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Chapter One

Introduction

This is the CSO's fourth report on information society statistics. The report has been expanded from previous years to provide more detail from the CSO ICT surveys, complementary administrative data on ICT, and summary information on the telecommunications sector in Ireland. Appreciation is extended to ComReg for their assistance in providing the CSO with administrative data on telecommunications.

The report contains statistics on how information and communications technologies (ICT) are being used in Ireland today, in the home and in business. The data sources used in this report also provide information to monitor progress on the i2010 Initiative to create a European Information Society for Growth and Employment.

The enterprise survey of e-commerce and ICT was conducted in March 2006. It covered enterprises with ten or more persons engaged in industry, construction and in a wide range of services sectors. The household survey was incorporated into the Quarterly National Household Survey in February 2006. It included questions about home computing at household level and individual questions in respect of persons aged 16 to 74. The results of these surveys appear in Chapters 3 and 4 respectively.

Chapter 2 gives the latest available information on employment, turnover and value added in the ICT sector in Ireland while Chapters 5 and 6 focus on the key topics of "Connecting to the Internet" and "Human Resources in ICT". Chapter 7 presents information on the Telecommunications sector while Chapter 8 presents some international comparisons.

Some of the key findings of this report on information society and telecommunications statistics are as follows:

The ICT Sector in Ireland

- In 2004, the ICT sector employed 83,400 people and accounted for 16% of total value added in Industry and Services. This compares to 80,100 people employed and 17% of total value added in 2003.
- The ICT sector accounted for 20% (€53 billion) of total turnover in industry and services.

- Foreign owned enterprises represent just 10% of the total number of ICT enterprises but account for 56% of total employment and 88% of total turnover in the sector.

Use of ICT by Enterprises

- Virtually all businesses in Ireland use computers and have access to e-mail and the internet.
- Just 19% of enterprises reported having a written ICT strategy.
- The main purposes for which businesses use the internet as a consumer are: to search for information, to avail of banking and financial services, and to monitor markets.
- Businesses which have a website mainly use it to market their products, to make catalogues and price lists available and to provide after sales support.
- Sales using e-commerce account for 22% of manufacturing turnover.
- Almost 60% of businesses have made some purchases using e-commerce. However, the percentage of total purchases made in this way is small relative to the percentage of sales made by e-commerce.

Use of ICT by Households

- An estimated 867,500 households (or 59%) have a home computer. This compares to a figure of 797,700 (or 55%) in 2005.
- The number of homes with internet connections increased from 655,000 in 2005 to 722,200 in 2006. Just over 83% of households who had a home computer used it to connect to the internet.
- An estimated 56% (or 1,721,000 persons) of people aged 16 to 74 have used a computer at some time while 48% (or 1,484,600 persons) have used the internet.
- An estimated 935,600 people used a computer every day or almost every day.
- An estimated 638,500 people in Ireland used the internet at least once a day.
- The most popular activities on the internet relate to *Information search and on-line services, Communication (e-mail)* and *Interaction with public authorities*.
- The most common internet purchases are *Travel and holiday accommodation* and *Tickets for events.*

Connecting to the Internet

- The number of broadband subscribers increased from 176,300 in the second quarter of 2005 to just over 372,000 in the second quarter of 2006. The number of dial-up subscribers dropped from 542,000 to 487,000 over the same period.
- Enterprises who use broadband are more likely show greater levels of e-business activity, and higher degrees of integration of their ICT systems.

Human Resources in ICT

- There were almost 11,000 full-time and part-time computing students in 2004.
- Three quarters of computing students are male, although the third level student population is 55% female.
- Just over 4% of all PhD graduates obtained a PhD in computing.

Telecommunications

- Total revenues in 2005 for the Telecommunications and Broadcasting sectors were €3.9bn with an average annual employment of 13,200.
- The mobile penetration rate for Ireland in the second quarter of 2006 was 103% with 4.4 million subscribers, from a population of just over 4 million.
- The number of SMS messages sent in 2005 was 4.4 billion which amounted to an average of 1053 text messages per person in that year.

International Comparisons

- Globally, the ICT sector in Ireland has one of the highest shares of business sector value added, just below Korea and Finland.
- Irish enterprises are more likely to sell on-line than most of their EU counterparts. However, they are less likely to have a broadband connection.
- Irish households are less likely to have internet access than their EU counterparts. They are among the lowest household users of broadband in the EU, less than half the EU average.
- Per capita, Ireland was among the highest in the EU for sending SMS text messages in 2004.

Chapter Two

The ICT Sector in Ireland

Introduction

Tables 2.1 to 2.9 present information from the Census of Industrial Production and the Annual Services Inquiry, in order to place the ICT sector in an overall context. The data relates to the year 2004, which is the latest available.

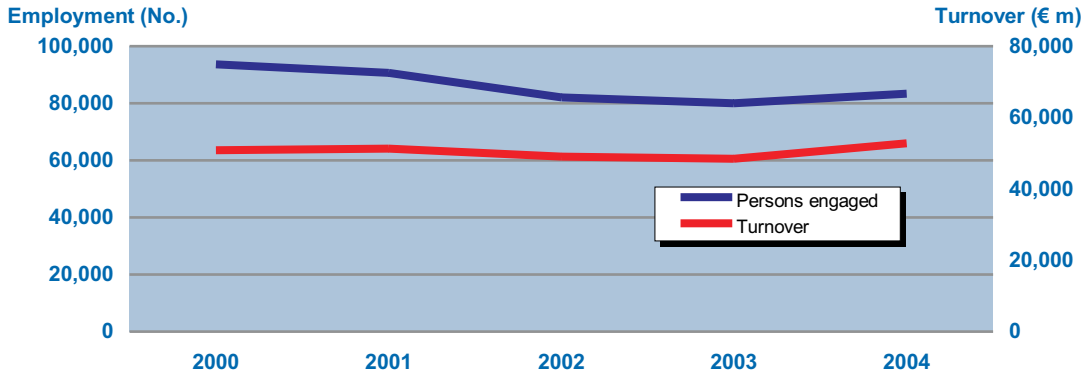
The ICT sector employed just over 83,400 people in 2004, which represented just over 8% of total employment in industry and services. The ICT manufacturing sector employed 30,000 and accounted for almost 13% of total industrial employment, while 53,400 were employed in ICT services accounting for over 7% of total services employment.

The ICT sector accounted for just 6% of the total number of enterprises and 8% of total employment. However, it contributed 20% of total turnover in industry and services. Total turnover in the ICT sector was almost €53 billion in 2004, with 61% in manufacturing and 39% in services. Value added in the ICT sector, at €14.6 billion, accounted for 16% of total value added in industry and services. *See Tables 2.1 and 2.2.*

The average ICT manufacturing enterprise employed 164 persons and had an average turnover of €176m. By contrast ICT services sector enterprises tended to be smaller with an average employment of 10 and an average turnover of just €4m.

Figure 2.1 shows the trends in ICT sector employment and turnover over the period 2000 – 2004. Between 2000 and 2003 employment fell from 93,700 to 80,100, while turnover in the ICT sector stayed at about the same level over the same period. Turnover and employment both increased between 2003 and 2004, with ICT services accounting for all of the increase in employment. ICT manufacturing saw a decrease of about 800 in numbers employed between 2003 and 2004, while employment in ICT services increased by 4,100.

Figure 2.1 ICT sector employment and turnover 2000 - 2004



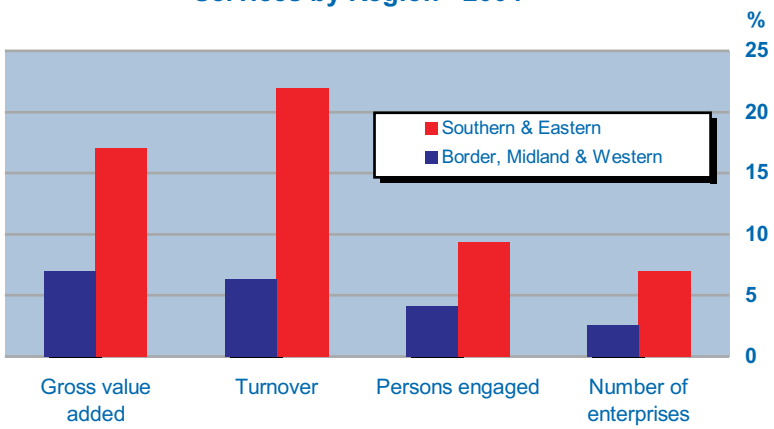
Source: CSO - Census of Industrial Production and Annual Services Inquiry

Regional analysis

In 2004, the Southern and Eastern region accounted for 87% of ICT enterprises, 89% of ICT employment and 96% of turnover in the sector. *See Tables 2.3 and 2.5.*

As a result of this concentration in the Southern and Eastern region, the sector accounts for a relatively higher share of business activity in that region. The relative intensity of ICT as a percentage of total industry and services in the two regions is shown in Figure 2.2 below. *See Figure 2.2 and Tables 2.4 and 2.6.*

Figure 2.2 Total ICT as a percentage of Total Industry and Services by Region - 2004



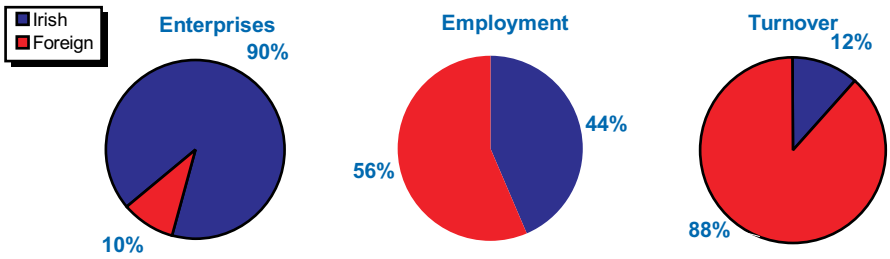
Source: CSO - Census of Industrial Production and Annual Services Inquiry

Nationality of ownership

Some 61% of ICT manufacturing enterprises are Irish-owned and 39% foreign-owned. This compares with 88% Irish-ownership for industry as a whole. Irish-owned ICT manufacturing enterprises employed almost 5,000 people while foreign-owned enterprises employed 25,100 in 2004. Foreign-owned ICT manufacturing enterprises tend to be on a larger scale with, on average, 353 persons engaged compared with an average of 44 employees for Irish-owned ICT manufacturers. *See Table 2.7.*

For ICT service enterprises, the balance between Irish and foreign ownership was different, with just over 91% Irish-owned. These Irish owned enterprises had 31,500 persons in employment while foreign-owned enterprises employed 21,900 people. ICT service enterprises were generally smaller than those involved in manufacturing: Irish owned enterprises had an average of 7 employees compared with 50 persons employed in foreign-owned enterprises in this sector. *See Figure 2.3.*

Figure 2.3 Principal aggregates for the ICT sector by nationality of ownership - 2004



Source: CSO - Census of Industrial Production and Annual Services Inquiry

Output per employee, in terms of gross value added, was more than three times as high in foreign owned enterprises compared with indigenous ICT companies. The average GVA per employee in the foreign owned enterprises was €248,300 compared with €79,100 in indigenous enterprises.

In 2004 foreign owned enterprises accounted for 80% of the total gross value added of the ICT sector.

Composition of the ICT sector

The ICT sector includes manufacture of office machinery and computers, manufacture of communications equipment, computer-related service activities and the distribution and renting of office machinery and equipment. Other manufacturing activities covered include measurement and process-control equipment, reproduction of computer media and manufacture of insulated wire and cable. In many international publications, the reproduction of computer media is not included as ICT. In this report this sector is included as it makes a significant contribution to industry in Ireland. This fact can therefore affect international comparisons. *See Table 2.9 and Chapter 8.*

Table 2.1 Principal aggregates for the ICT Manufacturing and Services sectors - Ireland

	Unit	2002	2003	2004
Ireland				
ICT Manufacturing (A)				
Number of enterprises	Number	233	216	183
Persons engaged	Number	33,488	30,791	30,004
Turnover	€ million	29,449	30,051	32,299
Gross value added	€ million	5,700	6,038	6,779
ICT Services (B)				
Number of enterprises	Number	3,900	4,226	5,101
Persons engaged	Number	48,572	49,307	53,415
Turnover	€ million	19,609	18,851	20,530
Gross value added	€ million	6,483	6,913	7,771
ICT Total (A + B)				
Number of enterprises	Number	4,133	4,442	5,284
Persons engaged	Number	82,060	80,098	83,419
Turnover	€ million	49,058	48,902	52,829
Gross value added	€ million	12,183	12,951	14,550

Table 2.2 Total Industry and Services - Ireland

	Unit	2002	2003	2004
Ireland				
Total Industry				
Number of enterprises	Number	4,996	4,994	4,684
Persons engaged	Number	253,842	244,231	235,489
Turnover	€ million	107,683	109,806	113,311
Gross value added	€ million	39,526	40,700	40,041
Total Services				
Number of enterprises	Number	76,312	83,277	86,204
Persons engaged	Number	668,876	713,116	753,039
Turnover	€ million	114,544	125,622	156,108
Gross value added	€ million	30,163	33,927	49,933
Total Industry and Services				
Number of enterprises	Number	81,308	88,271	90,888
Persons engaged	Number	922,718	957,347	988,528
Turnover	€ million	222,227	235,428	269,419
Gross value added	€ million	69,689	74,627	89,974
Total ICT as a % of Total Industry and Services[1]				
Number of enterprises	%	5	5	6
Persons engaged	%	9	8	8
Turnover	%	22	21	20
Gross value added	%	17	17	16

[1] ICT Total (A + B Table 2.1) as a % of Total Industry and Services (Table 2.2)

Table 2.3 Principal aggregates for the ICT Manufacturing and Services sectors - Border, Midland and Western Region

	Unit	2002	2003	2004
Border, Midland and Western				
ICT Manufacturing (A)				
Number of enterprises	Number	48	45	42
Persons engaged	Number	4,665	4,580	4,275
Turnover	€ million	1,314	1,116	1,314
Gross value added	€ million	227	279	371
ICT Services (B)				
Number of enterprises	Number	433	514	663
Persons engaged	Number	3,772	3,634	4,730
Turnover	€ million	1,645	1,174	912
Gross value added	€ million	649	739	439
ICT Total (A + B)				
Number of enterprises	Number	481	559	705
Persons engaged	Number	8,437	8,214	9,005
Turnover	€ million	2,959	2,290	2,226
Gross value added	€ million	876	1,018	810

Table 2.4 Total Industry and Services - Border, Midland and Western Region

	Unit	2002	2003	2004
Border, Midland and Western				
Total Industry				
Number of enterprises	Number	1,404	1,441	1,374
Persons engaged	Number	60,714	59,831	60,844
Turnover	€ million	15,281	15,357	15,908
Gross value added	€ million	5,583	5,927	5,779
Total Services				
Number of enterprises	Number	18,712	20,139	20,816
Persons engaged	Number	124,399	134,222	143,233
Turnover	€ million	16,461	18,590	22,514
Gross value added	€ million	3,972	4,730	5,439
Total Industry and Services				
Number of enterprises	Number	20,116	21,580	22,190
Persons engaged	Number	185,113	194,053	204,077
Turnover	€ million	31,742	33,947	38,422
Gross value added	€ million	9,555	10,657	11,218
Total ICT as a % of Total Industry and Services[1]				
Number of enterprises	%	2	3	3
Persons engaged	%	5	4	4
Turnover	%	9	7	6
Gross value added	%	9	10	7

[1] ICT Total (A + B Table 2.3) as a % of Total Industry and Services (Table 2.4)

Table 2.5 Principal aggregates for the ICT Manufacturing and Services sectors - Southern and Eastern Region

	Unit	2002	2003	2004
Southern and Eastern				
ICT Manufacturing (A)				
Number of enterprises	Number	185	171	141
Persons engaged	Number	28,823	26,211	25,729
Turnover	€ million	28,135	28,935	30,985
Gross value added	€ million	5,473	5,759	6,408
ICT Services (B)				
Number of enterprises	Number	3,467	3,712	4,438
Persons engaged	Number	44,800	45,673	48,685
Turnover	€ million	17,964	17,677	19,618
Gross value added	€ million	5,835	6,174	7,332
ICT Total (A + B)				
Number of enterprises	Number	3,652	3,883	4,579
Persons engaged	Number	73,623	71,884	74,414
Turnover	€ million	46,099	46,612	50,603
Gross value added	€ million	11,308	11,933	13,740

