4	1.9	0.0	0.2	0.4	0.5	0.3	0.2	0.0	0.1	0.1	0.0	0.1	0.7	:	0.4	~	~
1997	7.0	6.6	2.7	0.1	0.4	0.6	1.1	0.7	0.3	0.1	0.2	0.2	0.1	0.3	1.0	:	0.8	~	~
1998	9.2	7.2	3.5	0.1	0.7	0.8	1.7	0.9	0.6	0.3	0.5	0.3	0.1	0.4	1.2	:	1.1	~	~
1999	10.8	9.9	3.8	0.2	0.8	1.2	2.1	1.2	0.8	0.4	1.6	0.4	0.2	0.5	1.2	0.1	1.6	~	~
2000	14.3	10.1	3.7	0.2	1.1	1.6	3.0	1.0	0.8	0.5	1.7	0.9	0.2	0.7	1.1	0.1	2.7	~	~
2001	19.6	6.8	7.4	0.3	0.3	2.1	3.7	1.7	1.1	1.0	2.3	1.3	0.2	1.3	1.5	0.2	4.6	~	~
2002	19.3	6.5	7.3	0.3	0.3	2.2	4.0	1.7	1.3	0.8	2.3	1.3	0.2	1.5	1.6	0.2	5.6	~	~

(1) Population data, source: Auxiliary indicators (NewCronos Theme2/aux\_ind/aux\_pem), Eurostat. (2) Includes also .mil; Internet hosts per 100 inhabitants is not shown for .us for methodological reasons. (3) Generic includes .com, .org, .int, .net, .edu and .gov. (4) Hosts account for country code Top Level Domains (TLDs) unless otherwise specified; December for all years except 2002 which is March. (5) All population data for January of the reference year except for 2002 where CH, Candidate countries other than TR, JP and US all use 2001 data.

Source: RIPE NCC for European countries; ISC for JP, US and Generic; Demography (NewCronos Theme3/demo/dgen/gind), Eurostat, for population data.

Internet hosts are identified by their two-letter country code Top Level Domain (TLD) or by a three-letter generic TLD (such as .com or .org). This does not necessarily entail that the host is physically located in the corresponding country, but reveals how many hosts are interested in being identified with the respective countries or generic type. For generic TLDs only estimates can be made to distribute the number of hosts geographically, although it is widely accepted that many of these are located in the USA. For this and other reasons great care has to be taken when comparing between countries the absolute numbers of hosts and the number of hosts relative to population.

There were 147.3 million Internet hosts world-wide in January 2002 (ISC estimates). In excess of 100 million of these were generic top level domains such as .com or .org. The number of hosts using TLDs of the Member States of the EU was estimated in March 2002 at 13.9 million, with an Internet host density of 3.7 per 100 inhabitants. The highest densities among the EU Member States were recorded in Finland, the Netherlands, Sweden and Denmark and the lowest in Italy, Greece, Portugal and France.

Iceland, Norway and Switzerland had a higher density of Internet hosts than the EU average; in Iceland the density was higher than in any of the Member States. Among the Candidate countries Internet host density ranged from 0.2 hosts per 100 inhabitants in Romania and Turkey to 2.3 in Malta with Estonia (4.0) clearly above this range. As such the density of Internet hosts in Estonia was higher than in ten of the Member States. See table 4.8.



Table 4.9a: Number of secure servers

	EU-15	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
<b>Number of secure servers per 1 million inhabitants (units)</b>																
July 1998	8	5	8	6	1	6	4	15	3	26	8	12	3	13	16	12
July 1999	17	16	21	20	5	11	11	26	8	60	19	30	6	35	46	29
July 2000	38	26	54	46	8	19	22	65	14	100	34	55	12	66	91	74
July 2001	65	42	98	78	17	30	33	123	22	155	67	109	19	127	142	132
<b>Annual growth of the number of secure servers per 1 million inhabitants (%)</b>																
1999	116	205	153	231	499	80	185	71	161	132	139	145	118	163	180	141
2000	118	68	157	131	81	75	104	150	84	67	76	85	96	90	99	153
2001	73	61	81	71	102	57	52	91	59	55	97	97	66	92	55	80

Source: OECD and Netcraft (www.netcraft.com), December 2001.

Table 4.9b: Number of secure servers

	IS	NO	CH	BG	CY	CZ	EE	HU	LV	LT	MT	PL	RO	SK	SI	TR	JP	US
<b>Number of secure servers per 1 million inhabitants (units)</b>																		
July 1998	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	3	55
July 1999	105	29	56	:	:	9	:	3	:	:	:	2	:	0	:	1	9	117
July 2000	238	61	119	:	:	19	:	9	:	:	:	5	:	8	:	2	23	238
July 2001	324	109	191	:	:	37	:	16	:	:	:	12	:	20	:	4	63	312
<b>Annual growth of the number of secure servers per 1 million inhabitants (%)</b>																		
1999	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	171	115
2000	128	109	112	:	:	121	:	248	:	:	:	208	:	:	:	128	147	103
2001	36	80	60	:	:	97	:	83	:	:	:	148	:	144	:	146	174	31

Source: OECD and Netcraft (www.netcraft.com), December 2001.

Table 4.10a: Internet service providers (units)

	EU-15	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
<b>Number of Internet service providers</b>																
1997	:	18	:	:	:	:	:	:	:	:	:	:	8	:	:	:
1998	:	18	9	1,000	:	82	:	:	488	:	:	:	10	:	:	:
1999	:	48	16	1,000	:	276	:	:	523	20	:	:	24	35	:	400
2000	:	:	44	1,000	:	438	:	:	:	22	:	:	29	:	120	600
2001	:	:	:	3,146	:	590	:	:	:	:	:	:	30	50	:	:

Source: Communications (NewCronos Theme4/coins/telecom/tel\_oper), Eurostat

Table 4.10b: Internet service providers (units)

	IS	LI	NO	CH	BG	CY	CZ	EE	HU	LV	LT	MT	PL	RO	SK	SI	TR
<b>Number of Internet service providers</b>																	
1997	:	:	:	:	:	4	40	:	:	18	:	14	:	:	41	5	:
1998	:	:	:	75	:	4	220	:	:	64	:	16	:	:	49	15	81
1999	:	:	:	94	200	4	325	34	40	:	:	17	:	:	64	34	94
2000	:	:	:	:	200	5	320	:	46	:	:	15	:	:	60	47	104
2001	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	49	:

Source: Communications (NewCronos Theme4/coins/telecom/tel\_oper), Eurostat

Secure servers allow users to encrypt information (for example credit card data). In July 2001, there were approximately 65 secure servers in the EU for every million inhabitants, an increase of 73% compared to one year earlier and an eight-fold increase compared to July 1998. Among the Member States the highest density of secure servers relative to

population were found in Luxembourg, Sweden, the United Kingdom, Finland, Ireland and Austria, all with more than 100 secure servers per million inhabitants. Iceland, Switzerland and Norway all breached the level of 100 secure servers per million inhabitants and in Iceland the density of secure servers was greater than in the US. See table 4.9.

Table 4.11: Broadband connections to Internet (thousands)

	EU-15	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	IS	NO	CH	JP	US
<b>DSL</b>																					
1999	10	1	1	5	0	2	0	0	1	0	0	1	0	0	0	0	0	0	:	0	370
2000	641	43	26	200	0	48	64	0	115	0	15	39	1	15	42	32	2	1	:	10	2,429
June 2001	1,913	92	70	780	0	158	177	0	239	7	97	69	2	20	122	81	5	3	:	401	3,334
Change 2001/00 (%)	199	114	164	290	0	229	177	0	108	-	547	79	100	31	190	150	143	165	:	4,018	37
Per 100 inhabitants, 2000 (units)	0.2	0.4	0.5	0.2	0.0	0.1	0.1	0.0	0.2	0.0	0.1	0.5	0.0	0.3	0.5	0.1	0.7	0.0	:	0.0	0.9
<b>Cable modems</b>																					
1999 (1)	327	50	11	0	0	0	50	0	0	0	151	50	0	8	7	:	0	5	:	154	1,400
2000	815	102	41	65	0	13	122	0	0	0	250	99	25	15	63	20	0	15	:	625	3,700
June 2001	1,088	140	54	:	0	26	174	0	0	0	336	122	55	18	78	84	0	21	:	784	5,500
Change 2001/00 (%)	33	37	32	:	-	91	43	-	-	-	34	24	120	20	24	325	-	37	:	25	49
Per 100 inhabitants, 2000 (units)	0.2	1.0	0.8	0.1	0.0	0.0	0.2	0.0	0.0	0.0	1.6	1.2	0.2	0.3	0.7	0.0	0.0	0.3	:	0.5	1.3

(1) EU-15, excluding UK.

Source: OECD; Demography (NewCronos Theme3/demo/dgen/gind), Eurostat, for population data.

Internet access using cable modem and Digital Subscriber Lines (DSL) broadband technologies in 2001 was low or insignificant in Greece and Ireland. Within the EU the leader in the use of these types of broadband access was the Netherlands, particularly for cable modems. Across the EU as a whole the use of DSL connections more than tripled between 2000 and 2001. See table 4.11.

ISDN (Integrated Services Digital Network) standards concern the transmission of digital information, usually across traditional (copper) telephone wires. Adoption of ISDN varies significantly across EU Member States. The number of ISDN subscriptions passed 1 million in Germany in 1996, in France in 1998 and in Italy in 1999. By 2000 there were over 17 million ISDN subscriptions in Germany. Relative to population the number of ISDN subscriptions in Germany is far ahead of other EU Member States with 218 subscriptions per 1,000 inhabitants in 2000. In contrast in the United Kingdom there were 14 subscriptions per 1,000 inhabitants and ISDN subscription rates were also low in Spain, Ireland and Greece. Switzerland and Norway both show a higher take-up of ISDN than the EU average and Iceland appears to be at around the same level. Data on ISDN subscriptions is available for nine of the Candidate countries and shows a high use of ISDN relative to population in Bulgaria, Estonia and Slovenia. See table 4.12.

Although not an indicator of broadband access to the Internet, the number of cable and satellite providers (see table 4.13) indicates a potential number of suppliers of such access.

Table 4.12a: ISDN subscriptions (thousands)

	B	DK	D (1)	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
<b>Integrated services digital network (ISDN) subscriptions</b>															
1990	0	0	16	0	0	7	:	0	0	0	0	0	0	0	2
1991	0	0	65	0	0	26	:	0	0	0	0	0	0	0	6
1992	1	1	150	0	0	63	:	0	0	0	0	0	0	:	12
1993	1	2	300	0	1	103	:	4	0	1	0	0	4	:	50
1994	9	6	537	0	5	920	:	15	0	6	4	2	11	10	93
1995	28	14	961	:	28	284	0	49	2	29	17	8	6	17	117
1996	55	30	1,945	1	96	444	0	110	4	96	42	20	27	53	145
1997	99	58	7,341	2	228	701	6	290	10	279	86	48	58	72	266
1998	185	113	10,254	4	295	1,540	10	653	18	574	156	90	100	122	426
1999	319	241	13,636	29	544	:	:	1,521	28	:	253	140	157	:	656
2000	:	351	17,947	:	:	:	218	:	:	:	:	195	208	270	819

(1) ISDN channels instead of subscriptions.

Source: Communications (NewCronos Theme4/coins/telecom/tel\_ser), Eurostat

Table 4.12b: ISDN subscriptions (thousands)

	IS	LI	NO (1)	CH (1)	BG (1)	CY	CZ	EE	HU	LV	LT	MT	PL	RO	SK	SI	TR
<b>Integrated services digital network (ISDN) subscriptions</b>																	
1990	0	:	0	0	:	:	:	:	:	:	:	:	:	:	:	:	:
1991	0	:	0	1	:	:	:	:	:	:	:	:	:	:	:	:	:
1992	0	:	1	2	:	:	:	:	:	:	:	:	:	:	:	:	:
1993	0	:	0	8	:	:	:	:	:	:	:	:	:	:	:	:	:
1994	0	:	2	29	:	:	:	:	:	:	:	:	:	:	:	:	:
1995	0	1	12	69	:	:	:	0	:	:	:	0	:	:	:	0	:
1996	3	1	44	126	:	0	:	0	:	:	:	0	:	:	:	0	:
1997	12	2	150	208	:	1	0	16	:	:	:	0	:	:	:	6	:
1998	10	2	310	341	153	1	3	22	:	:	:	0	:	:	3	14	:
1999	16	4	532	1,444	229	3	11	31	:	:	:	0	99	:	13	31	2
2000	21	:	703	1,853	346	7	26	41	:	:	:	:	207	:	39	55	7

(1) ISDN channels instead of subscriptions.