Table 2.6 Total Industry and Services - Southern and Eastern Region

	Unit	2002	2003	2004
Southern and Eastern				
Total Industry				
Number of enterprises	Number	3,592	3,553	3,310
Persons engaged	Number	193,128	184,400	174,645
Turnover	€ million	92,402	94,449	97,403
Gross value added	€ million	33,943	34,773	34,262
Total Services				
Number of enterprises	Number	57,601	63,138	65,388
Persons engaged	Number	544,477	578,894	609,806
Turnover	€ million	98,083	107,032	133,594
Gross value added	€ million	26,191	29,197	44,494
Total Industry and Services				
Number of enterprises	Number	61,193	66,691	68,698
Persons engaged	Number	737,605	763,294	784,451
Turnover	€ million	190,485	201,481	230,997
Gross value added	€ million	60,134	63,970	78,756
Total ICT as a % of Total Industry and Services[1]				
Number of enterprises	%	6	6	7
Persons engaged	%	10	9	9
Turnover	%	24	23	22
Gross value added	%	19	19	17

[1] ICT Total (A + B Table 2.5) as a % of Total Industry and Services (Table 2.6)

Table 2.7 Principal aggregates for the ICT Manufacturing and Services sectors by Nationality of Ownership - 2004

	Unit	Irish	Foreign	Total
Ireland				
ICT Manufacturing (A)				
Number of enterprises	Number	112	71	183
Persons engaged	Number	4,945	25,059	30,004
Turnover	€ million	701	31,599	32,299
Gross value added	€ million	215	6,564	6,779
ICT Services (B)				
Number of enterprises	Number	4,658	443	5,101
Persons engaged	Number	31,482	21,933	53,415
Turnover	€ million	5,525	15,005	20,530
Gross value added	€ million	2,667	5,104	7,771
ICT Total (A + B)				
Number of enterprises	Number	4,770	514	5,284
Persons engaged	Number	36,427	46,992	83,419
Turnover	€ million	6,226	46,604	52,829
Gross value added	€ million	2,882	11,668	14,550

Table 2.8 Total ICT as a % of Total Industry and Services - 2004

	Unit	Irish	Foreign	Total
Ireland				
Total Industry				
Number of enterprises	Number	4,124	560	4,684
Persons engaged	Number	127,850	107,639	235,489
Turnover	€ million	25,540	87,771	113,311
Gross value added	€ million	9,272	30,769	40,041
Total Services				
Number of enterprises	Number	84,298	1,906	86,204
Persons engaged	Number	650,609	102,430	753,039
Turnover	€ million	112,090	44,017	156,108
Gross value added	€ million	36,479	13,454	49,933
Total Industry and Services				
Number of enterprises	Number	88,422	2,466	90,888
Persons engaged	Number	778,459	210,069	988,528
Turnover	€ million	137,630	131,788	269,419
Gross value added	€ million	45,751	44,223	89,974
Total ICT as a % of Total Industry and Services[1]				
Number of enterprises	%	5	21	6
Persons engaged	%	5	22	8
Turnover	%	5	35	20
Gross value added	%	6	26	16

[1] ICT Total (A + B Table 2.7) as a % of Total Industry and Services (Table 2.8)

Table 2.9 Composition of the ICT Sectors - 2004

NACE Division	Sector	Enterprises	Persons engaged	Turnover	Gross value added
		Number	Number	€ million	€ million
	ICT Total - Manufacturing and Services	**5,284**	**83,419**	**52,829**	**14,550**
	ICT Manufacturing	**183**	**30,004**	**32,299**	**6,779**
30	Manufacture of office machinery and computers.	50	14,127	15,971	1,518
32	Manufacture of radio, television and communication equipment and apparatus.	40	7,783	2,824	1,556
3320	Manufacture of instruments and appliances for measuring, checking, testing, navigating and other purposes, except industrial process control equipment.	38	2,172	454	154
3330, 2233, 3130	Manufacture of industrial process control equipment.Reproduction of computer media. Manufacture of insulated wire and cable.	55	5,922	13,050	3,550
	ICT Services	**5,101**	**53,415**	**20,530**	**7,771**
72	Computer and related activities.	4,313	28,921	6,742	2,713
5143, 5184, 5185, 6420, 7133	Wholesale of electrical household appliances, radio and television goods, office machinery and equipment, other machinery for use in industry, trade and navigation. Post and telecommunications. Renting of office machinery and equipment (including computers).	787	24,494	13,789	5,058

Chapter Three

Use of ICT by Enterprises

Introduction

Virtually all enterprises use computers in one way or another today: 99% in industry, 95% in construction and 96% in services. The majority also use e-mail and the internet while 64% of all enterprises reported that they have a website or homepage. *See Tables 3.4 and 3.5.*

The results were obtained from the March 2006 e-commerce and ICT survey and are based on a sample of just over 5,000 enterprises with ten or more persons employed in the manufacturing, construction and selected services sectors. Tables 3.2 and 3.3 contain information on the number of respondents to the e-commerce and ICT survey and other background information. The main results of the survey are presented in Tables 3.4 to 3.7. The background information relating to the number of enterprises, the total value of purchases and turnover in Tables 3.2 to 3.7 are based on the latest available estimates from the CSO's structural business surveys, which are subject to revision.

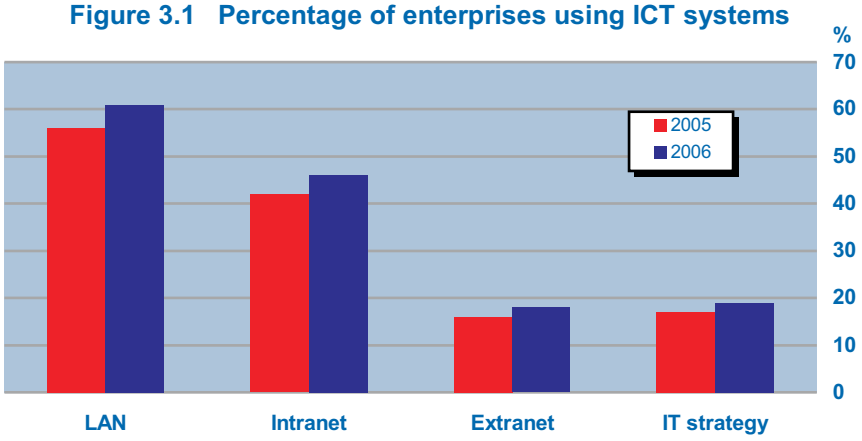
The tables include results from the Construction and the Recreational, Cultural and Sporting Activities[1] sectors which were not included in previous reports; data for 2004 and 2005 have been updated to take account of this expanded coverage.

General use of ICT systems

The survey reports that 61% of enterprises indicated that they use a Local Area Network (LAN) while 46% of enterprises stated that they had an intranet. About one in five have an extranet (i.e. access by external users to some part of their intranet). The use of LANs and related technologies was slightly higher than in 2005. About one fifth of manufacturing and service enterprises have a written IT strategy. One in ten construction companies had a written IT strategy. *See Figure 3.1.*

[1] NACE divisions 45 and 92

Figure 3.1 Percentage of enterprises using ICT systems



Source: CSO - e-Commerce and ICT Survey

Some 45% of enterprises had dedicated IT systems to manage the placing and receipt of orders in 2006, compared with 40% in 2005.

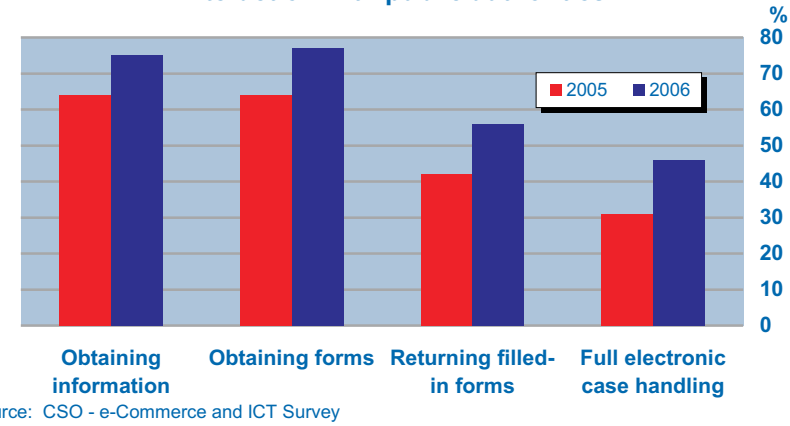
Table 3.4 and 3.5 give an indication of the degree of integration of business processes using ICT. The manufacturing sector shows higher levels of integration for internal business processes while the services sector displays greater levels of integration with its suppliers, and this is particularly evident in *Wholesale and Retail* and *Transport and Storage* sectors. The manufacturing and services sectors report a similar level of integration with their customers business systems. *See Tables 3.4 and 3.5.*

Use of the internet

Around two thirds of enterprises in manufacturing and services have a website, compared with 47% in the construction sector. The top three reasons for providing a website were (1) *Marketing the enterprise's products*, (2) *Facilitating access to product catalogues and price lists* and (3) *Providing after sales support*. A similar pattern exists for both industry and services. *See Tables 3.4 and 3.5*.

The main reasons given by businesses for using the internet (as a consumer) were (1) I*nformation search,* (2) *Banking and financial services* and (3) *Market monitoring*. In 2006, 77% of enterprises said they had downloaded forms from a public authority website, while 56% had returned completed forms online. In 2005, only 42% of enterprises had completed official forms online. The IT services sector (NACE 72) had the highest level of online interaction with public authorities. *See Figure 3.2 and Tables 3.4 and 3.5.*

Figure 3.2 Percentage of enterprises using the internet for interaction with public authorities



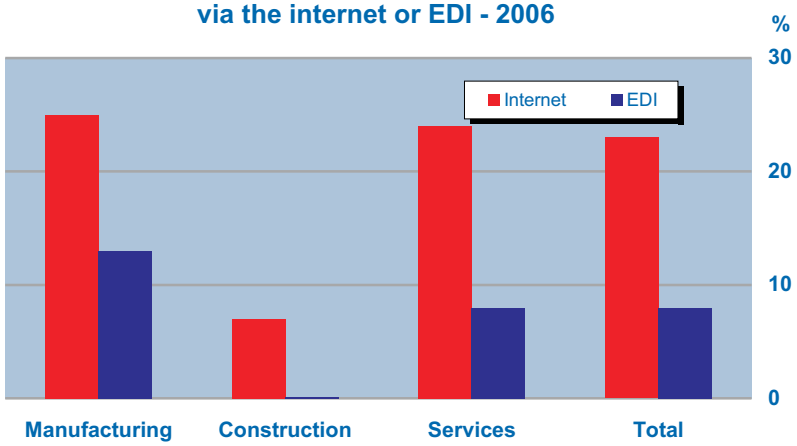
Source: CSO - e-Commerce and ICT Survey

e-Commerce

The 2006 survey found that the percentage of enterprises conducting sales via e-commerce (internet or EDI) was similar to 2005 levels. In manufacturing, the percentage with e-commerce sales decreased from 35% in 2005 to 33% in 2006, while in services there was a slight increase to 29% over the same period.

Sales by e-commerce accounted for almost a quarter of total turnover in the manufacturing sector in 2006. EDI (Electronic Data Interchange) accounted for more than half of these sales. In the services sector sales via e-commerce accounted for 13% of turnover. EDI had a smaller share of e-commerce sales in the services sector. These figures are influenced by the presence in Ireland of some very large multinational enterprises with highly integrated ICT systems. *See Figure 3.3 and Tables 3.6 and 3.7*.

Figure 3.3 Percentage of enterprises with e-commerce sales via the internet or EDI - 2006



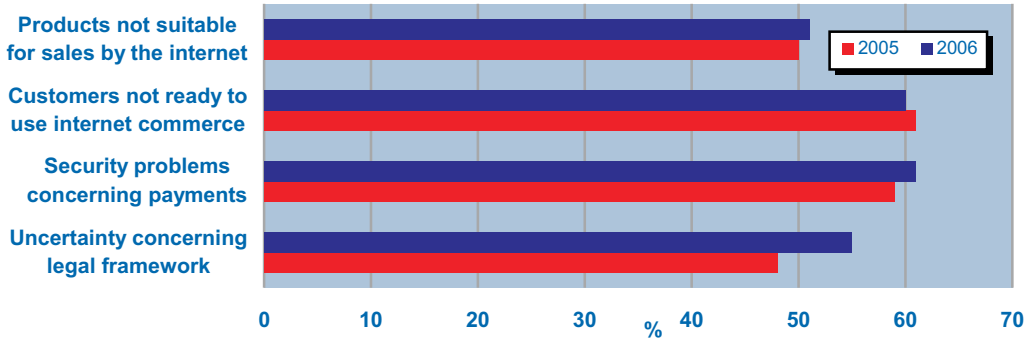
Source: CSO - e-Commerce and ICT Survey

The survey shows that 59% of all businesses purchased some goods using e-commerce. The percentage of total purchases completed in this way is small but has remained constant at about 10%. *See Tables 3.6 and 3.7.*

Barriers to e-Commerce

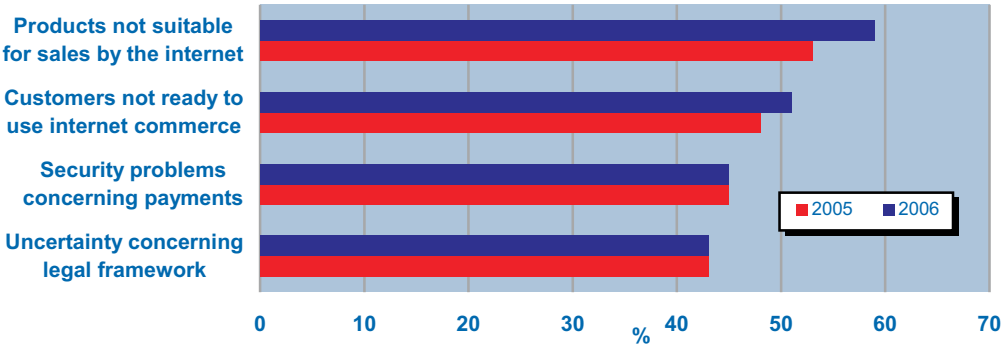
Businesses were also asked to rate the importance of potential barriers to e-commerce. The main concerns for those who were already selling on-line were whether customers were ready to shop on-line and security problems concerning payments. For those not selling on-line, the main barrier they perceived was that their products were unsuitable for on-line sales. The results show similar patterns to the 2004 and 2005 surveys. *See Figures 3.4 and 3.5*.

Figure 3.4 Barriers to e-commerce - Enterprises with internet sales



Source: CSO - e-Commerce and ICT Survey

Figure 3.5 Barriers to e-commerce - Enterprises without internet sales



Source: CSO - e-Commerce and ICT Survey

Internet security

The use of IT security measures by enterprises rose again in 2006 with an increasing use of systems such as secure servers, firewalls, offsite data backup, virus checking or protection software and authentication mechanisms. Virus checking or protection software was used by 91% of enterprises in 2006. The percentage of enterprises using encryption for confidentiality showed an increase from 11% in 2005 to 19% in 2006.

The main security problem encountered by enterprises were computer viruses resulting in either loss of data or working time. Over one in five enterprises reported such problems. Other less significant security problems included unauthorised access and blackmail or threats to the

enterprise's computer systems or data. The results show that 5% of enterprises in the *Computer and related activities* (NACE 72) sector reported problems relating to unauthorised access to their computer systems or data. *See Tables 3.4 and 3.5*.

ICT statistics from CSO's structural business inquiries

Some statistics on computer use have also been collected in the CSO's main annual surveys of industry and services. It is important to note the difference in coverage between the Structural Business Surveys and the ICT enterprise survey. Table 3.1 relates to total industry and services while the ICT enterprise survey (Tables 3.2 – 3.7) excludes the non-manufacturing element of industry, some services sectors, and very small enterprises.

The results for the period 2002-2004 show that industrial enterprises had adopted the internet earlier than service enterprises. In 2004, just over 82% of all industrial enterprises had e-mail, compared with just over 39% in the services sector. Similarly, over half of industrial businesses had a website, while just 17% of services enterprises had one. Enterprises with 10 or more employees had also adopted e-mail and website technologies sooner than smaller enterprises. *See Table 3.1.*

Appendix 3 contains a description of the NACE Rev. 1.1 sectors used in tables 3.2, 3.5, and 3.7.

Table 3.1 Use of ICT by enterprises, 2002 - 2004

	Persons engaged		Total enterprises	With e-mail	With website	With orders via e-commerce[1]	Total turnover	*of which:* % of turnover by e-commerce[2]
			Number	%	%	%	€ million	%
Industry								
2002	3-9		1,962	55.7	27.7	13.0	1,188	1.4
	10+		3,034	87.6	59.2	27.8	106,495	19.7
	Total		4,996	75.1	46.8	22.1	107,683	19.5
2003	3-9		1,987	62.9	31.9	23.9	1,223	6.9
	10+		3,007	89.1	61.0	34.2	108,583	21.0
	Total		4,994	78.7	49.4	30.1	109,806	20.9
2004	3-9		1,867	68.2	36.7	27.5	1,225	7.4
	10+		2,817	91.8	65.6	35.3	112,086	21.5
	Total		4,684	82.4	54.1	32.2	113,311	21.3
Services								
2002	1-9		67,025	29.3	10.1	4.0	23,467	0.4
	10+		9,287	65.1	39.5	15.4	91,076	7.1
	Total		76,313	33.7	13.7	5.4	114,544	5.7
2003	1-9		72,803	33.8	12.3	5.1	28,381	2.0
	10+		11,337	66.3	42.3	16.9	101,432	10.0
	Total		84,140	38.2	16.3	6.7	129,813	8.2
2004	1-9		73,945	33.7	13.1	6.0	40,253	2.1
	10+		12,254	67.2	42.7	18.4	115,936	10.3
	Total		86,199	38.5	17.3	7.8	156,189	8.2
Industry and Services								
2002	1-9	*	68,987	30.0	10.6	4.3	24,655	0.4
	10+		12,321	70.6	44.3	18.5	197,571	13.9
	Total		81,309	36.2	15.7	6.4	222,227	12.4
2003	1-9	*	74,790	34.6	12.8	5.6	29,604	2.2
	10+		14,344	71.1	46.2	20.5	210,015	15.7
	Total		89,134	40.5	18.2	8.0	239,205	14.0
2004	1-9*		75,812	34.5	13.7	6.5	41,478	2.3
	10+		15,071	71.8	47.0	21.6	228,022	15.8
	Total		90,883	40.8	19.2	9.1	269,500	13.7

[1] Industrial enterprises with less than 3 persons engaged not included

[2] E-commerce includes by e-mail, EDI or internet

Table 3.2 Background statistics on the enterprise ICT survey by sector - March 2006

	Manufacturing sectors					Construction sector	Selected services sectors								Total
	15-22	23-25	26-28	29-37	Total	45	50-52	55.1-55.2	60-63	64	70-71 73-74	72	92	Total	
Enterprises with 10 or more persons employed[1]															
Number of respondents to ICT survey	*372*	*158*	*204*	*326*	*1,060*	146	*828*	*192*	*116*	*27*	*395*	*70*	*80*	*1,708*	*2,914*
Number of enterprises in population[2]	1,088	353	551	767	2,759	736	4,425	679	776	106	1,838	427	473	8,724	12,219
Number of employees in population[2]	74,464	33,230	23,936	78,892	210,522	65,024	189,349	38,995	47,006	29,098	94,686	17,407	16,436	432,976	708,522
Total purchases (EUR m)[2]	30,431	17,556	2,589	23,050	73,626	3,945	57,635	1,060	6,498	4,322	4,013	4,569	774	78,870	156,441
Total turnover (EUR m)[2]	43,453	31,390	4,295	34,660	113,798	13,113	72,135	2,291	10,113	9,507	10,402	7,026	1,501	112,976	239,887

[1] The Construction sector covers only private firms with 20 or more persons engaged
[2] Figures subject to revision

Table 3.3 Background statistics on the enterprise ICT survey by size class - March 2006

	Size class (persons engaged)			
	10-49	50-249	250+	Total
Enterprises with 10 or more persons employed[1]				
Number of respondents to ICT survey	*1,758*	*926*	*230*	*2,914*
Number of enterprises in population[2]	9,601	2,201	417	12,219
Number of employees in population[2]	193,558	210,136	304,828	708,522
Total purchases (EUR m)[2]	29,190	42,637	84,614	156,441
Total turnover (EUR m)[2]	41,916	63,474	134,497	239,887

[1] The Construction sector covers only private firms with 20 or more persons engaged
[2] Figures subject to revision

Table 3.4 Main results of enterprise ICT survey, as percentage of all enterprises - March 2005 and 2006

	Manufacturing sectors		Construction sector		Selected services sectors		Total	
	2005	2006	2005	2006	2005	2006	2005	2006
Enterprises with 10 or more persons engaged[1]	2,800	2,759	682	736	8,729	8,724	12,211	12,219
%	100	100	100	100	100	100	100	100
General information about ICT systems								
Using a computer	99	99	98	95	96	96	97	97
Using e-mail	95	96	93	92	91	93	92	93
Using intranet	45	47	23	38	40	47	40	46
Using LAN	59	62	49	51	54	62	55	61
Using extranet	16	17	2	6	15	19	15	18
Using dedicated ICT systems for managing orders	45	49	17	22	41	46	40	45
Have a written ICT strategy	20	20	4	10	17	19	17	19
Use of the internet								
Using the internet	96	97	95	93	91	93	92	94
Having a website or homepage	67	66	40	47	59	64	60	64
Purposes of using the internet (as consumer)								
Market monitoring	37	46	25	28	36	44	35	44
Receiving digital products	30	35	22	23	28	30	29	31
Obtaining after sales services	18	32	5	19	17	31	16	31
Banking and financial services	78	84	78	82	68	80	71	81
Information search	88	92	87	84	77	86	80	87
Training and education	27	36	15	30	27	37	26	36
Interaction with public authorities via internet								
For obtaining information	68	78	69	75	62	74	64	75
For obtaining forms	69	80	67	77	63	76	64	77
For returning filled-in forms	44	58	40	54	41	56	42	56
For full electronic case handling	32	44	29	36	31	47	31	46
Submit proposal by electronic tender system	15	19	21	32	13	20	14	21
Purposes of using the internet (as provider)								
Marketing the enterprise's products	56	61	28	37	49	58	49	58
Facilitating access to catalogues and price lists	28	33	6	11	24	33	24	32
Customised page for repeat clients	7	10	3	5	8	12	7	11
Delivering digital products	6	6	-	1	9	10	8	9
Providing after sales support	12	16	1	4	11	17	11	16

See footnotes at end of table

Table 3.4 Main results of enterprise ICT survey, as percentage of all enterprises - March 2005 and 2006 - continued

	Manufacturing sectors		Construction sector		Selected services sectors		Total	
	2005	2006	2005	2006	2005	2006	2005	2006
Integration of ICT systems								
that link to								
Reordering replacement supplies	20	21	4	7	17	21	17	21
Invoicing and payment systems	33	37	12	16	25	28	26	30
Managing production, logistics or service operations	24	28	5	7	14	18	16	20
Your suppliers' business system	7	8	2	3	13	14	11	12
Your customers' business system	9	9	-	2	8	8	8	8
Security facilities used								
Virus checking or protection software	89	95	89	89	86	90	87	91
Firewalls	70	80	64	73	66	79	67	79
Secure servers	44	60	30	42	43	61	43	59
Offsite data backup	47	51	29	34	40	45	41	46
Electronic digital signature for customer authenication	10	11	13	11	9	13	10	12
Other authentication mechanism (e.g. PIN code)	24	23	29	21	21	24	22	24
Encryption for confidentiality	11	18	3	6	12	20	11	19
Security problems encountered								
Computer virus attack resulting in loss of data or working time	38	22	46	28	35	21	36	22
Unauthorised access to enterprise computer systems or data	2	2	11	7	3	3	3	3
Blackmail or threats to enterprise computer systems or data	1	0	2	1	2	0	2	0
Any of the above	40	23	50	30	36	22	38	23
None of the above	60	77	50	70	64	78	62	77

[1] The construction sector covers only private firms with 20 or more persons engaged

Table 3.5 Main results of enterprise ICT survey, as percentage of all enterprises, by sector - March 2006

	Manufacturing sectors					Construction sector	Selected services sectors								Total
	15-22	23-25	26-28	29-37	Total	45	50-52	55.1-55.2	60-63	64	70-71 73-74	72	92	Total	
Enterprises with 10 or more persons engaged[1]	1,088	353	551	767	2,759	736	4,425	679	776	106	1,838	427	473	8,724	12,219
%	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
General information about ICT systems															
Using a computer	98	99	98	99	99	95	97	93	91	100	97	100	98	96	97
Using e-mail	97	96	95	97	96	92	91	92	90	100	95	100	94	93	93
Using intranet	49	45	39	51	47	38	43	43	50	69	54	77	25	47	46
Using LAN	58	76	58	63	62	51	56	54	63	73	73	90	57	62	61
Using extranet	16	21	11	23	17	6	16	11	27	28	22	51	3	19	18
Using dedicated ICT systems for managing orders	51	55	31	54	49	22	58	27	44	57	31	47	20	46	45
Have a written ICT strategy	18	27	12	25	20	10	13	11	18	41	31	54	10	19	19
Use of the internet															
Using the internet	98	96	96	98	97	93	93	91	89	100	95	100	98	93	94
Having website or homepage	62	71	59	76	66	47	53	87	62	92	71	100	78	64	64
Purposes of using the internet (as consumer)															
Market monitoring	45	43	39	52	46	28	42	59	50	55	39	65	40	44	44
Receiving digital products	36	39	25	38	35	23	24	24	34	57	37	74	17	30	31
Obtaining after sales services	32	37	17	40	32	19	27	31	33	62	34	63	27	31	31
Banking and financial services	82	83	83	89	84	82	80	69	77	94	85	94	76	80	81
Information search	92	89	88	95	92	84	83	77	87	86	92	98	94	86	87
Training and education	38	44	23	40	36	30	31	36	37	59	46	70	31	37	36
Interaction with public authorities via internet															
For obtaining information	77	83	73	80	78	75	69	68	69	95	85	92	76	74	75
For obtaining forms	78	82	77	82	80	77	71	71	76	93	86	95	73	76	77
For returning filled-in forms	57	65	55	58	58	54	52	50	50	62	67	74	52	56	56
For full electronic case handling	42	51	43	45	44	36	43	41	40	62	58	59	46	47	46
Submit proposal by electronic tender system	18	16	20	22	19	32	15	14	22	44	31	42	6	20	21
Purposes of using the internet (as provider)															
Marketing the enterprise's products	57	60	56	70	61	37	47	82	56	86	63	99	74	58	58
Facilitating access to catalogues and price lists	28	30	30	43	33	11	32	57	27	53	22	39	46	33	32
Customised page for repeat clients	9	9	5	14	10	5	9	16	20	31	13	24	9	12	11
Delivering digital products	8	2	4	9	6	1	4	15	23	41	13	29	8	10	9
Providing after sales support	14	17	9	24	16	4	14	21	26	43	11	49	10	17	16

See footnotes at end of table.

Table 3.5 Main results of enterprise ICT survey, as percentage of all enterprises, by sector - March 2006 — Continued

	Manufacturing sectors					Construction sector	Selected services sectors								Total
	15-22	23-25	26-28	29-37	Total	45	50-52	55.1-55.2	60-63	64	70-71 73-74	72	92	Total	
Integration of ICT systems															
that link to															
Re-ordering replacement	18	29	12	29	21	7	33	7	12	25	8	12	3	21	20
Invoicing and payment systems	40	44	24	40	37	16	34	19	31	43	19	32	11	28	30
Managing production, logistics or service operations (%)	26	36	16	35	28	7	21	11	25	20	13	20	7	18	20
Your suppliers' business system (%)	8	10	4	10	8	3	20	4	18	17	5	12	2	14	12
Your customers' business system (%)	10	13	4	9	9	2	8	4	18	22	6	12	0	8	8
Security facilities used															
Virus checking or protection software	95	94	93	97	95	89	88	88	85	100	93	100	97	90	91
Firewalls	81	80	75	83	80	73	74	75	82	100	85	100	79	79	79
Secure servers	60	69	52	61	60	42	54	57	62	80	70	96	51	61	59
Offsite data backup	58	56	36	51	51	34	40	27	41	74	58	79	37	45	46
Electronic digital signature for customer authentication	11	12	10	12	11	11	11	8	12	33	14	30	14	13	12
Other authentication mechanism (e.g. PIN code)	23	22	20	26	23	21	23	20	26	38	27	38	19	24	24
Encryption for confidentiality	15	23	13	22	18	6	17	13	26	53	22	56	8	20	19
Security problems encountered															
Computer virus attack resulting in loss of data or working time	22	20	19	25	22	28	19	27	22	20	20	28	26	21	22
Unauthorised access to enterprise computer systems or data	1	2	2	3	2	7	2	3	2	3	3	5	3	3	3
Blackmail or threats to enterprise computer systems or data	–	2	1	0	0	1	0	–	1	6	0	2	–	0	0
Any of the above	22	20	20	27	23	30	19	28	24	20	22	31	27	22	23
None of the above	78	80	80	73	77	70	81	72	76	80	78	69	73	78	77

[1] Results for the construction sector cover only private firms with 20 or more persons engaged

Table 3.6 Purchases and sales via e-commerce - March 2005 and 2006

	Manufacturing sectors		Construction sector		Selected services sectors		Total	
	2005	2006	2005	2006	2005	2006	2005	2006
Use of e-commerce for purchases								
by internet (as % of total enterprises)	56	60	52	42	52	56	53	56
by EDI (%)	9	7	3	2	12	11	11	9
by internet or EDI (%)	59	61	53	42	57	60	57	59
Total value of purchases (EUR m)	**70,484**	**73,626**	**3,125**	**3,945**	**65,205**	**78,870**	**138,815**	**156,441**
Percentage of purchases by e-commerce								
Internet (as % of total purchases)	2	4	2	1	3	5	3	4
EDI (%)	7	6	0	0	7	5	7	5
Internet or EDI (%)	10	10	2	1	11	10	10	10
Use of e-commerce for sales								
by internet (as % of total enterprises)	26	25	6	6	23	24	23	23
by EDI (%)	15	13	5	0	11	7	11	8
by internet or EDI (%)	35	33	10	6	28	29	29	28
Total value of turnover (EUR m)	**108,500**	**113,798**	**10,250**	**13,113**	**104,482**	**112,976**	**223,232**	**239,887**
Percentage of sales by e-commerce								
Internet (as % of total turnover)	10	9	0	0	10	9	10	9
EDI (%)	18	13	0	0	5	4	11	8
Internet or EDI (%)	27	22	0	0	15	13	20	17

Table 3.7 Purchases and sales via e-commerce - March 2006

	Manufacturing sectors					Construction sector	Selected services sectors								Total
	15-22	23-25	26-28	29-37	Total	45	50-52	55.1-55.2	60-63	64	70-71 73-74	72	92	Total	
Use of e-commerce for purchases															
by internet (as % of total enterprises)	57	64	55	66	60	42	50	48	58	83	65	88	49	56	56
by EDI (%)	6	6	4	10	7	2	17	4	5	14	6	6	2	11	9
by internet or EDI (%)	58	66	56	67	61	42	57	49	59	89	66	88	49	60	59
Total value of purchases (EUR m)	**30,431**	**17,556**	**2,589**	**23,050**	**73,626**	**3,945**	**57,635**	**1,060**	**6,498**	**4,322**	**4,013**	**4,569**	**774**	**78,870**	**156,441**
Percentage of purchases by e-commerce															
Internet (as % of total purchases)	5	4	2	2	4	1	5	3	11	5	8	4	2	5	4
EDI (%)	2	7	1	12	6	0	6	0	4	0	1	2	0	5	5
Internet or EDI (%)	7	10	3	14	10	1	11	3	16	5	10	6	2	10	10
Use of e-commerce for sales															
by internet (as % of total enterprises)	32	14	21	24	25	6	21	72	30	29	14	19	21	24	23
by EDI (%)	19	9	7	10	13	0	10	5	9	8	4	1	1	7	8
by internet or EDI (%)	43	20	25	30	33	6	28	72	36	32	16	19	21	29	28
Total value of turnover (EUR m)	**43,453**	**31,390**	**4,295**	**34,660**	**113,798**	**13,113**	**72,135**	**2,291**	**10,113**	**9,507**	**10,402**	**7,026**	**1,501**	**112,976**	**239,887**
Percentage of sales by e-commerce															
Internet (as % of total turnover)	12	0	2	14	9	0	8	15	31	1	4	4	5	9	9
EDI (%)	16	11	3	13	13	0	5	0	5	0	1	2	0	4	8
Internet or EDI (%)	28	11	4	27	22	0	14	16	36	1	4	6	5	13	17

Chapter Four

Use of ICT by Households

Introduction

In February 2006, an estimated 867,500 households (or 58.5% of all households) had a home computer. This was an increase of 69,800 households since June 2005, when 797,700 households had a home computer. Internet access also increased over this period, with 722,200 households (or 48.7%) having a computer connected to the internet in February 2006, compared with 655,000 in June 2005. *See Table 4A and Figure 4.1.*

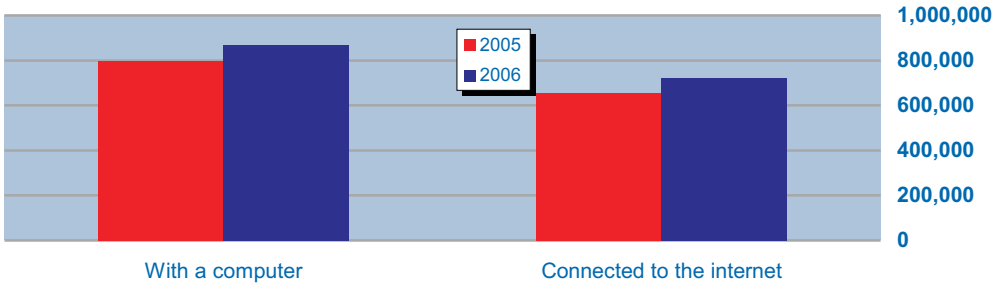
Minor revisions to the data published in previous years have been made for the 16-24 year age category. The effect of this revision on the headline figures for 2005 has been to reduce the percentage of individuals that have used a computer from 54% to 53.7% and to increase the percentage that used the internet from 44.5% to 44.7%. Data published at the level of the household are unaffected. A fully revised time series is available on the CSO website.