Source: Communications (NewCronos Theme4/coins/telecom/tel\_ser), Eurostat

Table 4.13a: Cable and satellite service providers (units)

	EU-15	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
<b>Number of cable and satellite service providers</b>																
1995	:	:	:	:	:	142	:	:	:	:	:	:	10	109	:	14
1996	:	:	:	:	:	425	:	:	:	:	:	:	14	103	:	9
1997	:	:	:	:	:	477	:	:	:	:	:	:	15	110	:	6
1998	:	:	:	4,000	:	531	:	:	9	:	:	:	16	98	:	4
1999	:	:	:	4,000	:	570	:	:	12	80	:	:	16	41	:	4
2000	:	:	:	5,000	:	404	:	2	:	:	:	:	16	:	:	:

Source: Communications (NewCronos Theme4/coins/telecom/tel\_oper), Eurostat

Table 4.13b: Cable and satellite service providers (units)

	IS	LI	NO	CH	BG	CY	CZ	EE	HU	LV	LT	MT	PL	RO	SK	SI	TR
<b>Number of cable and satellite service providers</b>																	
1995	:	:	:	:	:	37	:	:	10	:	:	:	:	:	:	:	1
1996	:	:	:	:	:	76	:	:	32	:	:	:	:	371	:	:	1
1997	:	:	:	:	2	160	24	:	37	:	:	:	1	456	35	:	1
1998	:	:	:	:	2	195	22	1,000	44	:	1	1	1	461	68	:	1
1999	:	:	:	:	:	187	31	600	41	:	1	1	1	657	475	:	1
2000	:	:	:	:	:	195	24	450	40	:	:	:	1	796	149	:	1

Source: Communications (NewCronos Theme4/coins/telecom/tel\_oper), Eurostat

## 5. ICT USE BY HOUSEHOLDS AND INDIVIDUALS

## 5. ICT USE BY HOUSEHOLDS AND INDIVIDUALS

Very little data is available from traditional statistical surveys on the use of ICT and the Internet by households and for this reason Eurostat is working with national statistical authorities to develop harmonised statistics in this area. It is expected that the first results of this work will be published in 2003 and that this chapter in the next edition of this publication will be able to benefit from this work.

For EU totals the only official source of data is Eurobarometer surveys. These are opinion surveys carried out on behalf of the European Commission. In June 2002 it was estimated that 40% of EU households had access to the Internet, a 12 percentage point increase in 20 months.

**Table 5.1: ICT in households**

	EU
<b>Proportion of households with Internet access (%)</b>	
October 2000	28
June 2001	36
June 2002	40
<b>Types of Internet access: proportion of Internet connected households, June 2002 (%)</b>	
Standard telephone line	72
ISDN line	16
ADSL lines	10
Cable modem	7
Wireless connection	4
Other	1
Do not know / no answer	3
<b>Proportion of persons using an Internet connection anywhere (%)</b>	
October 2000	42
June 2001	46
June 2002	51
<b>Places of Internet use: proportion of Internet users, June 2002 (%)</b>	
Home	71
Workplace	42
Friend, acquaintance or relative's place	31
School or University	21
Public access	11
Cyber-cafes	8
Mobile: telephones	8
Mobile: laptops	7
Mobile: handheld or pocket computer	1
<b>Frequency of use: proportion of Internet users, June 2002 (%)</b>	
Every day (or nearly)	42
Several times a week	25
Approximately once a week	16
Approximately once a month	9
Less often	8
<b>Frequency of private purchases of goods or services using the Internet: proportion of Internet users, June 2002 (%)</b>	
Frequently	4
Occasionally	16
Rarely	15
Have done, but would not do so again	1
Never	63

Source: Flash Eurobarometer 125, May/June 2002

Table 5.2a: PCs in private households

	B	DK	D	EL	E	F(1)	IRL	I(2)	L(3)	NL	A	P	FIN(4)	S	UK(5)
<b>Number of PCs in private households (thousands)</b>															
1999	2,200	:	:	:	:	6,357	:	4,477	:	:	:	:	:	:	9,571
2000	:	:	:	:	:	7,528	:	5,540	:	:	:	:	:	:	11,070
2001	:	:	:	:	:	9,257	:	:	84	:	:	:	:	:	12,330
<b>Proportion of private households having a PC (%)</b>															
1999	45	60	:	14	:	23	:	21	47	:	:	21	43	:	38
2000	:	65	:	14	:	27	:	26	51	:	:	22	48	:	44
2001	:	69	:	16	:	33	:	:	63	:	:	24	51	:	49

(1) Reference point is May. (2) Number of household with at least one PC instead of number of PCs in households. (3) Proportion of private households having a PC: December 1999, persons aged 14 or more; June 2000, persons aged 14 or more; November 2001, persons aged 12 or more. (4) Reference point is fourth quarter 1999, November 2000 and November 2001. (5) Reference point is August to October; number of household with at least one PC instead of number of PCs in households.

Source: Information Society questionnaire, Eurostat

Table 5.2b: PCs in private households

	IS	NO	CH	BG	CY(1)	CZ	EE	HU	LV(2)	LT(3)	MT	PL	RO	SK	SI	TR
<b>Number of PCs in private households (thousands)</b>																
1999	:	:	:	:	:	290	:	421	26	40	:	:	:	:	:	:
2000	:	:	:	:	66	360	:	522	38	70	44	:	:	:	:	:
2001	:	:	:	:	80	:	:	:	72	115	:	:	:	:	330	:
<b>Proportion of private households having a PC (%)</b>																
1999	:	:	:	:	:	18	7	11	3	3	:	12	:	10	42	:
2000	:	:	61	:	28	21	12	13	5	5	34	14	4	12	46	:
2001	:	:	:	:	30	31	17	:	9	9	:	:	:	12	46	:

(1) Reference point is April; number of PCs in private households is estimated. (2) Number of PCs in private households is estimated; proportion of private households having a PC is provisional for 2001. (3) Number of PCs in private households is estimated.

Source: Information Society questionnaire, Eurostat

Table 5.3a: Proportion of households with an Internet connection

	B	DK	D	EL	E	F(1)	IRL	I	L(2)	NL	A	P	FIN(3)	S	UK(4)
<b>Proportion of private households with an Internet connection (%)</b>															
1999	14	33	:	:	:	7	:	8	16	:	:	5	25	:	19
2000	29	46	:	:	:	12	:	15	25	:	:	9	32	:	32
2001	36	54	:	:	:	18	:	:	48	:	:	13	37	:	39

(1) Reference point is May; households without a PC who access the Internet via other means are excluded. (2) December 1999, persons aged 14 or more; June 2000, persons aged 14 or more; November 2001, persons aged 12 or more. (3) Reference point for the proportion of private households with an Internet connection is fourth quarter 1999, November 2000 and November 2001. (4) April 1999 to March 2000 for 1999; April 2000 to March 2001 for 2000; July to September 2001 for 2001, provisional.

Source: Information Society questionnaire, Eurostat

Table 5.3b: Proportion of households with an Internet connection

	IS	NO	CH	BG	CY(1)	CZ	EE(2)	HU	LV	LT(3)	MT	PL(4)	RO	SK(5)	SI	TR
<b>Proportion of private households with an Internet connection (%)</b>																
1999	:	36	:	:	:	2	:	1	1	:	:	:	:	:	15	:
2000	:	52	:	:	14	8	7	3	:	2	11	:	:	:	21	:
2001	:	58	:	:	20	11	10	:	2	3	:	8	:	4	24	:
2002	:	:	:	:	:	:	13	:	:	6	:	:	:	:	35	:

(1) Reference point for Internet connection is April. (2) Household access for first half of 2002 represents an average over the period. (3) 2000 and 2001 via PC only. (4) Reference point is June. (5) Estimated.

Source: Information Society questionnaire, Eurostat, for 1999 to 2001; ad hoc data collection for 2002

## 5. ICT USE BY HOUSEHOLDS AND INDIVIDUALS

**Table 5.4a: Internet dial-up access costs for a residential user (USD PPP) (1)**

	EU-15	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
<b>20 hours/month</b>																
Peak, 1998	64.03	97.70	54.04	68.44	60.15	42.09	72.05	80.16	42.27	73.06	62.79	100.10	61.20	23.38	48.01	70.01
Peak, September 2000	41.99	51.79	30.51	34.12	41.90	45.53	33.65	54.02	32.21	58.56	50.08	44.78	47.31	29.88	35.33	40.75
Off-Peak, 1998	45.96	46.59	31.73	68.44	60.15	42.09	48.27	50.57	35.64	52.98	40.23	64.03	46.12	19.77	36.60	46.17
Off-Peak, September 2000	32.03	35.80	30.51	34.12	36.77	28.32	33.65	31.04	26.38	37.87	35.49	32.40	45.82	27.78	24.14	26.61
Off-Peak, August 2001	28.95	36.99	26.25	25.40	38.98	27.73	26.49	30.37	28.14	35.37	29.13	28.47	31.59	16.97	28.19	24.23
<b>40 hours/month</b>																
Peak, 1999	96.00	147.00	91.53	76.78	88.46	85.87	95.73	83.22	67.91	152.06	85.66	128.15	124.27	43.73	64.09	105.61
Peak, September 2000	65.52	81.35	48.09	50.71	52.16	77.02	59.50	75.38	45.71	99.94	81.63	70.51	77.24	41.18	58.36	60.41
Off-Peak, 1999	61.07	66.23	42.25	76.78	88.46	85.87	62.07	41.82	44.04	91.93	47.77	64.87	82.27	32.97	39.48	49.31
Off-Peak, September 2000	44.15	51.79	41.98	50.71	41.90	31.27	59.50	41.80	38.79	58.56	50.08	45.73	57.75	36.97	35.98	27.13

(1) Using discounted PSTN rates and including VAT.

Source: OECD Communications Outlook 2001 for 1998 to 2000; OECD in eEurope benchmarking for 2001

**Table 5.4b: Internet dial-up access costs for a residential user (USD PPP) (1)**

	IS	NO	CH	BG	CY	CZ	EE	HU	LV	LT	MT	PL	RO	SK	SI	TR	JP	US
<b>20 hours/month</b>																		
Peak, 1998	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	51.65	39.77
Peak, September 2000	29.83	45.47	:	:	:	:	:	:	:	:	:	:	:	:	:	:	35.49	21.43
Off-Peak, 1998	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	51.65	39.77
Off-Peak, September 2000	24.38	38.70	:	:	:	:	:	:	:	:	:	:	:	:	:	:	35.49	21.43
Off-Peak, August 2001	25.33	35.93	:	:	:	:	:	:	:	:	:	:	:	:	:	:	33.81	20.89
<b>40 hours/month</b>																		
Peak, 1999	63.44	64.28	95.28	:	:	187.90	:	332.04	:	:	:	120.46	:	:	:	57.75	54.64	:
Peak, September 2000	45.34	63.90	65.44	:	:	173.92	:	150.17	:	:	:	134.54	:	:	:	33.74	49.01	23.76
Off-Peak, 1999	36.87	50.76	50.02	:	:	110.77	:	184.69	:	:	:	120.46	:	:	:	51.19	54.64	:
Off-Peak, September 2000	34.44	51.05	46.63	:	:	84.51	:	82.84	:	:	:	73.88	:	:	:	25.76	49.01	23.76

(1) Using discounted PSTN rates and including VAT.