Table 4A Main trends in household ICT use – 2000-2006

	2000	2003	2004	2005	2006
All households ('000)	**1,299.4**	**1,381.9**	**1,405.9**	**1,453.9**	**1,483.8**
Households with home computers ('000)	422.0	582.8	649.4	797.7	867.5
% of all households	*32.5*	*42.2*	*46.2*	*54.9*	*58.5*
Households with computers connected to internet ('000)	266.0	463.2	537.0	655.0	722.2
% of all households	*20.5*	*33.5*	*38.2*	*45.1*	*48.7*
% of all households with home computers	*63.0*	*79.5*	*82.7*	*82.1*	*83.3*

Source: CSO - Quarterly National Household Survey : Q4 2000, June 2003/2004/2005, February 2006.

Figure 4.1 Number of households with computers and connected to the internet



Source: CSO - Quarterly National Household Survey

Regional analysis

The percentage of households with a home computer was higher in the Southern and Eastern region, at 61.4%, than in the Border, Midland and Western region, at 50.5%. Computer ownership in the Southern and Eastern region increased from 608,800 in June 2005 to 666,600 in February 2006. In the Border, Midland and Western region, the number of households with a home computer increased form 188,900 to 200,800 over the same period. *See Table 4.1.*

Internet access was also more prevalent in the Southern and Eastern region, at 51.7%, than in the Border, Midland and Western region, where 40.5% of households had access to the Internet via a home computer. *See Table 4.2.*

Reasons for not using the Internet

The main reasons given by households without internet access were that they did not need the internet (33.1%), did not want the internet (21.5%) and the equipment cost was too high (16.7%). In 2005, just 12.2% of households indicated that high equipment costs were a reason for not having access to the internet at home. The number of households that do not have access to the internet has fallen over the year from 768,900 to 743,500. *See Table 4.4.*

Internet use

The results show that 1,721,000 persons aged 16-74 have ever used a computer while 1,484,600 have used the internet. In other words, 55.8% of the Irish population aged 16-74 have used a computer and nearly half (48.1%) have used the internet. Since June 2005, in percentage terms, computer and internet use increased across nearly all age groups. As in previous surveys, there is a correlation between age and the use of IT. Nearly two-thirds of persons aged 16-24 have ever used a computer, compared to 18% of those aged 65-74. Similarly, approximately 58% of those aged 16-24 have used the internet compared to just 11.6% for those aged 65-74. Persons in the 25-34 age group display the highest levels of computer and internet use. *See Table 4.6.*

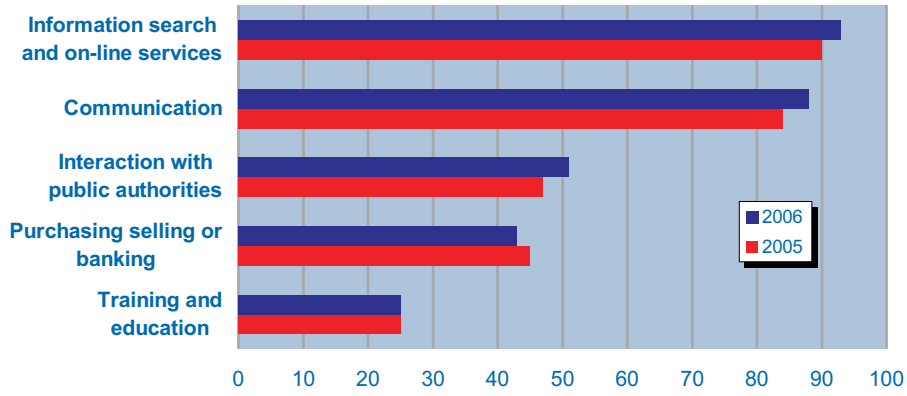
Computer and internet usage were more prevalent in the Southern and Eastern region (56.7% and 50.1% respectively) than in the Border, Midlands and West (53.1% and 42.4% respectively). Females continue to have higher rates of computer and internet usage than their male counterparts. Consistent with previous years, levels of both computer and internet usage were highest amongst students followed by those at work. *See Table 4.6.*

Nearly 1,500,000 persons had used a computer in the previous 3 months. Of these 63% (or 936,000) use a computer every day or almost every day and a further 392,000 had used a computer at least once a week. During the same period almost 1.3 million persons have used the internet. Of these, almost 639,000 used the internet on a daily basis and a further 464,000 persons used it at least once a week. The most common places to use a computer and the internet are at home, at work, followed by place of education. *See Tables 4.7 and 4.8.*

Internet activity

The most popular activity on the internet related to *Information search and online services* (1,205,700), e.g. finding information about goods and services, travel and accommodation. Next most popular is *Communication* (1,142,000), e.g. sending and receiving emails. *See Figure 4.2 and Table 4.9.*

Figure 4.2 Use of the internet by persons with access to an internet connection in the previous 3 months

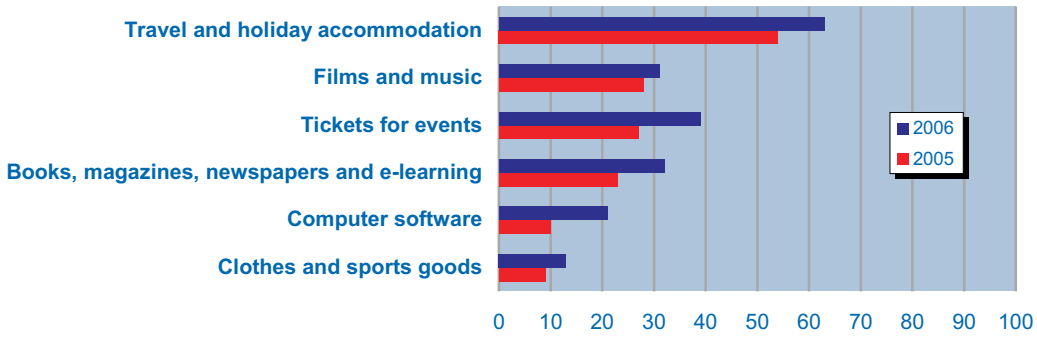


Source: CSO - Quarterly National Household Survey

Online purchases

In the 12 months prior to February 2006, 709,200 persons had ordered goods or services from the internet for private use. This compares with a figure of 580,700 in 2005. The most popular type of goods and services ordered on the internet were *Travel and holiday accommodation* (450,100), *Tickets for events* (273,600), and *Books/magazines/newspapers/e-learning material* (223,800). The numbers of persons ordering tickets on-line increased from 157,000 in 2005 to 274,000 in 2006. Nearly 92% of those who had ordered on-line in the last 12 months had encountered no problems. *See Figure 4.3 and Table 4.10.*

Figure 4.3 Persons ordering goods and services via the internet



Source: CSO - Quarterly National Household Survey

The main reasons given by persons who do not make on-line purchases were that they had *no need* (372,900) and that they *prefer to shop in person* (239,700). *See Table 4.11.*

Table 4.1 Households with a home computer

	All households					Number of households with a computer permanently in the dwelling					*Percentage of households with a computer permanently in the dwelling*				
	2000	2003	2004	2005	2006	2000	2003	2004	2005	2006	*2000*	*2003*	*2004*	2005	*2006*
	'000	'000	'000	'000	'000	'000	'000	'000	'000	'000	*%*	*%*	*%*	*%*	*%*
Regional Authority															
Border, Midland and Western	344.8	368.8	376.8	389.9	397.7	92.4	125.4	141.3	188.9	200.8	*26.8*	*34.0*	*37.5*	*48.4*	*50.5*
Southern and Eastern	954.6	1,013.2	1,029.1	1,064.0	1,086.2	329.6	457.5	508.0	608.8	666.6	*34.5*	*45.2*	*49.4*	*57.2*	*61.4*
Sex of reference person															
Male	586.3	581.3	610.3	620.0	651.9	197.5	250.4	285.0	336.3	368.3	*33.7*	*43.1*	*46.7*	*54.2*	*56.5*
Female	713.1	800.7	795.6	833.9	832.0	224.6	332.4	364.3	461.3	499.2	*31.5*	*41.5*	*45.8*	*55.3*	*60.0*
Age group of reference person															
16-24 years	64.5	60.3	74.5	59.0	59.1	17.3	23.7	26.1	28.0	30.2	*26.8*	*39.3*	*35.0*	*47.5*	*51.1*
25-34 years	234.2	236.5	233.7	228.2	236.9	77.6	110.7	105.7	121.6	148.0	*33.1*	*46.8*	*45.2*	*53.3*	*62.5*
35-44 years	284.8	301.5	338.4	333.7	365.9	134.0	180.7	205.8	221.4	261.7	*47.1*	*59.9*	*60.8*	*66.3*	*71.5*
45-54 years	245.6	262.3	307.4	334.0	340.8	113.8	143.6	178.9	223.7	231.7	*46.3*	*54.7*	*58.2*	*67.0*	*68.0*
55-64 years	186.3	220.0	257.7	288.4	288.0	55.3	84.1	95.8	146.9	143.0	*29.7*	*38.2*	*37.2*	*50.9*	*49.7*
65-74 years	283.9	301.3	194.2	210.6	193.2	24.0	40.0	37.1	56.1	52.9	*8.5*	*13.3*	*19.1*	*26.6*	*27.4*
ILO Economic Status of reference person															
In employment	691.5	721.1	789.5	853.7	889.5	295.7	394.7	443.9	550.1	606.6	*42.8*	*54.7*	*56.2*	*64.4*	*68.2*
Unemployed	26.3	33.2	54.7	34.1	37.5	6.2	10.6	19.8	14.8	16.9	*23.4*	*31.9*	*36.2*	*43.4*	*45.1*
Not economically active	581.6	627.6	561.7	566.1	556.8	120.1	177.5	185.7	232.8	243.9	*20.7*	*28.3*	*33.1*	*41.1*	*43.8*
No. of persons employed in household															
None	352.0	388.8	339.6	324.0	314.9	27.5	50.5	62.2	77.6	75.0	*7.8*	*13.0*	*18.3*	*24.0*	*23.8*
1	419.8	419.1	447.0	476.2	490.0	137.9	179.0	195.2	244.5	277.0	*32.8*	*42.7*	*43.7*	*51.3*	*56.5*
2	386.8	419.0	461.3	480.9	516.6	185.1	260.0	293.4	344.1	388.2	*47.9*	*62.1*	*63.6*	*71.6*	*75.1*
3 or more	140.8	155.0	157.9	172.8	162.4	71.5	93.3	98.5	131.5	127.2	*50.8*	*60.2*	*62.4*	*76.1*	*78.3*
All households	**1,299.4**	**1,381.9**	**1,405.9**	**1,453.9**	**1,483.8**	**422.0**	**582.8**	**649.4**	**797.7**	**867.5**	***32.5***	***42.2***	***46.2***	***54.9***	***58.5***

Source: CSO - Quarterly National Household Survey : Q4 2000, June 2003/2004/2005, February 2006.

Note: Data are subject to sampling and other survey errors, which are relatively greater in respect of smaller values.

Table 4.2 Households with an internet connection via personal computer

	All households					Number of households with an internet connection via PC					*Percentage of households with an internet connection via PC*				
	2000	2003	2004	2005	2006	2000	2003	2004	2005	2006	*2000*	*2003*	*2004*	*2005*	*2006*
	'000	'000	'000	'000	'000	'000	'000	'000	'000	'000	*%*	*%*	*%*	*%*	*%*
Regional Authority															
Border, Midland and Western	344.8	368.8	376.8	389.9	397.7	54.4	96.7	114.0	151.3	161.1	*15.8*	*26.2*	*30.3*	*38.8*	*40.5*
Southern and Eastern	954.6	1,013.2	1,029.1	1,064.0	1,086.2	211.6	366.6	423.1	503.7	561.1	*22.2*	*36.2*	*41.1*	*47.3*	*51.7*
Sex of reference person															
Male	586.3	581.3	610.3	620.0	651.9	128.0	202.3	239.6	283.1	306.5	*21.8*	*34.8*	*39.3*	*45.7*	*47.0*
Female	713.1	800.7	795.6	833.9	832.0	137.9	260.9	297.5	371.8	415.7	*19.3*	*32.6*	*37.4*	*44.6*	*50.0*
Age group of reference person															
16-24 years	64.5	60.3	74.5	59.0	59.1	9.2	17.6	19.0	21.5	21.4	*14.3*	*29.2*	*25.5*	*36.4*	*36.2*
25-34 years	234.2	236.5	233.7	228.2	236.9	51.2	86.6	86.3	100.6	119.9	*21.9*	*36.6*	*36.9*	*44.1*	*50.6*
35-44 years	284.8	301.5	338.4	333.7	365.9	84.7	141.3	167.1	180.2	223.6	*29.7*	*46.9*	*49.4*	*54.0*	*61.1*
45-54 years	245.6	262.3	307.4	334.0	340.8	72.9	117.9	150.5	185.4	197.3	*29.7*	*44.9*	*49.0*	*55.5*	*57.9*
55-64 years	186.3	220.0	257.7	288.4	288.0	34.0	69.5	83.2	123.0	115.9	*18.3*	*31.6*	*32.3*	*42.6*	*40.2*
65-74 years	283.9	301.3	194.2	210.6	193.2	14.1	30.2	30.9	44.2	44.0	*5.0*	*10.0*	*15.9*	*21.0*	*22.8*
ILO Economic Status of reference person															
In employment	691.5	721.1	789.5	853.7	889.5	191.8	323.0	371.6	456.9	512.1	*27.7*	*44.8*	*47.1*	*53.5*	*57.6*
Unemployed	26.3	33.2	54.7	34.1	37.5	3.3	9.1	16.4	10.3	11.5	*12.5*	*27.4*	*30.0*	*30.2*	*30.7*
Not economically active	581.6	627.6	561.7	566.1	556.8	70.8	131.1	149.0	187.7	198.5	*12.2*	*20.9*	*26.5*	*33.2*	*35.7*
No. of persons employed in household															
None	352.0	388.8	339.6	324.0	314.9	14.5	37.8	46.1	57.1	54.6	*4.1*	*9.7*	*13.6*	*17.6*	*17.3*
1	419.8	419.1	447.0	476.2	490.0	85.3	137.8	158.1	195.2	224.0	*20.3*	*32.9*	*35.4*	*41.0*	*45.7*
2	386.8	419.0	461.3	480.9	516.6	120.0	211.6	249.6	297.2	338.4	*31.0*	*50.5*	*54.1*	*61.8*	*65.5*
3 or more	140.8	155.0	157.9	172.8	162.4	46.1	75.9	83.2	105.5	105.3	*32.7*	*49.0*	*52.7*	*61.1*	*64.8*
All households	**1,299.4**	**1,381.9**	**1,405.9**	**1,453.9**	**1,483.8**	**266.0**	**463.2**	**537.0**	**655.0**	**722.2**	***20.5***	***33.5***	***38.2***	***45.1***	***48.7***

Source: CSO - Quarterly National Household Survey : Q4 2000, June 2003/2004/2005, February 2006.

Note: Data are subject to sampling and other survey errors, which are relatively greater in respect of smaller values.

Table 4.3 Households classified by means of access to the internet[1]

	2004		2005		2006	
	'000	%	'000	%	'000	%
All households	**1,405.9**	***100.0***	**1,453.9**	***100.0***	**1,483.8**	**100.0**
with a computer connected to the internet	537.0	*38.2*	655.0	*45.1*	722.2	*48.7*
Other types of internet access						
- Handheld computer[2]	13.5	*1.0*	6.5	*0.4*	-	-
- Television	4.5	*0.3*	5.1	*0.4*	4.7	*0.3*
- Mobile phone[2]	33.7	*2.4*	67.8	*4.7*	-	-
- Games console	4.1	*0.3*	*	*	9.5	*0.6*
- Other means	2.9	*0.2*	*	*	26.8	*1.8*
All households with any internet access	**557.4**	***39.7***	**685.0**	***47.1***	**740.4**	***49.9***

[1] Households could have multiple types of internet access hence the sum of the categories does not equal the total.

[2] Handheld computer and mobile phone were not given as an option as a type of internet connection in February 2006.

* Sample occurrence too small for estimation.

Source: CSO - Quarterly National Household Survey : June 2004/2005, February 2006.

Note: Data are subject to sampling and other survey errors, which are relatively greater in respect of smaller values.

Table 4.4 Households classified by reasons for not having access to the internet at home

	2004		2005		2006	
	'000	%	'000	%	'000	%
Reason[1]						
Have access to internet elsewhere	121.7	*14.3*	110.5	*14.4*	114.9	*15.5*
Don't want internet (content harmful, not useful etc.)	326.0	*38.4*	153.6	*20.0*	159.5	*21.5*
Do not need internet	-	-	218.9	*28.5*	246.1	*33.1*
Equipment costs too high	116.3	*13.7*	93.5	*12.2*	123.9	*16.7*
Access costs too high	73.8	*8.7*	71.1	*9.2*	48.7	*6.6*
Lack of skills	161.6	*19.0*	155.0	*20.2*	108.3	*14.6*
Physical disability	4.0	*0.5*	*	*	3.2	*0.4*
Privacy or security concerns	15.0	*1.8*	6.7	*0.9*	5.2	*0.7*
Other	173.2	*20.4*	139.1	*18.1*	195.7	*26.3*
All households without internet access	**848.4**		**768.9**		**743.5**	

[1] Respondents could give more than one response to this question hence the sum of the categories does not equal the total.

* Sample occurrence too small for estimation.

- Data not available

Source: CSO - Quarterly National Household Survey : June 2004/2005, February 2006.

Note: Data are subject to sampling and other survey errors, which are relatively greater in respect of smaller values.

Table 4.5 Number of households with ICT related appliances[1]

	2004		2005		2006	
	'000	%	'000	%	'000	%
Appliance						
TV	1,339.6	*95.3*	1,426.9	*98.1*	1,458.3	*98.3*
of which has:						
Satellite dish	320.3	*22.8*	357.8	*24.6*	410.4	*27.7*
Cable TV	586.2	*41.7*	586.2	*40.3*	524.8	*35.4*
Digital TV	-	-	236.6	*16.3*	219.9	*14.8*
Mobile phone	1,109.3	*78.9*	1,286.9	*88.5*	1,334.2	*89.9*
of which internet enabled mobile phone	172.5	*12.3*	310.5	*21.4*	377.1	*25.4*
Fixed telephone line	-	-	-	-	1,236.3	*83.3*
Games console	388.6	*27.6*	512.4	*35.2*	492.1	*33.2*
Personal computer	649.4	*46.2*	797.7	*54.9*	867.5	*58.5*
Handheld computer	33.9	*2.4*	20.4	*1.4*	24.9	*1.7*
None of the above	6.2	*0.4*	3.0	*0.2*	2.9	*0.2*
All households	**1,405.9**		**1,453.9**		**1,483.8**	

[1] Households could have more than one appliance hence the sum of the categories does not equal the total.

- Data not available

Source: CSO - Quarterly National Household Survey : June 2004/2005, February 2006.

Note: Data are subject to sampling and other survey errors, which are relatively greater in respect of smaller values.

Table 4.6 Computer and internet usage for persons aged 16-74[1]

	All persons		People who have used a computer				*People who have used the internet*				Not stated			
	2005	2006	2005		2006		2005		*2006*		2005		2006	
	'000	'000	'000	%	'000	%	'000	%	'000	%	'000	%	'000	%
Regional Authority														
Border, Midland and Western	789.7	810.6	398.0	*50.4*	430.4	*53.1*	318.7	*40.4*	344.0	*42.4*	102.8	*13.0*	105.4	*13.0*
Southern and Eastern	2,225.9	2,274.7	1,222.4	*54.9*	1290.6	*56.7*	1,028.1	*46.2*	1140.6	*50.1*	428.8	*19.3*	381.3	*16.8*
Sex														
Male	1,513.2	1,548.4	766.5	*50.7*	828.3	*53.5*	648.6	*42.9*	731.1	*47.2*	310.4	*20.5*	270.3	*17.5*
Female	1,502.4	1,536.9	853.9	*56.8*	892.7	*58.1*	698.1	*46.5*	753.5	*49.0*	221.2	*14.7*	216.4	*14.1*
Age														
16-24 years	577.9	580.5	374.8	*64.9*	382.5	*65.9*	327.4	*56.7*	336.9	*58.0*	147.1	*25.5*	146.8	*25.3*
25-34 years	681.6	713.6	447.8	*65.7*	493.9	*69.2*	392.7	*57.6*	442.4	*62.0*	118.8	*17.4*	111.5	*15.6*
35-44 years	597.0	608.3	372.3	*62.4*	382.6	*62.9*	306.1	*51.3*	337.0	*55.4*	94.0	*15.7*	86.3	*14.2*
45-54 years	506.3	515.5	242.3	*47.9*	272.1	*52.8*	188.1	*37.2*	228.8	*44.4*	76.8	*15.2*	67.3	*13.1*
55-64 years	394.3	405.7	147.5	*37.4*	142.8	*35.2*	108.8	*27.6*	109.4	*27.0*	60.5	*15.3*	43.4	*10.7*
65-74 years	258.3	261.6	35.6	*13.8*	47.1	*18.0*	23.7	*9.2*	30.3	*11.6*	34.3	*13.3*	31.4	*12.0*
ILO Economic Status														
In employment	1,851.4	1,916.2	1,144.7	*61.8*	1208.6	*63.1*	971.8	*52.5*	1067.9	*55.7*	334.6	*18.1*	316.6	*16.5*
Unemployed	89.4	111.7	38.5	*43.1*	60.6	*54.3*	26.3	*29.4*	51.2	*45.8*	26.6	*29.8*	22.8	*20.4*
Not economically active	1,074.7	1,057.4	437.2	*40.7*	451.8	*42.7*	348.7	*32.4*	365.5	*34.6*	170.4	*15.9*	147.3	*13.9*
Principal Economic Status														
At work	1,794.7	1,857.6	1,108.1	*61.7*	1171.9	*63.1*	938.0	*52.3*	1030.9	*55.5*	317.2	*17.7*	299.5	*16.1*
Unemployed	119.8	129.0	45.9	*38.3*	60.7	*47.1*	30.3	*25.3*	49.1	*38.1*	29.7	*24.8*	26.9	*20.9*
Student	273.1	272.5	192.3	*70.4*	195.9	*71.9*	182.6	*66.9*	188.3	*69.1*	70.7	*25.9*	71.7	*26.3*
Home duties	518.1	510.0	188.1	*36.3*	195.1	*38.3*	138.8	*26.8*	148.0	*29.0*	58.5	*11.3*	50.7	*9.9*
Retired	200.7	195.7	53.0	*26.4*	61.1	*31.2*	38.3	*19.1*	42.0	*21.5*	30.1	*15.0*	23.7	*12.1*
Other	109.2	120.4	32.9	*30.1*	36.2	*30.1*	18.8	*17.2*	26.3	*21.8*	25.3	*23.2*	14.3	*11.9*
All persons aged 16-74	**3,015.6**	**3085.3**	**1,620.4**	***53.7***	**1721.0**	***55.8***	**1,346.8**	***44.7***	**1484.6**	***48.1***	**531.6**	***17.6***	**486.7**	***15.8***

[1] This table is generated from a sub-sample of the QNHS and hence the results differ from the main QNHS results.

Source: CSO - Quarterly National Household Survey : June 2004/2005, February 2006.

Note: Data are subject to sampling and other survey errors, which are relatively greater in respect of smaller values.

Table 4.7 Use of computers classified by training activities, frequency and location of use

'000

	2004	2005	2006
Computer-related training course			
In the last 12 months	251.1	304.1	381.8
More that one year ago	556.3	810.4	825.7
Never	643.5	505.8	513.5
All persons who have ever used a computer	**1,450.9**	**1,620.4**	**1721.0**
Frequency of use in the previous 3 months			
Every day or almost every day	714.4	806.3	935.6
At least once a week (but not every day)	351.9	363.9	391.7
At least once a month (but not every week)	98.9	107.3	103.1
Less than once a month	40.3	39.9	55.0
Location of use in the previous 3 months[1]			
Home	813.6	921.1	1072.1
Place of work (other than home)	624.6	702.5	774.2
Place of education	181.7	124.9	202.3
Another person's home	-	52.2	60.6
Other places	58.6	81.9	75.7
All persons who used a computer in the previous 3 months	**1,205.5**	**1,317.5**	**1485.4**

[1] Respondents could give more than one response to this question hence the sum of the categories does not equal the total.

- Data not available

Source: CSO - Quarterly National Household Survey : June 2004/2005, February 2006.

Note: Data are subject to sampling and other survey errors, which are relatively greater in respect of smaller values.

Table 4.8 Use of internet in the previous three months, classified by frequency, location and duration of use

'000

	2004	2005	2006
Frequency of use			
At least once a day	368.8	521.3	638.5
At least once a week (but not every day)	431.5	406.8	463.7
At least once a month (but not every week)	132.6	139.6	141.7
Less than once a month	47.2	52.5	49.1
Location of use[1]			
Home	659.0	772.2	918.7
Place of work (other than home)	437.6	523.0	589.1
Place of education	129.6	107.6	171.1
Neighbour, friend or relative's house	34.3	52.4	54.8
Other	9.9	86.5	85.7
All persons who used the internet in previous 3 months	**980.1**	**1,120.2**	**1292.9**

[1] Respondents could give more than one response to this question hence the sum of the categories does not equal the total.

Source: CSO - Quarterly National Household Survey : June 2004/2005, February 2006.

Note: Data are subject to sampling and other survey errors, which are relatively greater in respect of smaller values.

Table 4.9 Activities[1] on the internet in the previous 3 months

000

	2004	2005	2006
Communication	**815.3**	**944.5**	**1,142.0**
Sending and receiving e-mails	804.5	934.6	1,132.3
Telephoning/video conferencing	57.9	87.6	145.1
Other (use of chat sites etc.)	72.9	83.4	155.4
Information search and on-line services	**821.9**	**1,010.5**	**1,205.7**
Finding information about goods and services	646.5	877.2	1,071.3
Travel and accommodation	531.7	733.9	938.2
Web radio/web television	73.8	118.0	222.2
Playing/downloading games, images and or music	136.1	181.7	272.5
Downloading software	-	138.8	231.0
Reading /downloading newspapers or magazines	156.7	123.8	192.4
Looking for a job/sending job applications	96.2	71.0	147.5
Seeking health related information	-	-	200.6
Selling or banking	**-**	**396.6**	**559.2**
Internet banking	-	387.3	530.2
Selling goods or services	-	22.7	103.1
Interaction with public authorities	**417.8**	**535.4**	**658.6**
Obtaining information from web sites	336.7	439.0	545.6
Downloading official forms	257.1	357.2	487.0
Sending completed forms	188.1	280.0	366.3
Training and education	**276.2**	**266.1**	**325.2**
Formalised educational activities	192.0	180.2	225.5
Post educational courses	64.7	91.1	99.4
Other employment-related educational courses	106.2	95.3	137.1
All persons who used the internet in previous 3 months[1]	**980.1**	**1,120.2**	**1,292.9**

[1] Respondents could give more than one response to this question hence the sum of the categories does not equal the total.

- Data not available

Source: CSO - Quarterly National Household Survey : June 2004/2005, February 2006.

Note: Data are subject to sampling and other survey errors, which are relatively greater in respect of smaller values.

Table 4.10 Purchases[1] on the internet

'000

	2004	2005	2006
Types of goods and services ordered in last 12 months			
Food/groceries	17.1	35.5	50.8
Household goods	-	40.8	57.5
Films/music	88.5	158.1	221.0
Books/magazines/newspapers/e-learning material	95.2	135.2	223.8
Clothes/sports goods	21.6	52.5	92.3
Computer software	17.9	60.6	148.2
Computer hardware	18.6	26.5	66.2
Electronic equipment	18.4	40.5	79.4
Share purchases/financial services/insurance	5.9	14.6	35.1
Travel and holiday accommodation	209.4	317.6	450.1
Tickets for events	63.7	157.0	273.6
Lotteries/betting	2.9	9.1	15.1
Other	39.2	28.3	34.6
Problems encountered[2]			
Uncertainty concerning guarantees	13.2	13.0	7.7
Delivery slower than indicated	16.5	25.6	21.2
Final cost higher than indicated (incl. Higher delivery, credit card fees, etc)	-	24.2	12.1
Wrong or damaged goods delivered	-	19.4	12.0
Lack of security of payments	5.3	6.6	6.0
Complaints and redress difficult/Unsatisfactory response after complaining	-	14.4	12.1
Other	38.6	42.7	14.1
None	382.5	459.8	651.1
All persons who have ever purchased on the internet in the last 12 months	**485.5**	**580.7**	**709.2**

[1] Purchases includes both purchasing and ordering of goods and services.

[2] Respondents could give more than one response to this question hence the sum of the categories does not equal the total.

- Data not available

Source: CSO - Quarterly National Household Survey : June 2004/2005, February 2006.

Note: Data are subject to sampling and other survey errors, which are relatively greater in respect of smaller values.

Table 4.11 Reasons for not purchasing[1] via the internet

'000

	2004	2005	2006
Reason[2]			
Have no need	385.7	340.1	372.9
Prefer to shop in person	192.6	233.6	239.7
Security and privacy concerns	-	*56.4*	61.8
Don't have a payment card	-	34.0	49.6
Lack of skills	-	24.1	41.7
Too long delivery times	-	3.6	6.1
Trust concerns	6.1	11.3	19.5
Speed of internet connection is too slow	-	*	*
Other (including no credit card)	75.3	46.7	26.5
All persons who have never purchased via the internet	**679.5**	**677.3**	**696.7**

[1] Purchases includes both purchasing and ordering of goods and services.

[2] Respondents could give more than one response to this question hence the sum of the categories does not equal the total.

- Data not available

* Sample occurrence too small for estimation.

Source: CSO - Quarterly National Household Survey : June 2004/2005, February 2006.

Note: Data are subject to sampling and other survey errors, which are relatively greater in respect of smaller values.