Source: OECD Communications Outlook 2001 for 1998 to 2000; OECD in eEurope benchmarking for 2001

**Table 5.5a: Internet dial-up access costs for a residential user, rates of change (%) (1)**

	EU-15	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
<b>20 hours/month (USD PPP)</b>																
Off-Peak, August 2001 compared to September 2000	-10	3	-14	-26	6	-2	-21	-2	7	-7	-18	-12	-31	-39	17	-9
Off-Peak, August 2001 compared to 1998	-37	-21	-17	-63	-35	-34	-45	-40	-21	-33	-28	-56	-32	-14	-23	-48
<b>40 hours/month (USD PPP)</b>																
Off-Peak, September 2000 compared to 1999	-28	-22	-1	-34	-53	-64	-4	0	-12	-36	5	-29	-30	12	-9	-45

(1) Using discounted PSTN rates and including VAT.

Source: OECD Communications Outlook 2001 for 1998 to 2000; OECD in eEurope benchmarking for 2001

**Table 5.5b: Internet dial-up access costs for a residential user, rates of change (%) (1)**

	IS	NO	CH	BG	CY	CZ	EE	HU	LV	LT	MT	PL	RO	SK	SI	TR	JP	US
<b>20 hours/month (USD PPP)</b>																		
Off-Peak, August 2001 compared to September 2000	4	-7	:	:	:	:	:	:	:	:	:	:	:	:	:	:	-5	-3
Off-Peak, August 2001 compared to 1998	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	-35	-47
<b>40 hours/month (USD PPP)</b>																		
Off-Peak, September 2000 compared to 1999	-7	1	-7	:	:	-24	:	-55	:	:	:	-39	:	:	:	-50	-10	:

(1) Using discounted PSTN rates and including VAT.

Source: OECD Communications Outlook 2001 for 1998 to 2000; OECD in eEurope benchmarking for 2001

Information on Internet access costs is available from OECD. Off-peak charges for local Public Switched Telephone Network (PSTN) services are generally less than peak rate charges; this was the case in 2000 in all EU Member States except Denmark, Germany and France. Off-peak charges have fallen in all EU Member States since 1998. Between 1998 and August 2001 the (unweighted) average charges across the EU

fell by 37%. The most significant reductions between 1998 and August 2001 were recorded in Germany and Austria where charges fell by more than 50%. The lowest charges in August 2001 were in Finland and the highest in Greece, Belgium and Luxembourg (when measured in PPPs). See table 5.4.

## 6. ICT USE BY ENTERPRISES



## 6. ICT USE BY ENTERPRISES

Eurostat's e-commerce pilot survey covered enterprises with 10 or more persons employed classified to NACE Sections D and G to K. A very large proportion of these enterprises in the EU use Information technology (IT) hardware. The results of the pilot survey show that computers were present, on average, in more than nine out of ten enterprises (93%) by the first half of 2001. Over two-thirds of enterprises had a connection to the world-wide-web (68%) by the end of 2000 and by the first half of 2001 46% of enterprises had their own web-site. The penetration of these three technologies into the business community was highest in the Nordic countries of Denmark, Finland and Sweden, as well as Germany and Austria. See tables 6.1 to 6.7.

### NACE Sections presented in this chapter

NACE Section	
D	Manufacturing
G	Distribution
H	Hotels and restaurants
I	Transport, storage and communication
J	Financial services
K	Business services (real estate, renting and business activities)

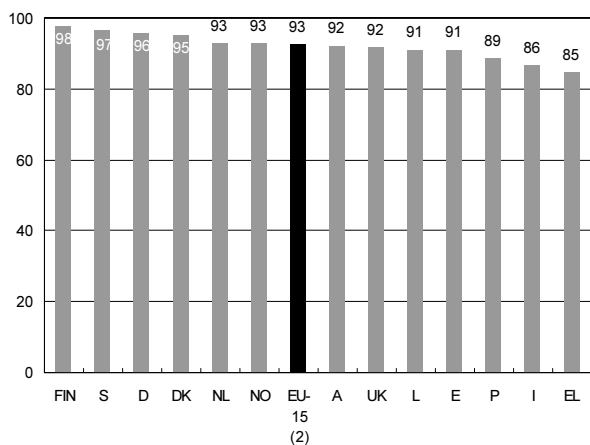
Table 6.1: Share of enterprises using computers, by size class, first half 2001 (%) (1)

	EU-15 (2)	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	NO
Total	93	:	95	96	85	91	:	:	86	91	93	92	89	98	97	92	93
Small	91	:	94	94	84	90	:	:	85	89	93	91	88	97	96	90	92
Medium	98	:	100	97	96	96	:	:	95	99	:	99	97	99	100	99	98
Large	97	:	100	96	98	100	:	:	99	99	:	100	99	100	100	100	99

(1) Activity coverage is NACE Sections D and G to K. (2) Weighted average for Member States; excluding B, F and IRL; also excluding NL for medium and large size enterprises.

Source: E-commerce database, Eurostat

Figure 6.1: Share of enterprises using computers, first half 2001 (%) (1)



(1) Activity coverage is NACE Sections D and G to K. (2) Weighted average for Member States; excluding B, F and IRL.

Source: E-commerce database, Eurostat

Table 6.2: Share of enterprises using computers, by NACE Section, first half 2001 (%)

	NACE Sections covered					
	D, G, H, I and K	D	G	H	I	K
B	:	:	:	:	:	:
DK	:	:	:	:	:	:
D	96	98	98	93	88	95
EL	84	83	88	74	89	95
E	91	92	98	77	79	88
F	:	:	:	:	:	:
IRL	:	:	:	:	:	:
I	86	86	91	70	81	90
L	90	92	92	68	94	98
NL	93	95	95	89	85	93
A	92	92	92	87	87	99
P	88	84	94	66	96	92
FIN	99	99	99	99	97	99
S	:	:	:	:	:	:
UK	91	94	95	69	90	96
NO	93	97	94	79	85	95

Source: E-commerce database, Eurostat

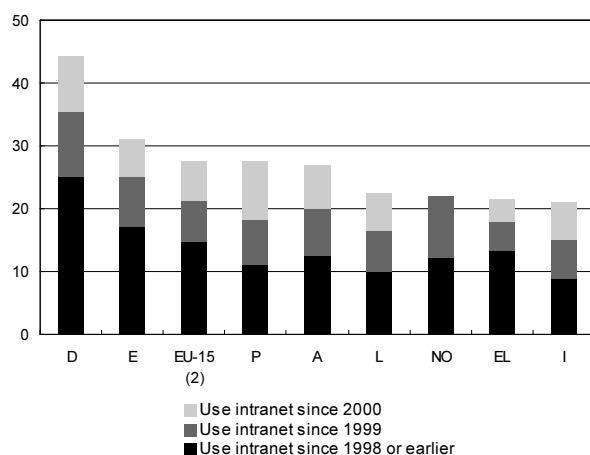
Table 6.3: Share of enterprises using intranet and EDI, by size class, end 2000 (%) (1)

	EU-15 (2)	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	NO
<b>Share of enterprises using intranet</b>																	
Total	36	:	29	44	22	31	:	:	21	22	77	27	28	26	41	27	21
Small	29	:	25	34	19	28	:	:	18	18	74	21	27	20	36	23	18
Medium	53	:	43	56	48	49	:	:	41	37	:	50	38	47	63	39	37
Large	60	:	68	57	64	72	:	:	68	42	:	67	58	74	78	61	61
<b>Share of enterprises using EDI</b>																	
Total	19	:	19	25	5	4	:	:	5	17	52	15	20	16	15	15	18
Small	14	:	16	17	4	2	:	:	4	13	49	11	20	13	13	11	16
Medium	29	:	30	32	13	12	:	:	12	27	:	30	26	26	22	26	28
Large	42	:	61	41	16	38	:	:	31	36	:	49	38	52	48	46	43

(1) Activity coverage is NACE Sections D and G to K. (2) Weighted average for Member States; excluding B, F and IRL; also excluding NL for medium and large size enterprises.

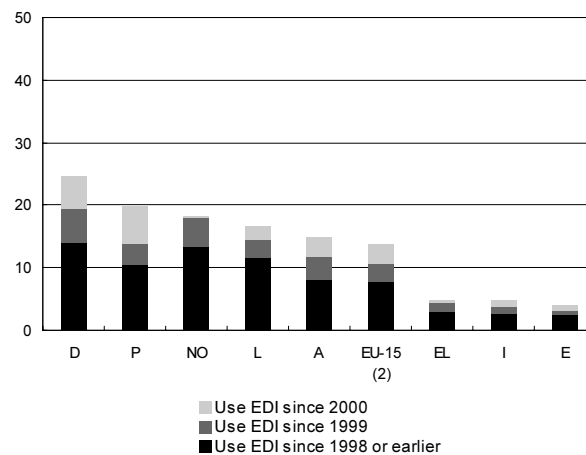
Source: E-commerce database, Eurostat

Figure 6.2: Share of enterprises using intranet, end 2000 (%) (1)



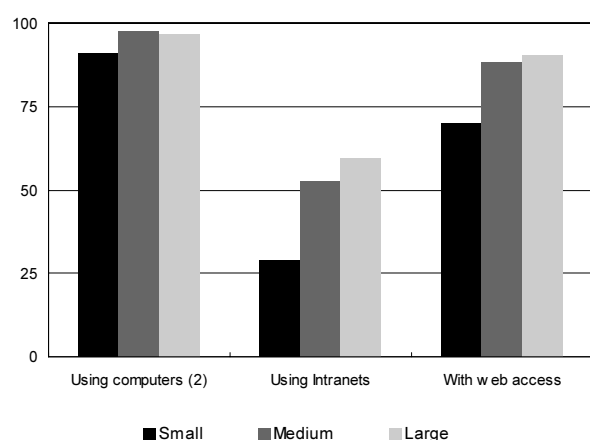
(1) Activity coverage is NACE Sections D and G to K. (2) Weighted average for Member States; excluding B, DK, F, IRL, NL, FIN, S and UK. Source: E-commerce database, Eurostat

Figure 6.3: Share of enterprises using EDI, end 2000 (%) (1)



(1) Activity coverage is NACE Sections D and G to K. (2) Weighted average for Member States; excluding B, DK, F, IRL, NL, FIN, S and UK. Source: E-commerce database, Eurostat

Figure 6.4: Share of enterprises using ICT equipment, by size class, EU, end 2000 (%) (1)



(1) Activity coverage is NACE Sections D and G to K; weighted average for Member States; excluding B, F and IRL; also excluding NL for medium and large size enterprises. (2) Reference period is the first half of 2001. Source: E-commerce database, Eurostat

## 6. ICT USE BY ENTERPRISES

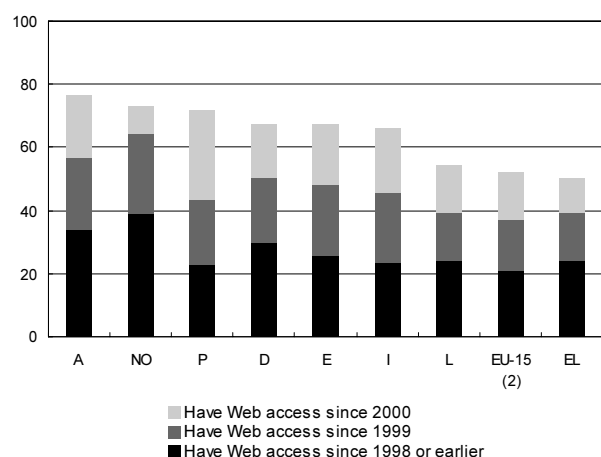
**Table 6.4: Share of enterprises with web access, by size class, end 2000 (%) (1)**

	EU-15 (2)	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	NO
Total	75	:	87	83	51	67	:	:	66	55	79	76	72	91	90	63	73
Small	70	:	85	77	49	63	:	:	63	52	77	73	71	90	88	59	71
Medium	88	:	96	90	70	89	:	:	86	63	:	91	88	96	96	79	87
Large	90	:	99	89	84	97	:	:	94	70	:	91	94	97	99	90	94

(1) Activity coverage is NACE Sections D and G to K. (2) Weighted average for Member States; excluding B, F and IRL; also excluding NL for medium and large size enterprises.