Chapter Five

Connecting to the Internet

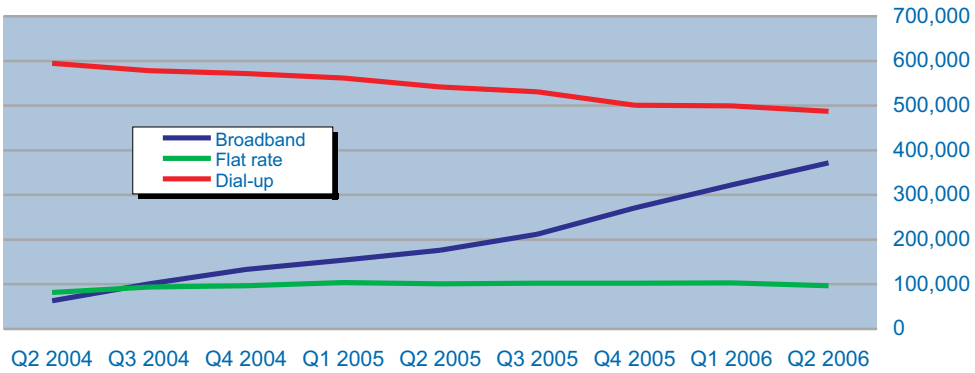
Introduction

This chapter presents information on the methods used to connect to the internet. The aggregate data on narrowband and broadband connections at State level has been provided by the Commission for Communications Regulation (ComReg). The CSO ICT surveys are used to provide additional data on both enterprises and households; and certain characteristics of broadband users are compared with those using the slower dial-up modem/ISDN connection types.

Aggregate narrowband and broadband connections

In the second quarter of 2005 broadband was used by just under 22% of subscribers to the internet. There has been a rapid growth in uptake since then, with broadband subscribers accounting for 39% of total subscribers in the second quarter of 2006. Traditional metered dial-up subscriptions decreased from two thirds of all internet subscribers in 2005 to just half (487,000) of subscribers in 2006. The share of narrowband flat rate subscriptions decreased slightly for the same period from just over 12% to 10%. *See Figure 5.1 and Tables 5.1 and 5.2*.

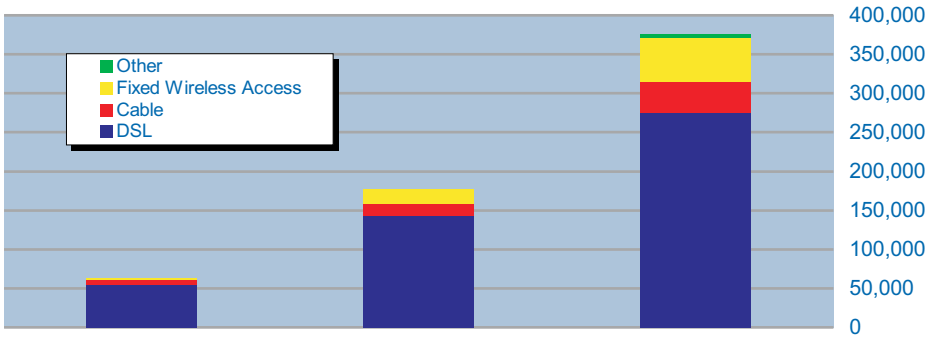
Figure 5.1 Number of internet subscriptions by type



Source: ComReg

Almost three out of every four broadband subscribers used DSL (Digital Subscriber Line) for their connection in the second quarter of 2006. However, fixed wireless and cable broadband connections gained market share. Fixed wireless access increased its share of the broadband market from 3% in 2004 to 14% by the second quarter of 2006. The number of DSL subscribers increased from 143,400 in 2005 to 275,200 in 2006, while over the same period cable modem subscribers increased from 14,900 to 39,900 and fixed wireless from 18,000 to 52,600 subscribers. *See Figure 5.2 and Tables 5.1 and 5.2.*

Figure 5.2 Number of subscribers to each type of broadband connection

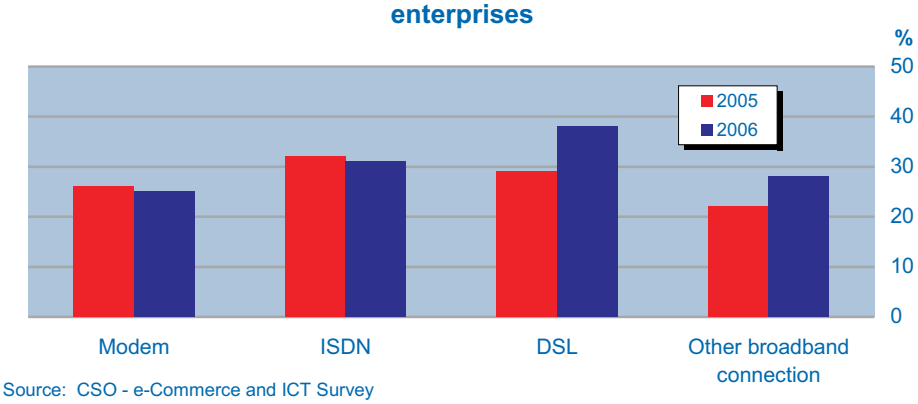


Source: ComReg

Enterprises

The results of the CSO e-Commerce and ICT survey show an increased use, in 2006, of broadband by businesses for their internet connections. The percentage of businesses with DSL and other broadband connections both increased, 38% of businesses had a DSL connection in 2006 compared with 28% in 2005. The percentage of businesses with other broadband connections increased from 22% in 2005 to 28% in 2006. These results relate to enterprises with 10 or more employees. The use of broadband in both manufacturing and the services sectors is the same, with 61% of all enterprises availing of this service. The construction sector had a lower usage of broadband. Overall the *Computer and related activities* (NACE 72) area reported the highest levels of broadband usage (91%) with the *Hotels and other short stay accommodation* (NACE 55) sector reporting the lowest uptake levels (49%). Enterprises may report multiple types of internet connection. *See Figure 5.3 and Tables 5.3 and 5.4.*

Figure 5.3 Type of internet connection as percentage of all enterprises



Source: CSO - e-Commerce and ICT Survey

Enterprises who use broadband for connecting to the internet are three times more likely to have employees who regularly work away from the enterprise's premises and use electronic networks to communicate with the enterprise's ICT system. Similarly, those enterprises that use broadband show greater levels of e-business activity and higher degrees of integration of their ICT systems.

Households

The CSO household survey on the use of ICT shows that the uptake of broadband increased from just under 3% of all households to almost 13% in the period between June 2004 and February 2006. By the first quarter of 2006 there were almost 200,000 households with broadband, while over half a million households used a modem/ISDN connection. *See Table 5A.*

Table 5A Main trends in household ICT use 2004 - 2006

	Unit	2004	2005	2006
All households	**'000**	**1,405.9**	**1,453.9**	**1,483.8**
Households with home computers	'000	649.4	797.7	867.5
% of all households	%	46.2	54.9	58.5
Households with computers connected to internet	'000	537.0	655.0	722.2
% of all households	%	38.2	45.1	48.7
% of households with home computers	%	82.7	82.1	83.3
Type of internet connection[1]				
Modem/ISDN	'000	503.6	552.1	523.8
Broadband	'000	40.4	106.9	193.5
Other/don't know	'000	13.9	48.1	35.1

[1] Some households may have more than one internet connection and use devices other than computers to connect to the internet.

Source: CSO - Quarterly National Household Survey : June 2004/2005, February 2006.

Note: Data are subject to sampling and other survey errors, which are relatively greater in respect of smaller values.

On a regional level, the results show a significantly higher uptake of broadband by households in the Southern and Eastern region where just over 31% of households who access the internet on home computers, connected using broadband. This compares with just over 11% of households in Border, Midlands and Western region. *See Tables 4.2 and 5B.*

Table 5B Type of connection to the internet[1]

	Modem/ISDN			Broadband			Other/don't know		
	2004	2005	2006	2004	2005	2006	2004	2005	2006
	(000)	(000)	(000)	(000)	(000)	(000)	(000)	(000)	(000)
Border, Midlands, Western	114.1	140.6	142.8	2.9	11.6	18.4	3.1	11.3	6.7
Southern and Eastern	389.7	411.5	380.9	37.4	95.4	175.2	10.8	36.8	28.5
Total	**503.6**	**552.1**	**523.8**	**40.4**	**106.9**	**193.5**	**13.9**	**48.1**	**35.1**

[1] Some households may have more than one internet connection and use devices other than computers to connect to the internet.

Source: CSO - Quarterly National Household Survey : June 2004/2005, February 2006.

Note: Data are subject to sampling and other survey errors, which are relatively greater in respect of smaller values.

Table 5.1 Numbers of subscribers to the internet by type of connection

	Unit	Quarter 2 2004	Quarter 2 2005	Quarter 2 2006
Narrowband	Number	**677,000**	**643,000**	**583,500**
of which				
Dial-up	Number	595,000	542,000	487,000
Flat Rate	Number	82,000	101,000	96,500
Broadband	Number	**63,100**	**176,300**	**372,200**
of which				
DSL	Number	55,600	143,400	275,200
Cable	Number	5,400	14,900	39,900
Fixed Wireless Access	Number	2,200	18,000	52,600
Other	Number	**-**	**-**	4,500
All Subscribers	Number	**740,100**	**819,300**	**955,700**

Source: ComReg.

Table 5.2 Market shares of connection types for internet subscribers

	Unit	Quarter 2 2004	Quarter 2 2005	Quarter 2 2006
Narrowband	%	**91**	**78**	**61**
of which				
Dial-up	%	88	84	83
Flat Rate	%	12	16	17
Broadband	%	**9**	**22**	**39**
of which				
DSL	%	88	81	74
Cable	%	9	8	11
Fixed Wireless Access	%	3	10	14
Other	%	**-**	**-**	1
All Subscribers	%	**100**	**100**	**100**

Source: ComReg.

Table 5.3 External connection to the internet, as a percentage of all enterprises, by sector - March 2005 and 2006

	Manufacturing sectors		Construction sector		Selected services sectors		Total	
	2005	2006	2005	2006	2005	2006	2005	2006
Enterprises with 10 or more persons engaged[1]	2,800	2,759	682	736	8,729	8,725	12,211	12,219
%	100	100	100	100	100	100	100	100
Type of external connection to the internet[2]								
Modem	24	25	36	21	28	26	26	25
ISDN	36	32	38	28	30	31	32	31
Broadband	47	61	36	54	49	61	49	61
Wireless connection	8	12	10	16	8	15	8	14
Broadband connection as % of all enterpises[2]								
DSL	26	36	19	26	30	39	28	38
DSL < 2Mb/sec	15	14	12	11	16	15	16	14
DSL > 2Mb/sec	13	23	8	16	15	28	14	26
Other broadband connection	23	30	18	29	21	27	22	28
Enterprises with broadband								
Using extranet	24	23	5	9	24	26	23	24
Having employees who e-work[3]	41	38	28	32	40	42	40	41
Using dedicated ICT systems for managing orders	59	60	44	25	51	52	53	52
Purchases by internet or EDI	71	70	64	52	76	72	74	70
Sales by internet or EDI	41	38	17	9	37	34	37	33
Enterprises without broadband								
Using extranet	10	9	-	3	7	9	7	8
Having employees who e-work[3]	17	15	12	13	14	10	14	12
Using dedicated ICT systems for managing orders	33	30	2	18	31	37	30	34
Purchases by internet or EDI	48	47	47	29	39	42	41	42
Sales by internet or EDI	29	25	6	3	20	22	21	21

[1] Results for the construction sector cover only private firms with 20 or more persons engaged

[2] Enterprises may have more than one internet connection. Similarly, those with broadband may use more than one type of connection.

[3] Enterprises which have employees who regularly work part of their time (at least 1/2 day per week) away from the premises and use electronic networks to communicate with the enterprise's ICT system.

Table 5.4 External connection to the internet, as percentage of all enterprises, by sector - March 2006

	Manufacturing sectors					Construction sector	Selected services sectors								Total
	15-22	23-25	26-28	29-37	Total	45	50-52	55.1-55.2	60-63	64	70-71 73-74	72	92	Total	
Enterprises with 10 or more persons engaged[1]	1,088	353	551	767	2,759	736	4,425	679	776	106	1,838	427	473	8,724	12,219
%	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Type of external connection to the internet[2]															
Modem	25	19	25	27	25	21	28	33	22	24	14	31	43	26	25
ISDN	37	29	31	28	32	28	33	36	30	50	22	29	29	31	31
Broadband	61	69	54	64	61	54	54	49	58	70	79	91	53	61	61
Wireless connection	11	14	13	14	12	16	12	19	16	35	16	26	8	15	14
Broadband connection type as % of all enterprises[2]															
DSL	36	42	30	37	36	26	33	23	44	55	52	54	39	39	38
DSL < 2Mb/sec	15	15	11	16	14	11	13	10	23	11	15	24	15	15	14
DSL >= 2Mb/sec	23	29	21	22	23	16	23	16	27	52	40	39	24	28	26
Other broadband connection	29	32	26	32	30	29	24	28	25	33	34	49	16	27	28
Enterprises with broadband															
Using extranet	20	24	16	31	23	9	23	14	34	37	27	53	5	26	24
Having employees who e-work[3]	38	39	24	45	38	32	37	20	38	60	51	80	11	42	41
Using dedicated ICT systems for managing orders	63	62	44	66	60	25	65	34	57	67	36	48	29	52	52
Purchases by internet or EDI	65	73	70	75	70	52	69	58	75	98	74	90	58	72	70
Sales by internet or EDI	50	21	30	35	38	9	37	81	48	37	18	16	30	34	33
Enterprises without broadband															
Using extranet	9	14	5	9	9	3	9	9	17	5	5	26	1	9	8
Having employees who e-work[3]	18	22	11	13	15	13	8	4	24	5	16	75	3	10	12
Using dedicated ICT systems for managing orders	34	40	16	34	30	18	50	19	27	33	9	33	10	37	34
Purchases by internet or EDI	46	49	40	52	47	29	43	40	39	67	36	67	39	42	42
Sales by internet or EDI	31	18	20	21	25	3	18	63	19	20	9	49	12	22	21

[1] Results for the construction sector cover only private firms with 20 or more persons engaged

[2] Enterprises may have more than one internet connection. Similarly, those with broadband may use more than one type of connection.

[3] Enterprises which have employees who regularly work part of their time (at least 1/2 day per week) away from the premises and use electronic networks to communicate with the enterprise's ICT system.

Chapter Six

Human Resources in ICT

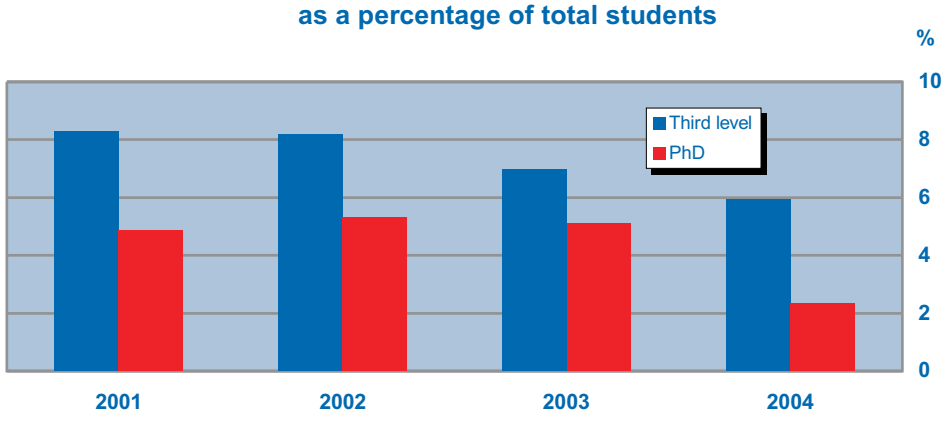
Introduction

This chapter presents the latest available estimates of the number of Higher Education students and graduates in the field of computing. In 2004, the latest year for which estimates are available, there were almost 11,000 full-time and part-time computing students, while 4,500 graduated in the same year.

Students in computing - Third level

Third level courses in computing include those at certificate, diploma, degree and post-graduate below the level of PhD. The total number of computing students at third level has decreased from 13,500 in 2001 to 10,900 in 2004. This decrease in IT course participation took place in the context of an overall increase of over 20,000 in the total number of third level students, from 163,500 in 2001 to 184,000 in 2004. As a consequence, the share of third level computing students as a percentage of the total number of students declined from 8.3% to 5.9%. *See Figure 6.1 and Tables 6.1, 6.2 and 6.3.*

Figure 6.1 Number of higher education students in computing as a percentage of total students



Source: Eurostat

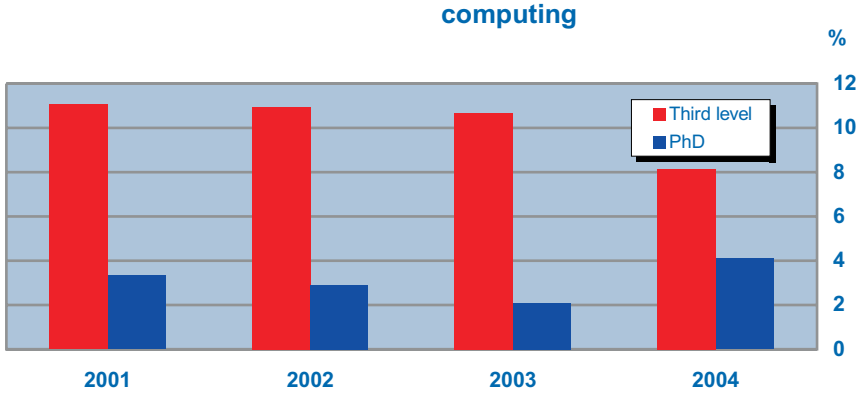
PhD students

The total number of PhD students in Ireland increased from 3,059 in 2001 to 4,339 in 2004. However, the number studying computing at PhD level fell from 149 to 102. *See Tables 6.1 and 6.2.*

Graduates in computing

In 2003, almost 5,700 third level students graduated in computing. The number of computing graduates was 21% lower (4,500) in 2004. This trend looks set to continue as a result of the falling numbers of students taking part in third level computer studies courses. *See Figure 6.2 and Tables 6.1 and 6.4.*

Figure 6.2 Percentage of higher education graduates in computing



Source: Eurostat

Table 6.1 Total number of higher education students[1] in computing classified by sex

	Unit	2001	2002	2003	2004
Total Male	**No.**	**8,771**	**9,577**	**8,854**	**8,044**
Third level	No.	8,648	9,438	8,703	7,961
PhD	No.	123	139	151	83
Total Female	**No.**	**4,912**	**4,778**	**3,700**	**2,943**
Third level	No.	4,886	4,735	3,658	2,924
PhD	No.	26	43	42	19
Total computing students	**No.**	**13,683**	**14,355**	**12,554**	**10,987**
Third level	No.	13,534	14,173	12,361	10,885
PhD	No.	149	182	193	102

[1] Includes full-time and part-time students

Source: Eurostat.

Table 6.2 Total number of higher education students[1] classified by sex

	Unit	2001	2002	2003	2004
Total Male	**No.**	**75,442**	**79,123**	**80,402**	**84,374**
Third level	No.	73,766	77,283	78,389	82,018
PhD	No.	1,676	1,840	2,013	2,356
Total Female	**No.**	**91,158**	**97,173**	**101,155**	**103,941**
Third level	No.	89,775	95,584	99,382	101,958
PhD	No.	1,383	1,589	1,773	1,983
Total students	**No.**	**166,600**	**176,296**	**181,557**	**188,315**
Third level	No.	163,541	172,867	177,771	183,976
PhD	No.	3,059	3,429	3,786	4,339

[1] Includes full-time and part-time students

Source: Eurostat.

Table 6.3 Students in computing as a percentage of total students in higher education

	Unit	2001	2002	2003	2004
Third level	%	8.3	8.2	7.0	5.9
PhD	%	4.9	5.3	5.1	2.4

Source: Eurostat

Table 6.4 Number of higher education students graduating in computing, 2001-2004

	Unit	2001	2002	2003	2004
Computing graduates in year	**No.**	**5,025**	**4,887**	**5,687**	**4,520**
Third level	No.	5,006	4,872	5,673	4,492
PhD	No.	19	15	14	28
Total Higher Education graduates in year	**No.**	**45,818**	**45,028**	**53,808**	**55,852**
Third level	No.	45,246	44,508	53,140	55,169
PhD	No.	572	520	668	683

Source: Eurostat

Table 6.5 Graduates in computing as a percentage of all graduates in year, 2001-2004

	Unit	2001	2002	2003	2004
Third level	%	11.1	10.9	10.7	8.1
PhD	%	3.3	2.9	2.1	4.1

Source: Eurostat

Chapter Seven

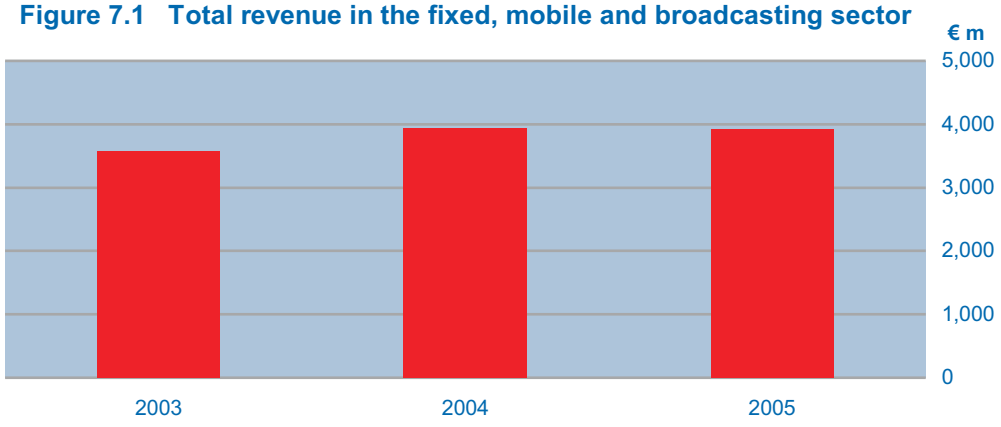
Telecommunications

Introduction

This chapter presents information, supplied by the Commission for Communications Regulation (ComReg), on the telecommunications sector in Ireland. The fixed, mobile and broadcasting sectors employed on average 13,200 people during 2005 and earned revenues of €3.9 billion. This represented a decrease of 0.6% in revenue compared with 2004, following a large increase in the previous year. Between 2003 and 2005, total revenue increased from €3.6 billion to €3.9 billion. The relative shares of revenues from the fixed and mobile sectors changed only slightly between 2004 and 2005. *See Figures 7.1, 7.2 and 7.3 and Table 7.2*.

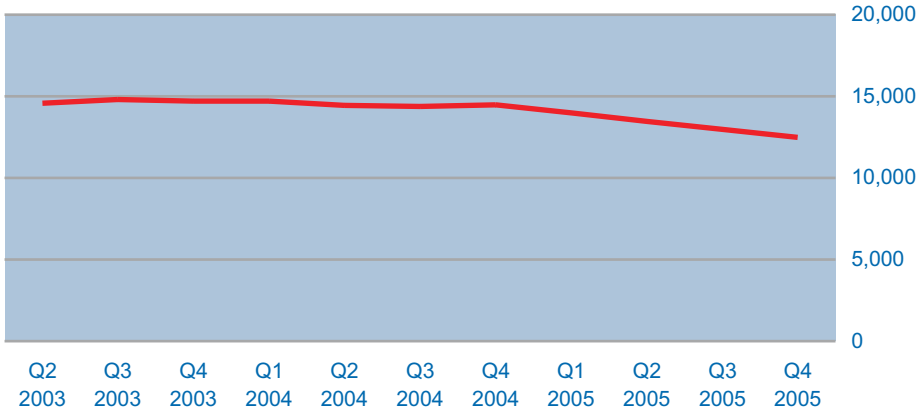
Although revenues were static, the total volume of voice calls (fixed and mobile) increased from 14.4 billion minutes in 2004 to 15.5 billion minutes in 2005. Mobile calls increased from 4.8 billion to 5.7 billion minutes. *See Table 7.2*.

Figure 7.1 Total revenue in the fixed, mobile and broadcasting sector



Source: ComReg

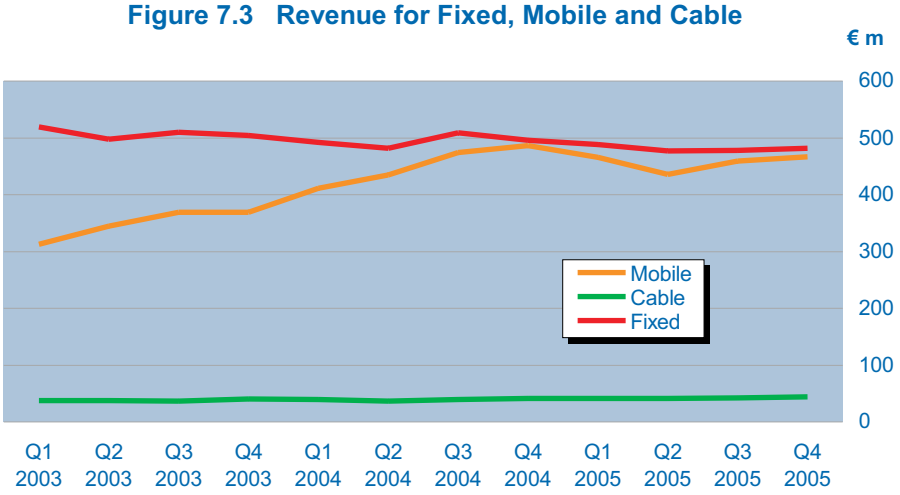
Figure 7.2 Number of persons employed in the fixed, mobile and broadcasting sectors[1]



Source: ComReg

[1] Data for 2005 is an estimate

Figure 7.3 Revenue for Fixed, Mobile and Cable



Source: ComReg

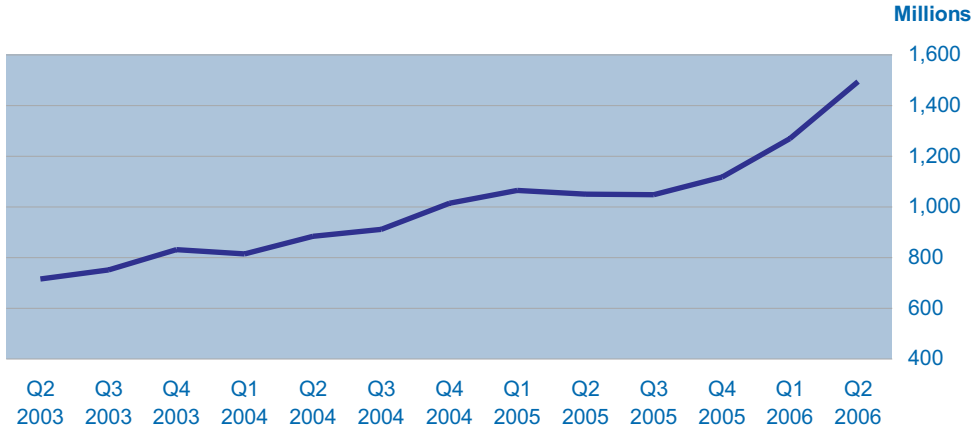
Fixed market

There were just over two million fixed telephone access paths in the second quarter of 2006. The total amount of basic retail voice time was nearly 9.8 billion minutes in 2005. This represents an increase of just 1% on the corresponding figure for 2004. The call volumes are made up of national, international, calls to mobile and other calls (including calls made from payphones). *See Tables 7.1 and 7.2.*

Mobile market

The total number of mobile subscribers in the second quarter of 2006 was almost 4.4 million. Pre-paid subscribers made up three quarters of this market. The mobile penetration rate (based on active SIM cards as a percentage of the total population) for Ireland increased from 93% in the second quarter of 2005 to 103% in the same quarter of 2006. Revenue in the mobile sector was just over €1.8bn in 2005. The mobile voice traffic for 2005 was 5.7 billion minutes, an increase of 19% on 2004. The volume of SMS messages increased by 20% over the same period. *See Figure 7.4 and Tables 7.1 and 7.2.*

Figure 7.4 Number of SMS messages sent quarterly

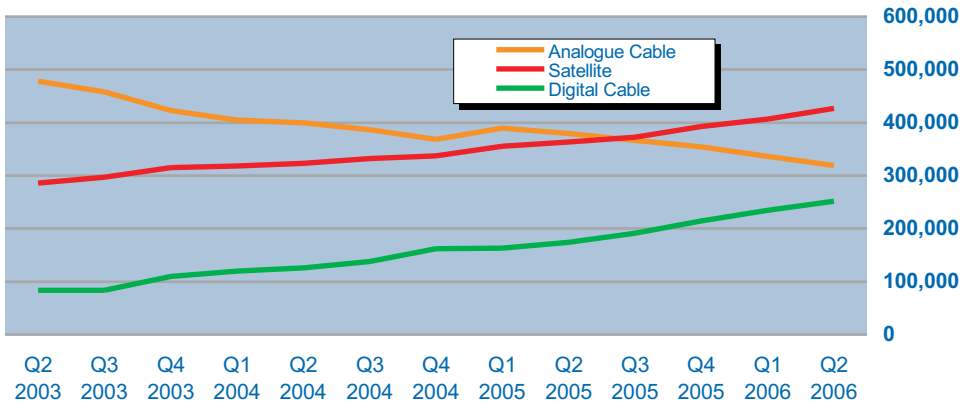


Source: ComReg

Broadcasting

The number of pay TV subscribers for the period 2003 – 2006 is shown in Figure 7.5 below. In the second quarter of 2005 just under 60% of pay television subscribers had a digital subscription via satellite or digital cable. By the second quarter of 2006 this had increased to almost 7 in every 10 pay TV subscribers. *See Figure 7.5 and Table 7.1.*

Figure 7.5 Number of subscribers to pay television



Source: ComReg

Table 7.1 Selected telecommunications and broadcasting data for Q2 of 2004 - 2006

	Unit	Quarter 2 2004	Quarter 2 2005	Quarter 2 2006
Ireland				
Fixed				
Total fixed access paths[1]	Number	2,024,000	2,047,000	2,039,000
Mobile				
Post-paid subscribers	Number	920,000	965,000	1,055,000
Pre-paid subscribers	Number	2,578,000	2,866,000	3,317,000
Total Mobile	Number	**3,499,000**	**3,831,000**	**4,372,000**
Mobile penetration rates[2]	%	87	93	103
Television				
Number of subscribers by platform	Number	**849,000**	**917,000**	**997,000**
of which				
Analogue cable	Number	400,000	380,000	319,000
Satellite	Number	323,000	363,000	427,000
Digital cable	Number	126,000	174,000	251,000

[1] Total number of direct and indirect fixed PSTN and ISDN access paths. Individual ISDN lines may have multiple access paths.

[2] Based on active SIMs as a percentage of the total population.

Source: ComReg.

Table 7.2 Selected telecommunications and broadcasting data for 2003 - 2005

	Unit	2003	2004	2005
Ireland				
Revenues				
Fixed	€ million	2,031	1,979	1,925
Mobile	€ million	1,396	1,806	1,826
Cable	€ million	153	156	168
Total	€ million	**3,580**	**3,941**	**3,919**
Volumes				
Fixed telephone voice	000 mins	9,302,701	9,659,809	9,758,858
Mobile voice	000 mins	4,305,193	4,783,741	5,698,581
Total (fixed and mobile) Voice	**000 mins**	**13,607,894**	**14,443,550**	**15,457,439**
Mobile SMS	**000 number**	**3,035,396**	**3,623,696**	**4,351,350**

Source: ComReg.

Chapter Eight

International Comparisons

Introduction

This chapter presents some international comparisons in respect of various aspects of the Information Society. The relative contribution of ICT is examined on a global perspective and some of the latest EU results from the enterprise and household surveys are presented.