Source: E-commerce database, Eurostat

**Figure 6.5: Share of enterprises with web access, end 2000 (%) (1)**



(1) Activity coverage is NACE Sections D and G to K. (2) Weighted average for Member States; excluding B, DK, F, IRL, NL, FIN, S and UK.

Source: E-commerce database, Eurostat

**Table 6.5: Share of enterprises with web access, by NACE Section, end 2000 (%)**

	NACE Sections covered					
	D, G, H, I and K	D	G	H	I	K
B	:	:	:	:	:	:
DK	89	88	91	83	77	92
D	81	:	82	73	:	:
EL	51	46	55	37	72	64
E	67	69	76	55	57	50
F	:	:	:	:	:	:
IRL	:	:	:	:	:	:
I	66	66	66	51	65	74
L	53	53	48	36	52	73
NL	79	81	77	70	72	85
A	76	74	76	76	67	84
P	71	67	79	32	90	77
FIN	92	90	91	88	94	96
S	:	:	:	:	:	:
UK	64	69	59	47	56	75
NO	73	82	64	63	67	88

Source: E-commerce database, Eurostat

**Table 6.6: Share of enterprises with selected types of web access, first half 2001 (%) (1)**

	EU-15 (2)	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	NO
Use Internet via Mobile Phone	7	:	:	12	2	2	:	:	2	4	:	8	5	10	:	3	:
Use Internet via Analogue Modem	27	:	:	15	38	39	:	:	34	15	:	23	42	39	:	46	:
Use Internet via ISDN	45	:	:	67	29	33	:	:	42	37	:	60	25	50	:	32	:
Use Internet via xDSL	7	:	:	9	1	6	:	:	9	2	:	10	6	18	:	3	:
Use Internet via other broadband connection (> 2 Mbps)	7	:	:	10	3	2	:	:	2	18	:	8	11	17	:	5	:

(1) Activity coverage is NACE Sections D and G to K. (2) Weighted average for Member States; excluding B, F, IRL, NL and S.

Source: E-commerce database, Eurostat

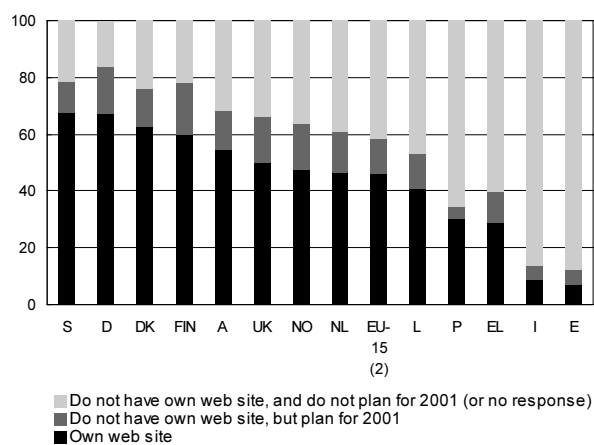
**Table 6.7: Share of enterprises with a web site, by size class, first half 2001 (%) (1)**

	EU-15 (2)	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	NO		
									Own web site										
Total	46	:	63	67	29	7	:	:	9	41	47	54	30	60	68	50	47		
Small	37	:	59	57	27	5	:	:	8	36	43	49	30	55	64	45	43		
Medium	69	:	80	78	52	13	:	:	14	57	:	76	44	79	83	69	69		
Large	80	:	89	86	54	35	:	:	22	67	:	86	59	93	91	80	79		

(1) Activity coverage is NACE Sections D and G to K. (2) Weighted average for Member States; "Own web site" excluding B, F and IRL and also excluding NL for medium and large size enterprises.

Source: E-commerce database, Eurostat

Figure 6.6: Share of enterprises with their own web site, first half 2001 (%) (1)



(1) Activity coverage is NACE Sections D and G to K. (2) Weighted average for Member States; excluding B, F and IRL.  
Source: E-commerce database, Eurostat

Table 6.8: Share of enterprises with their own web site, by NACE Section, first half 2001 (%)

	NACE Sections covered					
	D, G, H, I and K	D	G	H	I	K
B	:	:	:	:	:	:
DK	67	65	69	75	48	76
D	68	:	67	75	:	:
EL	28	24	32	27	34	45
E	7	6	7	6	8	8
F	:	:	:	:	:	:
IRL	:	:	:	:	:	:
I	9	8	9	10	8	12
L	38	39	35	29	42	48
NL	46	43	43	55	33	59
A	54	52	50	65	42	63
P	30	27	32	15	47	33
FIN	64	64	53	76	67	76
S	:	:	:	:	:	:
UK	50	57	43	39	43	59
NO	48	52	39	48	41	67

Source: E-commerce database, Eurostat

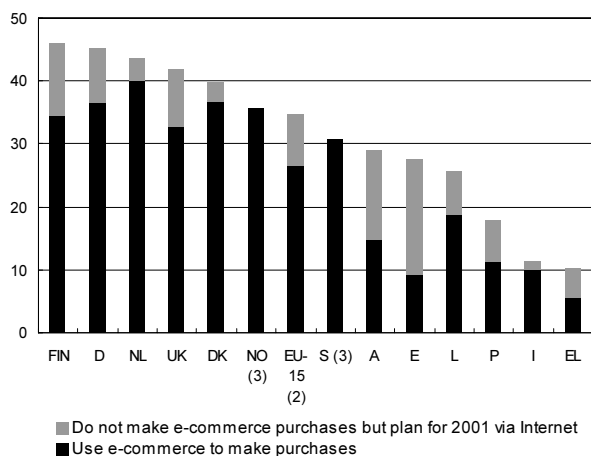
Table 6.9: Share of enterprises using e-commerce to make purchases, by size class, first half 2001 (%) (1)

	EU-15 (2)	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	NO
Total	27	:	37	37	5	9	:	:	10	19	40	15	11	35	31	33	36
Small	22	:	33	32	5	8	:	:	9	17	38	13	11	33	30	31	32
Medium	36	:	50	40	10	16	:	:	16	26	:	20	15	42	36	39	51
Large	47	:	66	51	8	20	:	:	21	28	:	30	21	45	37	50	72

(1) Activity coverage is NACE Sections D and G to K. (2) Weighted average for Member States; excluding B, F and IRL and also excluding NL for medium and large size enterprises.

Source: E-commerce database, Eurostat

Figure 6.7: Share of enterprises using e-commerce to make purchases, first half 2001 (%) (1)



(1) Activity coverage is NACE Sections D and G to K. (2) Weighted average for Member States; excluding B, F and IRL. (3) Data not available for the category Do not make e-commerce purchases but plan for 2001 via Internet. Source: E-commerce database, Eurostat

Internet has been a recent development in the procurement strategy of most enterprises but by the beginning of 2001, approximately one-quarter of enterprises used e-commerce (Internet and/or EDI) to make purchases. The highest take-up of e-commerce among the countries participating in the pilot survey was in the Netherlands (40%), Denmark and Germany (both 37%). The vast majority of these however only used e-commerce for a small proportion of their purchases: in Denmark for example only 5% of enterprises used e-commerce for 10% or more of their purchases.

E-commerce may be used at several different stages of a transaction, including ordering, payment and electronic delivery. Note that for the e-commerce pilot survey sending or receiving orders via manually written e-mails was not considered as e-commerce. The most common process is for ordering and the least common for electronic delivery which requires of course that the products can be digitised. The third process studied, electronic payment, requires specific efforts to build a secure environment and to establish trust. See tables 6.9 to 6.12.

Table 6.10: Share of enterprises using e-commerce to make purchases, by NACE Section, first half 2001 (%)

	NACE Sections covered					
	D, G, H, I and K	D	G	H	I	K
B	:	:	:	:	:	:
DK	41	38	45	33	24	52
D	36	:	36	36	:	:
EL	5	3	7	5	6	13
E	9	7	15	3	6	5
F	:	:	:	:	:	:
IRL	:	:	:	:	:	:
I	10	8	12	9	9	20
L	18	18	21	8	10	28
NL	40	36	42	33	31	48
A	15	9	17	17	10	20
P	11	7	14	0	18	15
FIN	37	34	30	40	40	51
S	:	:	:	:	:	:
UK	33	29	34	20	32	45
NO	36	41	31	24	25	55

Source: E-commerce database, Eurostat

The e-commerce pilot survey shows that enterprises were generally less active in selling than in purchasing by electronic means. Indeed, approximately one-fifth of enterprises used e-commerce to make sales (using EDI and/or Internet) by the first half of 2001, though in several member States the proportion was below 10%. Greece was the only Member State participating in the pilot survey that recorded a greater proportion of enterprises using e-commerce for sales than for purchases. The most active users of e-commerce for sales were again enterprises in the Netherlands, Germany and Denmark.

Using e-commerce for selling may range from the simple presentation of the company and its products over the Internet to more developed interfaces allowing the taking of orders and receipt of payments and, if possible, the delivery of products. In the first half of 2001 giving information on products and prices and taking orders were the most frequent e-sales processes used by enterprises over the Internet, whilst receiving payments and electronic delivery were the least used. See tables 6.13 to 6.16.

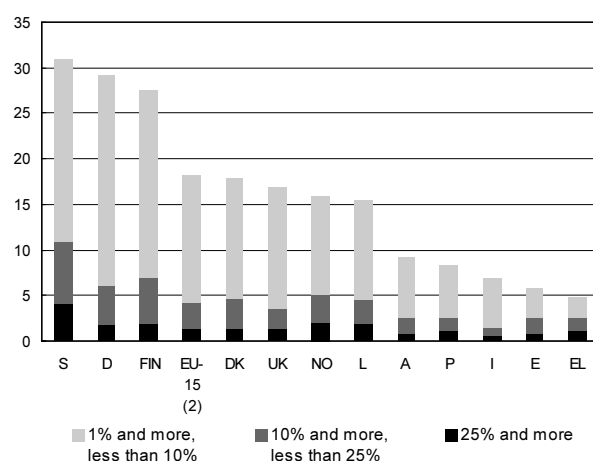
Table 6.11: Share of enterprises using e-commerce for at least a specified proportion of their purchases, by size class, 2000 (%) (1)

	EU-15 (2)	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	NO	
<b>Using Internet for 1% or more of purchases</b>																		
Total	18.2	:	17.9	29.2	4.7	5.9	:	:	6.8	15.4	:	9.1	8.2	27.5	30.8	16.8	15.9	
Small	14.9	:	16.7	26.4	4.5	5.5	:	:	6.2	13.7	:	8.9	8.1	26.4	29.7	15.9	15.0	
Medium	27.1	:	23.1	31.3	7.3	8.2	:	:	10.7	21.4	:	10.4	10.5	32.2	35.8	20.0	20.3	
Large	32.4	:	27.7	37.2	5.6	8.4	:	:	13.0	23.2	:	10.3	12.6	32.8	36.7	23.8	25.5	
<b>Using Internet for 10% or more of purchases</b>																		
Total	4.1	:	4.6	6.0	2.5	2.4	:	:	1.3	4.4	:	2.4	2.5	6.9	10.8	3.5	5.0	
Small	3.9	:	4.7	6.9	2.4	2.3	:	:	1.3	4.2	:	2.5	2.5	7.2	11.1	3.2	5.1	
Medium	4.8	:	3.8	5.3	4.0	3.3	:	:	1.3	4.5	:	2.3	2.3	6.1	9.2	4.3	5.0	
Large	3.5	:	4.3	3.2	3.8	3.0	:	:	2.2	6.6	:	2.9	1.7	3.9	10.1	5.3	2.8	
<b>Using Internet for 25% or more of purchases</b>																		
Total	1.3	:	1.3	1.7	1.1	0.7	:	:	0.4	1.8	:	0.7	1.1	1.8	3.9	1.2	2.0	
Small	1.4	:	1.4	2.5	1.0	0.6	:	:	0.4	2.0	:	0.6	1.1	1.7	4.2	1.1	2.1	
Medium	1.0	:	0.6	1.0	1.9	1.5	:	:	0.2	1.0	:	1.0	0.6	2.2	2.7	1.5	1.6	
Large	0.3	:	1.0	0.0	3.1	1.5	:	:	0.7	2.0	:	0.8	0.7	1.4	2.7	1.3	1.4	

(1) Activity coverage is NACE Sections D and G to K. (2) Weighted average for Member States; excluding B, F, IRL and NL.

Source: E-commerce database, Eurostat

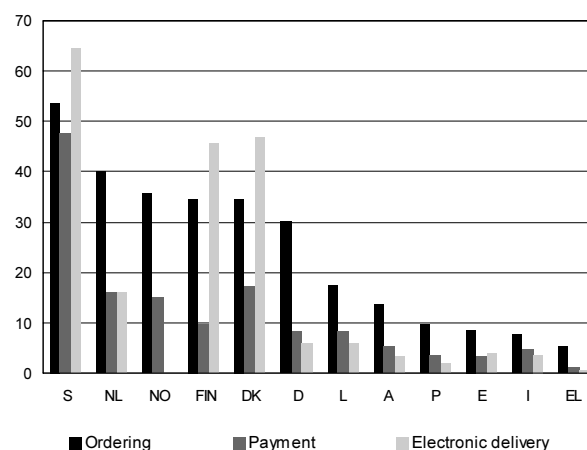
Figure 6.8: Share of enterprises using e-commerce for at least a specified proportion of their purchases, 2000 (%) (1)



(1) Activity coverage is NACE Sections D and G to K. (2) Weighted average for Member States; excluding B, F, IRL and NL.

Source: E-commerce database, Eurostat

Figure 6.9: Share of enterprises using Internet e-commerce for specified purchasing processes, first half 2001 (%) (1)



(1) Activity coverage is NACE Sections D and G to K; data for electronic delivery for DK, FIN and S are not comparable with other countries for methodological reasons.

Source: E-commerce database, Eurostat

Table 6.12: Share of enterprises using Internet e-commerce for specified purchasing processes, by size class, first half 2001 (%) (1)

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	NO
<b>Ordering</b>																
Total	:	34	30	5	9	:	:	8	18	40	14	10	35	54	:	36
Small	:	31	27	5	8	:	:	7	16	38	12	9	33	51	:	32
Medium	:	47	32	10	15	:	:	13	24	:	19	14	42	63	:	51
Large	:	62	40	6	16	:	:	17	25	:	25	16	45	71	:	72
<b>Payment</b>																
Total	:	17	8	1	3	:	:	5	8	16	5	4	10	48	:	15
Small	:	15	9	1	3	:	:	4	7	15	5	4	9	48	:	14
Medium	:	25	7	2	6	:	:	7	13	:	8	4	11	50	:	19
Large	:	37	7	3	8	:	:	9	14	:	7	6	12	34	:	30
<b>Electronic delivery</b>																
Total	:	47	6	1	4	:	:	4	6	16	3	2	46	64	:	:
Small	:	44	6	1	3	:	:	3	5	15	3	2	42	61	:	:
Medium	:	56	6	2	7	:	:	6	9	:	7	2	57	81	:	:
Large	:	73	4	1	9	:	:	8	11	:	6	5	74	87	:	:

(1) Activity coverage is NACE Sections D and G to K; data for electronic delivery for DK, FIN and S are not comparable with other countries for methodological reasons.

Source: E-commerce database, Eurostat

## 6. ICT USE BY ENTERPRISES

**Table 6.13: Share of enterprises using e-commerce to make sales, by size class, first half 2001 (%) (1)**

	EU-15 (2)	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	NO
Total	19	:	28	30	6	6	:	:	3	9	36	12	6	14	11	16	10
Small	14	:	26	23	6	5	:	:	3	7	36	11	6	13	10	15	10
Medium	30	:	32	36	14	8	:	:	4	13	:	16	10	17	14	20	13
Large	42	:	46	48	13	24	:	:	8	27	:	26	19	26	19	35	27

(1) Activity coverage is NACE Sections D and G to K. (2) Weighted average for Member States; excluding B, F and IRL and also excluding NL for medium and large size enterprises.

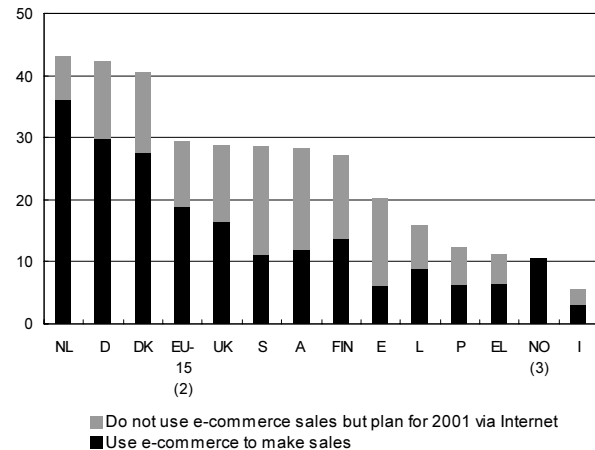
Source: E-commerce database, Eurostat

**Table 6.14: Share of enterprises using e-commerce to make sales, by NACE Section, first half 2001 (%)**

	NACE Sections covered					
	D, G, H, I and K	D	G	H	I	K
B	:	:	:	:	:	:
DK	30	25	36	54	23	29
D	31	:	31	30	:	:
EL	6	3	6	21	10	7
E	6	5	7	7	8	5
F	:	:	:	:	:	:
IRL	:	:	:	:	:	:
I	3	2	3	13	5	3
L	8	7	10	11	9	4
NL	36	37	36	38	37	33
A	12	5	13	32	10	3
P	6	4	8	7	7	3
FIN	15	12	11	34	25	16
S	:	:	:	:	:	:
UK	17	20	16	20	19	11
NO	11	12	10	17	11	9

Source: E-commerce database, Eurostat

**Figure 6.10: Share of enterprises using e-commerce to make sales, first half 2001 (%) (1)**



(1) Activity coverage is NACE Sections D and G to K. (2) Weighted average for Member States; excluding B, F and IRL. (3) Data not available for the category Do not use e-commerce sales but plan for 2001 via Internet.

Source: E-commerce database, Eurostat

**Table 6.15: Share of enterprises using e-commerce for at least a specified proportion of their sales, 2000 (%) (1)**

	EU-15 (2)	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	NO
<b>Using Internet for 1% or more of sales</b>																	
Total	8.9	:	11.7	15.5	4.4	1.6	:	:	2.4	6.3	:	5.9	3.4	9.8	11.2	6.8	7.6
Small	6.4	:	11.4	12.0	4.1	1.1	:	:	2.2	5.3	:	5.7	3.3	9.2	10.3	6.6	7.2
Medium	15.3	:	13.2	18.8	8.4	3.9	:	:	3.3	7.7	:	6.5	5.2	11.0	14.3	6.7	9.2
Large	19.8	:	16.2	23.4	5.6	9.7	:	:	5.2	17.9	:	8.3	7.5	16.6	19.2	10.6	13.6
<b>Using Internet for 10% or more of sales</b>																	
Total	1.8	:	3.2	2.6	1.9	0.7	:	:	1.0	1.6	:	1.9	0.8	2.4	4.7	1.7	1.7
Small	1.8	:	3.2	3.2	1.8	0.6	:	:	0.9	1.4	:	1.9	0.8	2.4	4.4	1.5	1.6
(2) Weighted average for Member States, excluding B, F, IRL and NL	2.3	:	3.3	2.1	3.1	2.5	:	:	1.6	1.7	:	1.7	1.5	1.8	6.1	2.1	1.8
Large	2.3	:	3.3	2.1	3.1	2.5	:	:	1.9	4.0	:	1.8	1.8	3.3	7.4	2.9	1.9
<b>Using Internet for 25% or more of sales</b>																	
Total	0.5	:	0.7	0.6	0.8	0.3	:	:	0.2	0.3	:	0.7	0.2	0.8	1.6	0.6	0.4
Small	0.5	:	0.7	0.8	0.7	0.3	:	:	0.2	0.2	:	0.6	0.2	0.8	1.3	0.5	0.4
Medium	0.4	:	0.5	0.3	2.6	0.6	:	:	0.2	0.0	:	0.8	0.3	0.4	2.9	0.8	0.7
Large	0.3	:	1.2	0.0	1.3	1.6	:	:	0.4	2.0	:	0.8	0.5	0.4	2.5	1.3	0.3

(1) Activity coverage is NACE Sections D and G to K. (2) Weighted average for Member States; excluding B, F, IRL and NL.

Source: E-commerce database, Eurostat

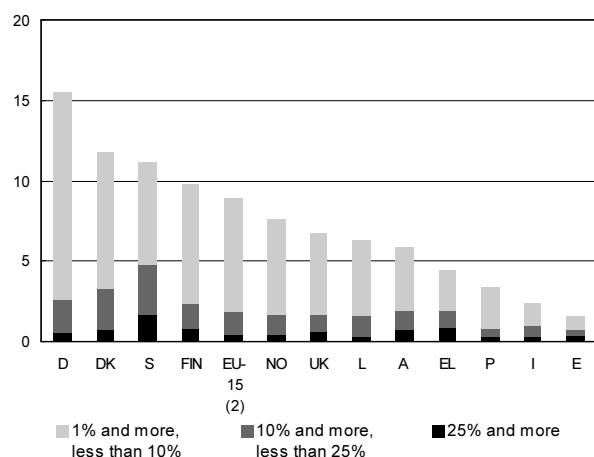
Table 6.16: Share of enterprises using Internet e-commerce for specified sales processes, by size class, first half 2001 (%) (1)

	EU-15 (2)	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	NO
<b>Providing product information</b>																	
Total	14	:	:	26	6	5	:	:	2	8	46	11	5	29	:	:	44
Small	10	:	:	21	5	4	:	:	2	7	43	10	5	26	:	:	40
Medium	24	:	:	31	12	7	:	:	2	8	:	14	7	38	:	:	66
Large	32	:	:	41	10	17	:	:	6	26	:	22	12	50	:	:	76
<b>Providing price information</b>																	
Total	11	:	:	21	5	4	:	:	1	4	21	9	4	29	:	:	:
Small	8	:	:	17	5	3	:	:	1	3	21	9	4	26	:	:	:
Medium	19	:	:	25	10	6	:	:	2	7	:	12	6	38	:	:	:
Large	26	:	:	33	9	14	:	:	5	15	:	18	10	50	:	:	:
<b>Taking orders</b>																	
Total	12	:	24	22	5	4	:	:	2	7	36	11	4	14	17	:	17
Small	9	:	24	17	4	4	:	:	2	5	36	10	3	13	16	:	16
Medium	20	:	23	25	10	6	:	:	3	10	:	14	6	17	25	:	24
Large	29	:	29	37	9	11	:	:	5	22	:	20	9	26	26	:	27
<b>Receiving payment</b>																	
Total	3	:	7	5	1	1	:	:	1	2	9	2	1	2	4	:	4
Small	2	:	7	5	1	1	:	:	1	1	9	2	1	:	3	:	4
Medium	4	:	7	5	3	1	:	:	1	5	:	4	2	:	5	:	4
Large	4	:	7	4	4	6	:	:	2	12	:	7	4	:	8	:	5
<b>Electronic delivery</b>																	
Total	2	:	7	2	1	1	:	:	0	2	10	1	1	:	4	:	4
Small	1	:	6	2	1	1	:	:	0	1	10	1	1	:	4	:	4
Medium	2	:	9	2	2	0	:	:	0	2	:	2	1	:	5	:	7
Large	3	:	13	3	3	7	:	:	1	10	:	4	1	:	7	:	11

(1) Activity coverage is NACE Sections D and G to K. (2) Weighted average for Member States; excluding B, F, IRL and UK; also excluding NL for medium and large size enterprises; "Providing product information" and "Providing price information" also excluding DK and S; "Receiving payment" also excluding FIN for the size class breakdown; "Electronic delivery" also excluding FIN.

Source: E-commerce database, Eurostat

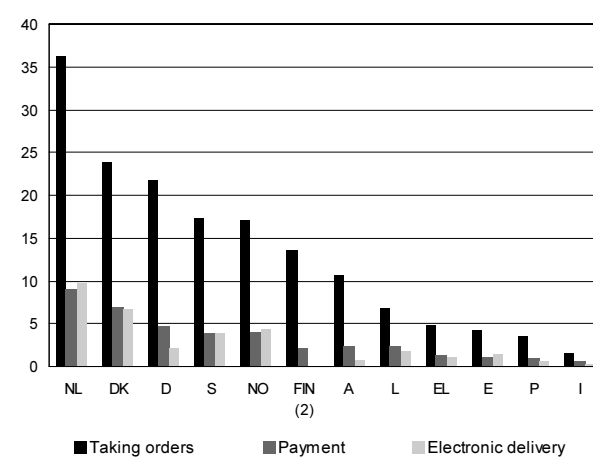
Figure 6.11: Share of enterprises using e-commerce for at least a specified proportion of their sales, 2000 (%) (1)



(1) Activity coverage is NACE Sections D and G to K. (2) Weighted average for Member States; excluding B, F, IRL and NL.

Source: E-commerce database, Eurostat

Figure 6.12: Share of enterprises using Internet e-commerce for specified sales processes, first half 2001 (%) (1)



(1) Activity coverage is NACE Sections D and G to K. (2) Data not available for the category "Electronic delivery".

Source: E-commerce database, Eurostat



## 6. ICT USE BY ENTERPRISES

**Table 6.17: Use of PCs by enterprises (%)**

	IS	CH (1)	BG	CY	CZ	EE	HU	LV (2)	LT	MT	PL (3)	RO	SK	SI (4)	TR
<b>Proportion of enterprises (with 10 or more employees) using a PC</b>															
1999	:	:	:	:	:	:	:	:	:	:	94	:	:	98	:
2000	:	94	:	85	:	:	:	74	:	:	95	:	:	100	:
2001	:	:	:	:	:	:	:	77	:	:	:	:	56	:	:
<b>Proportion of SMEs (10-249 employees) using a PC</b>															
1999	:	:	:	:	:	:	:	:	:	:	84	:	:	99	:
2000	:	93	:	85	:	:	:	73	:	:	87	:	:	100	:
2001	:	:	:	:	:	:	:	77	:	:	:	:	42	:	:

(1) Enterprises with 5 employees or more; 93% for enterprises with 5-49 employees and 97% for enterprises with 50-249 employees. (2) 2001, provisional.

(3) Only enterprises in NACE Section D with 50 or more employees; estimated. (4) 98% of small enterprises (5-49 employees), 99% of medium-sized enterprises (50-249 employees) and 100% of large enterprises (with more than 250 employees) used a PC in 1999; proportion of SMEs using a PC covers enterprises with 50 to 249 employees; reference period is December for 1999 and December 2000 or January 2001 for 2000.

Note: unless otherwise specified coverage is NACE Sections D and G to K.

Source: Information Society questionnaire, Eurostat

**Table 6.18: Use of the Internet (%)**

	IS	CH (1)	BG	CY	CZ	EE	HU	LV (2)	LT	MT	PL (3)	RO	SK	SI (4)	TR
<b>Proportion of enterprises (10 or more employees) with an Internet connection</b>															
1999	:	:	:	:	:	:	:	:	:	:	47	:	:	77	:
2000	:	78	:	63	:	:	:	46	:	:	40	:	:	88	:
2001	:	:	:	:	:	:	:	50	:	:	:	:	:	:	:
<b>Proportion of SMEs (10-249 employees) with an Internet connection</b>															
1999	:	:	:	:	:	:	:	:	:	:	42	:	:	89	:
2000	:	76	:	63	:	:	:	44	:	:	34	:	:	97	:
2001	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:

(1) Enterprises with 5 employees or more; 76% for enterprises with 5-49 employees and 87% for enterprises with 50-249 employees. (2) 2001, provisional.

(3) Only section D; 1999, only enterprises with 50 or more employees. (4) 77% of small enterprises (5-49 employees), 89% of medium-sized enterprises (50-249 employees) and 96% of large enterprises (with more than 250 employees) had an Internet connection in December 1999; 88% of small enterprises (5-49 employees), 97% of medium-sized enterprises (50-249 employees) and 99% of large enterprises (with more than 250 employees) had an Internet connection in December 2000 (or January 2001).

Note: unless otherwise specified coverage is NACE Sections D and G to K.

Source: Information Society questionnaire, Eurostat

**Table 6.19: Computer professionals (second quarter of the reference year)**

	EU-15	B	DK	D	EL	E	F (1)	IRL	I	L	NL	A (1)	P	FIN	S	UK
<b>Number of computer professionals employed (thousands)</b>																
1995	:	39	20	144	5	31	180	:	10	1	64	7	4	:	:	265
1998	:	53	32	215	7	62	197	:	13	2	106	10	3	29	66	382
1999	:	60	34	248	5	70	234	:	12	2	110	12	7	38	76	474
2000	:	54	37	296	7	78	245	21	13	2	126	11	5	37	93	486
2001	1,642	65	40	340	8	89	301	23	17	3	142	13	9	39	93	463
<b>Number of assistant computer professionals employed (thousands)</b>																
1995	:	2	13	207	3	33	109	:	131	0	71	25	32	:	:	:
1998	:	3	18	219	7	47	99	:	139	1	85	37	21	8	20	:
1999	:	4	20	221	6	57	120	:	171	1	101	39	23	11	24	:
2000	:	7	26	257	8	65	129	:	180	1	123	45	27	9	42	:
2001 (2)	1,170	5	18	275	6	70	136	:	215	1	115	49	33	13	42	191
<b>Total number of computer professionals and assistant computer professionals employed (thousands)</b>																
1995	:	41	33	350	8	64	289	:	141	2	135	32	36	:	:	:
1998	:	56	50	434	15	108	296	:	152	3	191	47	24	37	86	:
1999	:	64	54	469	11	127	354	:	183	3	211	51	31	49	100	:
2000	:	60	63	552	15	142	374	:	193	3	249	56	32	46	135	:
2001 (2)	2,790	70	58	615	14	159	436	:	232	4	256	63	42	52	135	654
<b>Computer professionals and assistant computer professionals as share of total employment (%)</b>																
1995	:	1.1	1.3	1.0	0.2	0.5	1.3	:	0.7	0.9	2.0	0.9	0.8	:	:	:
1998	:	1.4	1.9	1.2	0.4	0.8	1.3	:	0.7	1.5	2.6	1.3	0.5	1.7	2.2	:
1999	:	1.6	2.0	1.3	0.3	0.9	1.6	:	0.9	1.8	2.8	1.4	0.6	2.1	2.5	:
2000	:	1.5	2.3	1.7	0.4	1.0	1.6	:	0.9	1.5	3.2	1.5	0.6	2.0	3.3	:
2001 (2)	1.8	1.7	2.2	1.7	0.4	1.1	1.8	:	1.1	2.0	3.2	1.7	0.8	2.2	3.3	2.3

(1) Results for the first quarter. (2) EU-15 excluding IRL.

Source: Labour Force Survey, Eurostat

## 7. ICT USE IN EDUCATION ESTABLISHMENTS

## 7. ICT USE IN EDUCATION ESTABLISHMENTS

Table 7.1: Schools with Internet connection, responses from headteachers, January/February 2002

	EU-15	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
<b>Proportion of schools that: (%)</b>																
Use computers for educational purposes	95	99	100	95	65	88	97	99	95	98	99	95	95	100	100	100
Are connected to the Internet	93	93	100	99	59	94	89	99	88	67	92	94	92	99	99	99
Use Internet for educational purposes	85	81	99	87	51	74	85	97	80	60	86	70	89	99	99	97
Have a web page	51	45	80	61	19	42	38	29	45	42	50	52	34	75	81	60
Have an internal PC network	51	38	76	48	25	40	39	24	63	43	50	52	30	25	69	71
Have access to a helpdesk	36	40	67	16	13	31	25	35	12	44	77	24	24	41	79	88
<b>Proportion of computers used for education that are connected to the Internet (among schools using computers for educational purposes) (%)</b>																
Median	60	33	100	60	43	80	50	46	32	58	40	60	100	90	100	89
Mean	58	42	81	59	51	60	52	52	46	51	43	55	68	75	80	74
<b>Proportion of schools accessing the Internet using specified means (among schools having an Internet connection) (%)</b>																
Standard telephone line	28	37	3	23	37	28	42	74	25	11	11	28	28	11	10	28
ISDN	64	58	16	86	69	42	41	27	69	37	53	49	74	35	28	77
ADSL	19	16	26	25	1	43	21	0	13	4	6	15	1	12	19	12
TV-cable modem	6	18	3	4	2	2	7	0	1	0	35	11	1	4	4	6
Other	7	4	53	8	3	1	5	1	1	56	6	0	0	43	42	8

Source: Flash Eurobarometer 118, January/February 2002

Table 7.2: Use of PCs in schools (units)

	IS	NO	CH	BG	CY (1)	CZ	EE (2)	HU (3)	LV (4)	LT (5)	MT (6)	PL	RO	SK (7)	SI (8)	TR
<b>Number of PCs for teaching purposes in primary and secondary schools for 100 pupils</b>																
1999	:	:	:	165	:	:	3	:	3	:	:	:	:	:	4	:
2000	:	:	:	:	:	4	:	:	3	:	:	:	:	:	4	:
2001	:	:	8	:	4	:	:	5	4	3	12	3	1.2	:	:	:
<b>Number of PCs for teaching purposes in primary schools for 100 pupils</b>																
1999	:	:	:	26	:	:	:	:	:	:	:	:	:	:	4	:
2000	:	:	:	:	:	4	:	:	:	:	:	:	:	:	5	:
2001	:	:	6	:	1	:	:	12	:	:	16	2	0.7	:	:	:
<b>Number of PCs for teaching purposes in secondary schools for 100 pupils</b>																
1999	:	:	:	171	:	:	:	:	:	:	:	:	:	24	4	:
2000	:	:	:	:	:	6	:	:	:	:	:	:	:	26	4	:
2001	:	:	11	:	6	:	:	8	:	:	6	3	2.3	:	:	:

(1) Public schools only which constitute 96% of the pupils in primary schools and 90% in secondary schools. (2) General schools; all PC's. (3) Full-time and part-time students where part-time students are counted as 0.5 full-time; data may include computers used for non-teaching purposes. (4) General and vocational schools. (5) ISCED levels 1 to 3. (6) Government schools only. (7) Estimates. (8) September for 1999; December for 2000; primary covers primary and lower secondary; secondary covers upper secondary.

Source: Information Society questionnaire, Eurostat

Table 7.3: Use of Internet in schools (%)

	IS	NO	CH	BG	CY (1)	CZ	EE (2)	HU	LV (3)	LT (4)	MT (5)	PL (6)	RO	SK (7)	SI (8)	TR
<b>Proportion of schools with an Intranet</b>																
1999	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
2000	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
2001	:	:	9	:	:	:	:	:	:	24	:	:	:	:	:	:
<b>Proportion of schools with an Internet connection</b>																
1999	:	:	:	:	:	:	:	:	32	:	:	:	:	:	94	:
2000	:	:	:	:	:	:	:	:	55	:	:	:	:	:	99	:
2001	:	:	66	:	:	45	64	68	38	63	54	10	:	:	:	:
<b>Proportion of primary schools with an Internet connection</b>																
1999	:	:	:	0	:	:	:	:	:	:	:	:	:	:	93	:
2000	:	:	:	:	:	:	:	:	:	:	:	:	:	:	99	:
2001	:	:	53	:	:	:	54	:	:	51	40	4	:	:	:	:
<b>Proportion of secondary schools with an Internet connection</b>																
1999	:	:	:	3	:	:	:	:	:	:	:	:	:	62	96	:
2000	:	:	:	:	:	:	:	:	:	:	:	:	:	65	100	:
2001	:	:	93	:	:	:	81	:	:	89	67	57	:	:	:	:

(1) Number of computers connected to the Internet per 100 pupils is 0.6 for primary education, 2.6 for secondary education and 1.5 for the total; data refer to public schools only which constitute 96% of the pupils in primary schools and 90% in secondary schools. (2) Provisional. (3) General and vocational schools. (4) Intranet and Internet connections for ISCED levels 1 to 3. (5) Government schools only. (6) Internet connections, estimates. (7) Estimates. (8) September for 1999; December for 2000; primary covers primary and lower secondary; secondary covers upper secondary.

Source: Information Society questionnaire, Eurostat

## 8. BACKGROUND INFORMATION





## 9. SOURCES AND METHODOLOGY

## 9. SOURCES AND METHODOLOGY

### PRESENTATION AND TIMELINESS OF DATA

Unless otherwise specified monetary values are presented in EUR at current prices and current exchange rates. Data was extracted from NewCronos in August 2002.

### STRUCTURAL BUSINESS STATISTICS

The SBS data used in this publication has been compiled using the enterprise as the statistical unit. Enterprises are classified to the NACE Rev. 1 classification according to their principal activity. No enterprise size threshold is applied. Summary definitions of the variables used to measure the ICT sector in this publication are given below.

The number of enterprises is a count of the number of enterprises registered to the population concerned in the business register corrected for errors, in particular frame errors. Dormant units are excluded. This statistic should include all units active during at least a part of the reference period.

The number of persons employed is defined as the total number of persons who work in the observation unit (inclusive of working proprietors, partners working regularly in the unit and unpaid family workers), as well as persons who work outside the unit who belong to it and are paid by it (e.g. sales representatives, delivery personnel). It includes persons absent for a short period and also those on strike, but not those absent for an indefinite period. It also includes part-time workers on the pay-roll, as well as seasonal workers, apprentices and home workers on the pay-roll. The number of persons employed excludes manpower supplied to the unit by other enterprises.

Turnover comprises the totals invoiced by the observation unit during the reference period, and this corresponds to market sales of goods or services supplied to third parties. Turnover includes all duties and taxes on the goods or services invoiced by the unit with the exception of the VAT invoiced by the unit vis-à-vis its customer and other similar deductible taxes directly linked to turnover.

Value added at factor cost can be calculated from the sum of i) turnover ii) capitalised production iii) other operating income, minus the sum of i) purchases of goods and services ii) other taxes on products which are linked to turnover but not deductible iii) duties and taxes linked to production, plus or minus changes in stocks. Alternatively it can be calculated from gross operating surplus by adding personnel costs. Value added at factor cost is calculated “gross” as value adjustments (such as depreciation) are not subtracted.

Apparent labour productivity is calculated as value added at factor cost divided by the number of persons employed.

### EXTERNAL TRADE

The external trade data used in this publication are compiled using data reported according to the Combined Nomenclature. For EU-15 as the reporting country only extra-EU trade is provided; for all other reporting countries, including the individual Member States, both intra-EU and extra-EU trade are included in total trade figures. The external trade figures provided in this publication only include trade in goods, not services.

ICT goods cover i) computers, ii) consumer electronics, iii) electronic components, iv) instruments, v) office machinery and vi) telecommunication products.

Imports and exports are calculated according to “statistical regime number 4”, and as such cover normal trade (mainly goods exported definitively and released into free circulation), inward and outward processing and economic processing arrangements for textiles.

The statistical value of external trade is the value calculated at national frontiers. It can be FOB value (free on board), for exports/dispatches, or CIF (cost, insurance, freight), for imports/arrivals: it therefore includes only incidental expenses (freight, insurance) incurred in the part of the journey located on the territory of the Member State from which the goods are exported (in the case of exports/dispatches) and in the part of the journey located outside of the territory of the Member State which imports the goods (in the case of imports/arrivals). The statistical value is generally based on the customs value (which does not include, inter alia, import duties or other Community taxes on the import or sale of goods) in the case of extra-EU trade, or on taxable value, in the case of intra-EU trade. In the case of processing it is always the total value of the goods which is entered, before and after processing, not only the value added.



**E-COMMERCE PILOT SURVEY**

Most of the data presented in chapter 6 come from a recent pilot study on e-commerce. As a pilot study the coverage in terms of the target population and the detailed list of questions asked by each statistical authority varied. The differences in the data set in terms of the activities included and the size of enterprises surveyed are in some cases significant and this should be borne in mind when interpreting the data. The target population foreseen was to cover NACE Sections:

- D - manufacturing;
- G - distribution;
- H - hotels and restaurants;
- I - transport, storage and communication;
- J - financial services;
- K - business services (real estate, renting and business activities).

Unless otherwise specified, all results have been presented for the sum of these NACE Sections for enterprises with 10 or more persons employed. For data presented with a size class breakdown the following definitions were used:

- Small - enterprises with between 10 and 49 persons employed;
- Medium - enterprises with between 50 and 249 persons employed;
- Large - enterprises with 250 or more persons employed.

The following list indicates the main differences in the activity coverage of the data from the E-commerce database:

- DK - Includes NACE Section F and Division 93 and excludes Section J;
- D - Excludes NACE Sections D, I, J and K;
- I - Excludes NACE Section J;
- FIN - Includes NACE Section F and excludes Section J;
- UK - Includes NACE Section F;
- NO - Includes NACE Section F and Division 93 and excludes Section J.

Whenever an average is presented for several Member States (referred to in the tables and figures as EU-15) it is an average of the available data. As a result the EU-15 averages provide information for each particular variable presented but these can not be compared within a table or across tables without first checking to see if data for the same Member States are present. Furthermore, any divergences from the standard activity and size coverage definitions within individual Member States that are used to compile averages are also present in the average. For example, averages including the United Kingdom will include data for Section F for the United Kingdom. Averages have been calculated using the number of enterprises to weight the Member State data.

**ISQ**

The Information Society Questionnaire is sent by Eurostat to each National Statistical Office each year. It asks for data for three reference years for a number of indicators grouped into six modules. The aim of the questionnaire is to collect data that is available, even if it is unharmonised. Over time it is hoped that regular, harmonised data collection exercises will replace parts of this questionnaire.

## 9. SOURCES AND METHODOLOGY

### OTHER SOURCES USED IN THE PUBLICATION

Name	Sources used	Web address
Organisation for Economic Cooperation and Development - OECD	Data on cable modem and DSL connections provided directly by OECD OECD Communications outlook 2001 OECD Science, technology and industry scoreboard 2001	<a href="http://www.oecd.org/">http://www.oecd.org/</a>
European Information Technology Observatory - EITO	EITO 2002	<a href="http://www.eito.org/">http://www.eito.org/</a>
International Telecommunication Union - ITU	ICT free statistics	<a href="http://www.itu.int/ITU-D/ict/statistics/">http://www.itu.int/ITU-D/ict/statistics/</a>
Internet Software Consortium - ISC	Internet domain survey	<a href="http://www.isc.org/ds/">http://www.isc.org/ds/</a>
Netcraft	Secure server survey	<a href="http://www.netcraft.com/ssl/">http://www.netcraft.com/ssl/</a>
Réseaux IP Européens, Network Coordination Centre - RIPE NCC	Internet statistics - the RIPE region hostcount	<a href="http://www.ripe.net/ripencc/pub-services/stats/hostcount/index.html">http://www.ripe.net/ripencc/pub-services/stats/hostcount/index.html</a>

### DIRECTORATE-GENERALS OF THE EUROPEAN COMMISSION

The following Directorate-Generals produce reports and data on Information Society related issues.

Directorate-General (and sources used in this publication)	Web address
Eurostat - DG ESTAT	<a href="http://www.europa.eu.int/comm/dgs/eurostat/index_en.htm">http://www.europa.eu.int/comm/dgs/eurostat/index_en.htm</a>
Directorate-General information society - DG INFSO	<a href="http://www.europa.eu.int/information_society/index_en.htm">http://www.europa.eu.int/information_society/index_en.htm</a>
Directorate-General press and communication - DG PRESS	<a href="http://www.europa.eu.int/comm/dgs/press_communication/index_en.htm">http://www.europa.eu.int/comm/dgs/press_communication/index_en.htm</a>
Eurobarometer surveys	<a href="http://www.europa.eu.int/comm/public_opinion/archives_en.htm">http://www.europa.eu.int/comm/public_opinion/archives_en.htm</a>
Directorate-General for employment and social affairs - DG EMPL	<a href="http://www.europa.eu.int/comm/dgs/employment_social/index_en.htm">http://www.europa.eu.int/comm/dgs/employment_social/index_en.htm</a>
"Employment and social dimension of the information society" (ESDIS)	<a href="http://www.europa.eu.int/comm/employment_social/soc-dial/info_soc/esdis/">http://www.europa.eu.int/comm/employment_social/soc-dial/info_soc/esdis/</a>
Directorate-General for economic and financial affairs - DG ECFIN	<a href="http://www.europa.eu.int/comm/dgs/economy_finance/index_en.htm">http://www.europa.eu.int/comm/dgs/economy_finance/index_en.htm</a>

### LIST OF NATIONAL STATISTICAL OFFICES

Country		Web address
Belgium	Nationaal Instituut voor de Statistiek / Institut National de la Statistique (Statistics Belgium)	<a href="http://www.statbel.fgov.be/">http://www.statbel.fgov.be/</a>
Denmark	Danmarks Statistik (Statistics Denmark)	<a href="http://www.dst.dk/">http://www.dst.dk/</a>
Germany	Statistisches Bundesamt (Federal Statistical Office)	<a href="http://www.destatis.de/">http://www.destatis.de/</a>
Greece	National Statistical Service of Greece	<a href="http://www.statistics.gr/">http://www.statistics.gr/</a>
Spain	Instituto Nacional de Estadística	<a href="http://www.ine.es/">http://www.ine.es/</a>
France	Institut National de la Statistique et des Etudes Economiques	<a href="http://www.insee.fr/">http://www.insee.fr/</a>
Ireland	Central Statistics Office	<a href="http://www.cso.ie/">http://www.cso.ie/</a>
Italy	Istituto nazionale di statistica	<a href="http://www.istat.it/">http://www.istat.it/</a>
Luxembourg	Service central de la statistique et des études économiques	<a href="http://www.statec.lu/">http://www.statec.lu/</a>
The Netherlands	Centraal Bureau voor de Statistiek (Statistics Netherlands)	<a href="http://www.cbs.nl/">http://www.cbs.nl/</a>
Austria	Statistik Austria	<a href="http://www.statistik.at/">http://www.statistik.at/</a>
Portugal	Instituto Nacional de Estatística	<a href="http://www.ine.pt/">http://www.ine.pt/</a>
Finland	Tilastokeskus (Statistics Finland)	<a href="http://www.stat.fi/">http://www.stat.fi/</a>
Sweden	Statistiska centralbyrån (Statistics Sweden)	<a href="http://www.scb.se/">http://www.scb.se/</a>
The United Kingdom	The Office for National Statistics	<a href="http://www.statistics.gov.uk/">http://www.statistics.gov.uk/</a>
Iceland	Hagstofa Íslands (Statistics Iceland)	<a href="http://www.statice.is/">http://www.statice.is/</a>
Norway	Statistisk sentralbyrå (Statistics Norway)	<a href="http://www.ssb.no/">http://www.ssb.no/</a>
Switzerland	Statistik Schweiz	<a href="http://www.statistik.admin.ch/">http://www.statistik.admin.ch/</a>
Bulgaria	National Statistical Institute	<a href="http://www.nsi.bg/">http://www.nsi.bg/</a>
Cyprus	Statistical Service of Cyprus	<a href="http://www.pio.gov.cy/dsr/">http://www.pio.gov.cy/dsr/</a>
Czech Republic	Czech Statistical Office	<a href="http://www.czso.cz/">http://www.czso.cz/</a>
Estonia	Statistikaamet (Statistical Office of Estonia)	<a href="http://www.stat.ee/">http://www.stat.ee/</a>
Hungary	Központi Statisztikai Hivatal (Hungarian Central Statistical Office)	<a href="http://www.ksh.hu/">http://www.ksh.hu/</a>
Latvia	Central Statistical Bureau of Latvia	<a href="http://www.csb.lv/">http://www.csb.lv/</a>
Lithuania	Department of Statistics to the Government of the Republic of Lithuania	<a href="http://www.std.lt/">http://www.std.lt/</a>
Malta	National Statistics Office	<a href="http://www.nso.gov.mt/">http://www.nso.gov.mt/</a>
Poland	Central Statistical Office	<a href="http://www.stat.gov.pl/">http://www.stat.gov.pl/</a>
Romania	Institutul National de Statistica (National Institute of Statistics)	<a href="http://www.insse.ro/">http://www.insse.ro/</a>
Slovak Republic	Štatistický úrad Slovenskej republiky (Statistical Office of the Slovak Republic)	<a href="http://www.statistics.sk/">http://www.statistics.sk/</a>
Slovenia	Statistical Office of the Republic of Slovenia	<a href="http://www.sigov.si/zrs/">http://www.sigov.si/zrs/</a>
Turkey	State Institute of Statistics	<a href="http://www.die.gov.tr/">http://www.die.gov.tr/</a>
Japan	Statistics Bureau and Statistics Centre	<a href="http://www.stat.go.jp/">http://www.stat.go.jp/</a>
USA	US Census Bureau	<a href="http://www.census.gov/">http://www.census.gov/</a>

**SIGNS, COUNTRY ABBREVIATIONS, COUNTRY CODE TOP LEVEL DOMAINS (TLD'S) AND OTHER ABBREVIATIONS**

:	not available	ADSL	Asymmetric Digital Subscriber Line
0	less than half the unit used	B2B	Business to Business
~	not relevant	B2C	Business to Consumer
EU-15	European Union (15 countries)	DSL	Digital Subscriber Line
B	Belgium .be	EB	Eurobarometer
DK	Denmark .dk	EDI	Electronic Data Interchange
D	Germany .de	ESIS	European Statistical Information System
EL	Greece .gr	EUR	Euro (note that EUR is also used in series that were originally compiled in ECU as the exchange rate was 1 ECU to 1 EUR)
E	Spain .es	GDP	Gross Domestic Product
F	France .fr	GP	General Practitioner
IRL	Ireland .ie	GSM	Global System for Mobile communication
I	Italy .it	HTML	HyperText Markup Language
L	Luxembourg .lu	ICT	Information and Communication Technologies
NL	the Netherlands .nl	IP	Internet Protocol
A	Austria .at	ISDN	Integrated Services Digital Network
P	Portugal .pt	ISP	Internet Service Provider
FIN	Finland .fi	IT	Information Technology
S	Sweden .se	LFS	Labour Force Survey
UK	the United Kingdom .uk	NACE	Statistical classification of economic activities in the European Community
IS	Iceland .is	NIC	Newly Industrialising Country
NO	Norway .no	PC	Personal Computer
CH	Switzerland .ch	PIAP	Public Internet Access Point
BG	Bulgaria .bg	PSTN	Public Switched Telephone Network
CY	Cyprus .cy	PPP	Purchasing Power Parity
CZ	Czech Republic .cz	SBS	Structural Business Statistics
EE	Estonia .ee	SME	Small and Medium-sized Enterprises
HU	Hungary .hu	TLD	Top Level Domain
LV	Latvia .lv	UMTS	Universal Mobile Telecommunications System
LT	Lithuania .lt	WWW	World Wide Web
MT	Malta .mt		
PL	Poland .pl	Glossary:	
RO	Romania .ro	Electronic commerce:	Transactions conducted over computer mediated networks.
SK	Slovak Republic .sk	Internet:	Internet Protocol based networks
SI	Slovenia .si		
TR	Turkey .tr		
JP	Japan .jp		
US	United States of America .us		

## NACE REV.1 ACTIVITIES COVERED BY THE INFORMATION AND COMMUNICATION TECHNOLOGIES SECTOR

**ICT manufacturing (part of Sub-section DL):**

- 30: Manufacture of office machinery and computers  
 31.3: Manufacture of insulated wire and cable  
 32: Manufacture of radio, television, and communication equipment and apparatus  
 33.2: Manufacture of instruments and appliances for measuring, checking, testing, navigating and other purposes, except industrial process control equipment  
 33.3: Manufacture of industrial process control equipment

**ICT services (\*):**

- Section G:  
 51.43: Wholesale of electrical household appliances and radio and television goods  
 51.64: Wholesale of office machinery and equipment  
 51.65: Wholesale of other machinery for use in industry, trade and navigation  
 Section I:  
 64.2: Telecommunications  
 Section K:  
 72: Computer and related activities

(\* ) NACE Class 71.33 (renting of office machinery and equipment including computers) is part of ICT services, however SBS data is not available for this activity and hence the SBS data presented in this publication do not cover this activity.

**ICT PRODUCTS****Computers**

847110, 847130, 847141, 847149, 847150, 847160, 847170, 847180, 847190, 847330, 847350	data processing machines and units (processing, input, output, storage or other) for automatic data-processing machines, including magnetic or optical readers parts and accessories for automatic data-processing machines, other machines of heading 8471 or for use with two or more typewriters
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**Consumer electronics**

851810, 851821, 851822, 851829, 851830, 851840, 851850, 851890	microphones and stands therefor, loudspeakers, headphones, audio-frequency electric amplifiers, electric sound amplifier sets, parts of microphones
851910, 851921, 851929, 851931, 851939, 851940, 851992, 851993, 851999	record-players, turntables, transcribing machines, cassette players and other sound reproducing apparatus
852010, 852020, 852032, 852033, 852039, 852090	sound reproducing devices (telephone answering machines, magnetic tape recorders, cassette recorders) and sound recording equipment
852110, 852190	video recording or reproducing apparatus
852210, 852290	pick-up cartridges, parts and accessories of sound and video reproducing and recording apparatus
852311, 852312, 852313, 852320, 852390	magnetic tapes and discs, prepared unrecorded media for sound recording or similar recording of other phenomena (excluding magnetic tapes)
852540	still-image video cameras and other video camera recorders
852712, 852713, 852719, 852721, 852729, 852731, 852732, 852739, 852790	radio-broadcast receivers and pocket-size radio/cassette-players, radio-broadcast receivers not capable of operating without an external source of power, receivers for radio-telephony
852812, 852813, 852821, 852822, 852830	television receivers and video monitors, video projectors

**Electronic components**

852330, 852460	cards incorporating a magnetic stripe
853210, 853221, 853222, 853223, 853224, 853225, 853229, 853290	fixed capacitors designed for use in 50/60 Hz circuits and having a reactive power-handling capacity of $\geq 0.5$ kvar 'power capacitors', fixed electrical capacitors and parts therefor
853400	printed circuits
854011, 854012, 854020, 854040, 854050, 854060, 854071, 854072, 854079, 854081, 854089, 854091, 854099	television camera tubes; image converters and intensifiers; photo-cathode tubes, data/graphic display tubes, cathode-ray tubes and parts therefor, magnetrons, klystrons, microwave tubes, receiver or amplifier valves and tubes, electronic valves and tubes, parts of thermionic
854110, 854121, 854129, 854130, 854140, 854150, 854160, 854190	diodes and parts therefor, transistors, thyristors, photosensitive semiconductor devices, semiconductor devices n.e.s., mounted piezo-electric crystals
854212, 854213, 854214, 854219, 854230, 854240, 854250, 854290,	monolithic digital integrated circuits and cards incorporating these, integrated circuits (electronic or hybrid), electronic microassemblies made from discrete parts of electrical capacitors, parts of electronic integrated circuits and microassemblies
854420, 854441, 854449, 854451, 854459, 854470	co-axial cable, electric conductors, optical fibre cables made up of individually sheathed fibres

**Instruments**

900110, 900190, 900290	optical fibres, lenses
900620, 900630, 900659	cameras of a kind used for recording documents on microfilm or specially designed for underwater use, cameras for roll film of a width of > 35 mm or for film in the flat (excluding instant print cameras and special cameras of headings 900610)
900711, 900719, 900720, 900791, 900792	cinematographic cameras and projectors and parts and accessories therefor
901210, 901290	electron microscopes and parts and accessories therefor
901310, 901320, 901380, 901390	telescopic sights for fitting to arms; periscopes; telescopes designed to form parts of machines, lasers, liquid crystal devices n.e.s. and other optical appliances and instruments not elsewhere specified in chapter 90, parts and accessories for liquid crystal devices
901410, 901420, 901480, 901490	direction finding compasses, instruments and appliances for aeronautical or space navigation, navigational instruments and apparatus, parts and accessories therefor
901510, 901520, 901530, 901540, 901580, 901590	rangefinders, theodolites and tacheometers; levels, photogrammetrical surveying instruments and appliances, instruments and appliances used in geodesy and parts therefor
902410, 902480, 902490	machines and appliances for testing metals and the mechanical properties of materials and parts therefor
902580, 902590	hydrometers and similar floating instruments and parts therefor
902620, 902680, 902690	instruments and apparatus for measuring or checking variables of liquids or gases and parts and accessories therefor
902710, 902720, 902730, 902740, 902750, 902780, 902790	gas or smoke analysis apparatus, chromatographs and electrophoresis instruments, spectrometers, exposure meters, parts and accessories for microtomes, instruments and apparatus for physical or chemical analysis
902810, 902820, 902830, 902890	gas, liquid and electricity meters and parts and accessories for gas
902910, 902920, 902990	revolution counters, speed indicators and tachometers, parts and accessories for revolution counters
903010, 903020, 903031, 903039, 903082, 903083, 903089, 903090	instruments and apparatus for measuring or detecting ionizing radiations, cathode-ray oscilloscopes and cathode-ray oscillographs, multimeters for voltage, instruments and apparatus for measuring or checking i) voltage, ii) semiconductor wafers or devices, iii) electrical quantities, iv) electrical quantities, parts and accessories for instruments and apparatus for measuring or checking electrical quantities or for detecting ionizing radiations n.e.s.
903110, 903120, 903130, 903141, 903149, 903180, 903190	machines for balancing mechanical parts, test benches for motors, profile projectors, optical instruments and appliances for inspecting semiconductor wafers or devices or for inspecting photomasks or reticles used in manufacturing semiconductor devices, instruments and parts and accessories therefor
903210, 903220, 903281, 903289, 903290	thermostats, manostats (excluding taps), regulating or controlling instruments and apparatus and parts and accessories therefor
903300	parts and accessories for machines

**Office machinery**

846911, 846912	word-processing machines (excluding items of heading no 8471 and laser), typewriters
847010, 847021, 847029, 847040, 847050, 847090	electronic calculators capable of operation without an external source of power, accounting machines incorporating a calculating device (excluding data-processing machines of heading no 8471), cash registers incorporating a calculating device, postage-franking machines
847310, 847321, 847340	parts and accessories for items of heading no 8469 subheading no 847010 and heading no 8472
900930, 900990, 900911, 900912, 900921, 900922	thermo-copying and photocopying apparatus (excluding thermo-printers), parts and accessories therefor

**Telecommunication products**

851711, 851719, 851721, 851722, 851730, 851750, 851780, 851790	telephone sets for line telephony, videophones (excluding entry-phone systems), facsimile machines and teleprinters for line telephony and telegraphy, telephonic or telegraphic switching apparatus, apparatus for carrier-current line systems or digital line systems, electrical apparatus for line telephony or line telegraphy and parts therefor
852510, 852520, 852530	transmission apparatus for radio-telephony or incorporating reception apparatus, television cameras
852610, 852691, 852692	radio navigational aid apparatus, radio remote control apparatus, radar apparatus
852910, 852990	aerials and aerial reflectors of all kinds and parts suitable for use therewith, parts suitable for use solely or principally with transmission and reception apparatus for radio-telephony
880260, 880390	spacecraft and parts of aircraft and spacecraft
903040	instruments and apparatus for measuring or checking electrical quantities

**MORE METHODOLOGICAL INFORMATION**

Detailed information on methods and definitions of Eurostat statistics are available from the Business Methods site on CIRCA at the following address:

[http://forum.europa.eu.int/irc/dsis/bmethods/info/data/new/main\\_en.html](http://forum.europa.eu.int/irc/dsis/bmethods/info/data/new/main_en.html)