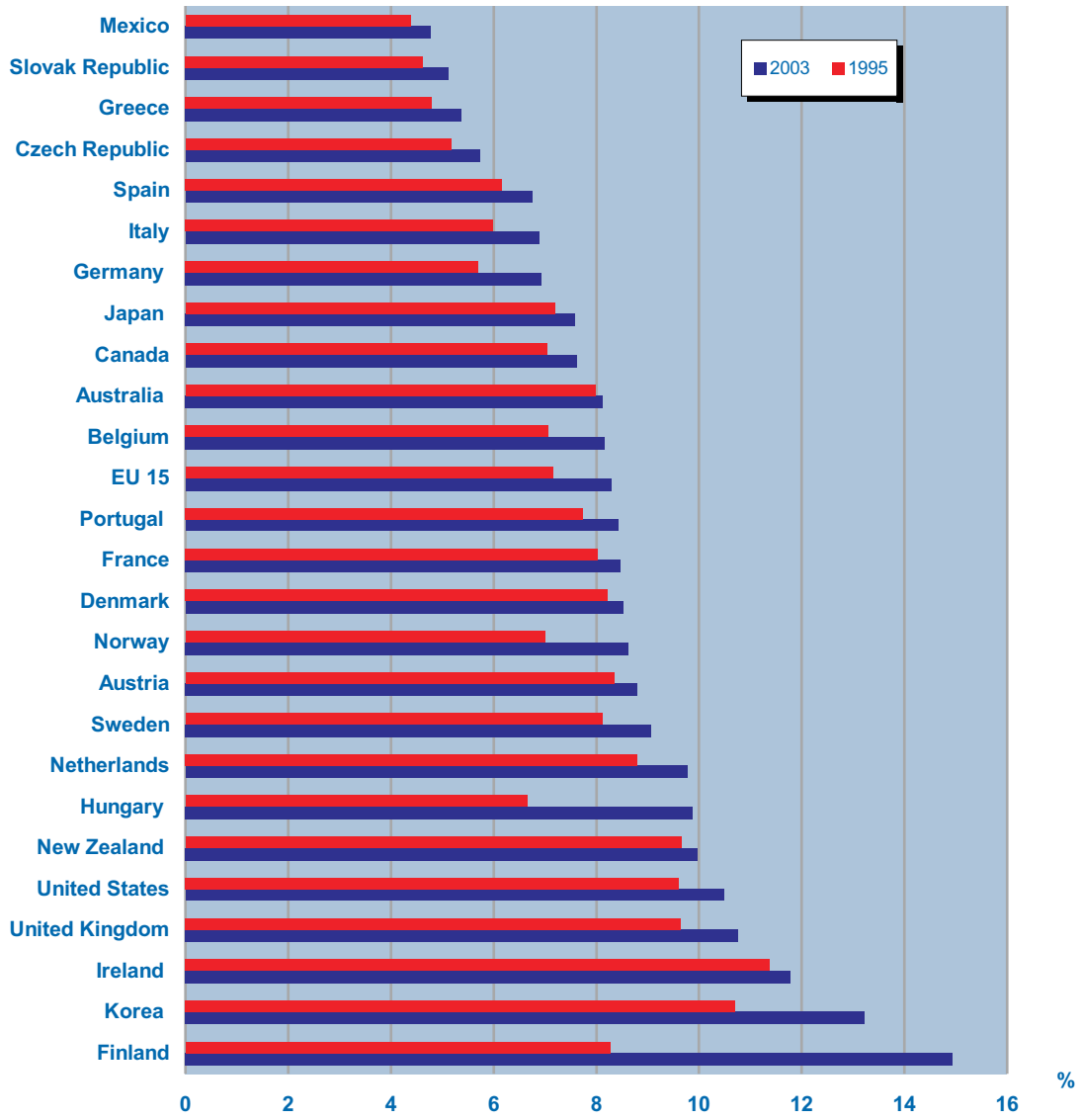
The ICT sector

Figure 8.1 shows the percentage of business value added attributable to the ICT sector in selected OECD countries in 1995 and 2003, the latest year for which comparable data is available.

In 2003, the ICT sector in Ireland had one of the highest shares of business sector value added, with only Korea and Finland having higher shares. In Finland, the share increased from 8.3% in 1995 to almost 15% in 2003. The corresponding share in Hungary increased from 6.7% to almost 10% over the same period. *See Figure 8.1.*

These figures are not directly comparable with the ICT sector statistics for Ireland in Chapter Two which include the Reproduction of Recorded Media sector.

Figure 8.1 Share of ICT value added in the business sector value added, EU15 and selected OECD countries, 1995 and 2003



Note: EU15 excludes Luxembourg as data was not available.
Source: OECD - Key ICT indicators.

Use of ICT by Enterprises

In 2006, over one in three enterprises in Denmark indicated that they received orders on-line in the previous year. The corresponding level of on-line sales in Ireland was 23%, similar to that of the Netherlands and Sweden. The EU average was 16%. *See Table 8.1.*

Table 8.1 Percentage of enterprises who received orders on-line during the previous year, 2004 - 2006

	Unit	2004	2005	2006
European Union (EU25)	%	13	12	16
Belgium	%	18	16	15
Czech Republic	%	11	13	8
Denmark	%	25	32	34
Germany	%	18	16	18
Estonia	%	8	8	:
Greece	%	6	7	:
Spain	%	2	3	8
France	%	:	:	18
Ireland	**%**	**19**	**23**	**23**
Italy	%	7	3	3
Cyprus	%	5	4	6
Latvia	%	1	1	2
Lithuania	%	5	6	13
Luxembourg	%	11	10	11
Hungary	%	6	4	:
Malta	%	:	16	:
Netherlands	%	17	14	23
Austria	%	12	10	15
Poland	%	4	5	9
Portugal	%	6	9	:
Slovenia	%	15	12	11
Slovakia	%	6	7	:
Finland	%	17	17	14
Sweden	%	20	23	24
United Kingdom	%	27	25	30

: Data not available.

Source: Eurostat.

Use of ICT by Households

The Netherlands had the highest rate of home internet access in the EU, with 80% of all households having access in 2006. In Denmark and Sweden, over three-quarters of households had internet access. In Ireland, 50% of households had internet access, which was slightly below the EU average of 52%. *See Table 8.2.*

Table 8.2 Percentage of households having access to the Internet at home, 2004-2006

	Unit	2004	2005	2006
European Union (EU25)	%	42	48	52
Belgium	%	:	50	54
Czech Republic	%	19	19	:
Denmark	%	69	75	79
Germany	%	60	62	67
Estonia	%	31	39	46
Greece	%	17	22	23
Spain	%	34	36	39
France	%	34	:	41
Ireland	**%**	**40**	**47**	**50**
Italy	%	34	39	40
Cyprus	%	53	32	37
Latvia	%	15	31	42
Lithuania	%	12	16	35
Luxembourg	%	59	65	70
Hungary	%	14	22	32
Malta	%	:	:	:
Netherlands	%	:	78	80
Austria	%	45	47	52
Poland	%	26	30	36
Portugal	%	26	31	35
Slovenia	%	47	48	54
Slovakia	%	23	23	27
Finland	%	51	54	65
Sweden	%	:	73	77
United Kingdom	%	56	60	63

: Data not available.

Source: Eurostat.

Connecting to the Internet

Between 2005 and 2006, the percentage of Irish enterprises with a broadband connection increased from 48% to 61%. The EU average for 2006 was 78%. The highest rates were in Sweden, Finland, Spain, France, Denmark, Belgium and the Netherlands. In each of these countries, more than 80% of enterprises had broadband. In the UK, 77% of enterprises had broadband. *See Table 8.3.*

Table 8.3 Percentage of enterprises with a broadband connection, 2004-2006

	Unit	2004	2005	2006
European Union (EU15)	%	55	65	78
Belgium	%	70	78	84
Czech Republic	%	38	52	69
Denmark	%	80	82	83
Germany	%	54	62	73
Estonia	%	68	67	:
Greece	%	21	44	:
Spain	%	72	76	87
France	%	:	:	86
Ireland	**%**	**32**	**49**	**61**
Italy	%	:	57	70
Cyprus	%	35	40	55
Latvia	%	45	48	59
Lithuania	%	50	57	57
Luxembourg	%	48	64	76
Hungary	%	:	48	:
Malta	%	:	78	:
Netherlands	%	54	71	82
Austria	%	55	61	69
Poland	%	28	43	46
Portugal	%	49	63	:
Slovenia	%	62	74	75
Slovakia	%	25	48	61
Finland	%	71	81	89
Sweden	%	:	83	89
United Kingdom	%	44	65	77

: Data not available.

Source: Eurostat.

Irish households also reported a lower level of broadband uptake than their EU counterparts. Just 26% of households with an internet connection in 2006 used broadband, compared to an EU average of 62%. Only Greece reported a lower level of uptake at 17%. The highest levels of broadband usage were recorded in Belgium, the Netherlands and Finland. *See Table 8.4.*

Table 8.4 Households with a broadband connection as a percentage of households with Internet access at home, 2004 - 2006

	Unit	2004	2005	2006
European Union (EU25)	%	32	48	62
Belgium	%	:	81	89
Czech Republic	%	23	27	:
Denmark	%	52	68	80
Germany	%	30	38	50
Estonia	%	66	77	80
Greece	%	1	3	17
Spain	%	45	58	75
France	%	:	:	74
Ireland	**%**	**7**	**16**	**26**
Italy	%	:	34	41
Cyprus	%	4	14	34
Latvia	%	37	30	53
Lithuania	%	32	73	56
Luxembourg	%	28	51	63
Hungary	%	41	49	68
Malta	%	:	:	:
Netherlands	%	:	69	82
Austria	%	36	50	63
Poland	%	32	51	60
Portugal	%	47	63	68
Slovenia	%	22	40	62
Slovakia	%	15	31	43
Finland	%	42	67	82
Sweden	%	:	55	66
United Kingdom	%	28	52	70

: Data not available.

Source: Eurostat.

Students in computer studies

In 2004, the total number of Higher Education students in computer studies in Ireland was almost 11,000, a decrease of 23% since 2002. The number of computer students also fell markedly in the UK and Sweden. The total number taking computer studies in the EU25 however, has increased by 9% overall, with Poland showing large increases in the number of computer students since 2002. *See Table 8.5.*

Table 8.5 Number of Higher Education students in computer studies, 2002 - 2004

	2002	2003	2004
European Union (EU25)	663,619	679,799	724,477
Belgium	22,531	14,877	20,141
Czech Republic	9,412	12,364	12,498
Denmark	8,620	8,070	9,583
Germany	123,508	131,788	137,891
Estonia	3,087	3,591	3,809
Greece	19,849	:	26,301
Spain	133,414	145,224	145,084
France	:	:	:
Ireland	**14,355**	**12,554**	**10,987**
Italy	27,410	31,530	34,071
Cyprus	1,336	1,876	2,002
Latvia	4,825	5,822	6,067
Lithuania	4,094	5,537	6,473
Luxembourg	136	:	:
Hungary	11,591	13,831	15,109
Malta	182	207	223
Netherlands	14,991	15,500	24,844
Austria	14,113	11,972	12,833
Poland	44,597	55,962	66,425
Portugal	9,072	9,215	8,986
Slovenia	2,245	2,479	2,889
Slovakia	6,204	6,582	6,927
Finland	15,958	17,449	17,997
Sweden	18,247	17,580	16,584
United Kingdom	153,842	135,939	136,753

: Data not available.
Source: Eurostat.

Telecommunications

The total number of SMS messages sent in EU member states in 2004 is shown in Table 8.6 below. Irish mobile subscribers were among the highest users of SMS messaging in the EU, in terms of messages per capita (3,624 million SMS with a population of just over 4 million) in 2004. Denmark, Cyprus and Malta also recorded large volumes of SMS per capita. *See Table 8.6.*

Table 8.6 Total number of SMS, 2002 - 2004

	Unit	2002	2003	2004
European Union (EU25)	000	:	:	:
Belgium	000	2,401,415	2,721,652	:
Czech Republic	000	:	5,130,236	5,710,760
Denmark	000	2,018,892	3,989,143	6,554,569
Germany	000	17,000,000	19,500,000	20,100,000
Estonia	000	75,372	94,286	112,488
Greece	000	3,858,153	3,958,305	:
Spain	000	9,999,906	11,736,000	12,801,000
France	000	5,523,000	8,188,000	:
Ireland	**000**	**2,400,000**	**3,035,000**	**3,624,000**
Italy	000	:	:	:
Cyprus	000	330,198	754,511	960,991
Latvia	000	:	:	:
Lithuania	000	:	897,100	1,387,646
Luxembourg	000	:	169,000	195,000
Hungary	000	1,150,563	1,177,277	1,204,926
Malta	000	232,562	364,518	392,457
Netherlands	000	2,051,275	2,522,877	:
Austria	000	1,200,000	1,297,000	1,589,000
Poland	000	3,184,803	5,293,724	7,988,427
Portugal	000	2,109,977	2,203,390	2,563,616
Slovenia	000	333,519	391,743	413,364
Slovakia	000	800,000[e]	1,340,120	1,224,352
Finland	000	142,000	1,650,000	2,193,500
Sweden	000	1,325,000	1,816,000	2,045,000
United Kingdom	000	:	:	:

: Data not available.

[e] Estimated value

Source: Eurostat.

Appendix One

Data Sources

Census of Industrial Production

This Census is conducted annually by the CSO and covers all enterprises which are wholly or primarily engaged in industrial production and which have three or more persons engaged. The results cover mining, quarrying, manufacturing, electricity, gas and water supply. The information collected includes details of turnover, inputs, stocks, capital assets and employment. Since 1999, some questions on use of information technology have also been included. The results for the industrial sector contained in Chapter 2 have been updated for 2003, to take account of minor revisions to the 2003 Census of Industrial Production. *Results from the Census of Industrial Production appear in Chapter 2 and Table 3.1.*

Annual Services Inquiry

This is an annual inquiry to enterprises in the retail, wholesale, real estate, renting, business services and other selected sectors, i.e. covering NACE Rev. 1.1 sections G, K, H, O, I and J. It covers all size classes and the results are estimated from a sample of about a quarter of all enterprises in the relevant sectors. In most sectors, the information collected relates to turnover, inputs, stocks, capital assets and employment. This survey has also included some information technology questions since 1999. The results in this report include data for some sectors (guesthouse accommodation, taxi companies) which are not shown in the CSO Annual Services Inquiry reports. *Results from the Annual Services Inquiry appear in Chapter 2 and Table 3.1.*

Quarterly National Household Survey (QNHS)

This is a continuous survey in which 3,000 households are interviewed each week to give a total sample of 39,000 households each quarter. The survey asks demographic and labour force questions, which are the basis for the CSO's quarterly labour force figures. The survey also includes modules on social and other topics from time to time. The module on ICT and e-commerce usage was first included in June 2003 and repeated in June 2004 and 2005. In the first quarter of 2006, a sample of just under 6,000 households was included for the purposes of the ICT and e-commerce module. It included questions relating to the household and questions asked of each person aged 16 to 74. The grossing procedure aligns the distribution of persons covered in

the sample with independently determined population estimates at the level of sex, age group and region. The results are subject to sampling and other survey errors. Sampling errors have a relatively larger effect on smaller estimates and on the interpretation of some year-on-year trends. The reference quarters for survey results are: Q1 - December to February, Q2 - March to May, Q3 - June to August and Q4 - September to November. When comparing the 2006 results with earlier year's results, the change in the reference period should be taken into account. Similar, but less detailed, modules on home computing were included in the survey in Q3/1998 and Q4/2000. A module on teleworking was included in Q3/2002. *Results from the QNHS module on Home Computing appear in Chapter 4.*

Enterprise Survey of e-commerce and ICT

This survey was first conducted by the CSO in October 2002 and since then has been conducted in March of each year. The results presented in this report are for the March 2006 survey. The survey covered manufacturing enterprises (with three or more employees), enterprises in the construction sector (with twenty or more employees) and enterprises with ten or more employees in a range of service sectors. Bars and restaurants were not surveyed. *The results for enterprises with 10 or more employees are included in Chapter 3.*

NACE Rev. 1.1 Classification

This is the EU classification of economic activity. Information on the sections of NACE covered in the Census of Industrial Production, the Annual Services Inquiry and in the Enterprise Survey of e-commerce and ICT is shown in Appendix 2; while a detailed list of NACE divisions is given in Appendix 3.

International Comparisons

The international comparisons in Chapter 8 are based on information from Eurostat and the OECD.

i2010: European Information Society 2010

This is a European initiative to foster growth and jobs in the information society and media industries. i2010 is a comprehensive strategy for modernising and deploying all EU policy instruments to encourage the development of the digital economy: regulatory instruments, research and partnerships with industry. The household (QNHS) and enterprise surveys on ICT will be repeated annually under EU Regulation (EC) No. 808/2004. These two surveys will be the source for harmonised statistics at EU level and for the production of statistical indicators required under this initiative.

Appendix Two

Sectors in CSO Enterprise Surveys

NACE Rev. 1.1 Section and Divisions	Description	Census of Industrial Production	Annual Services Inquiry	E-commerce and ICT survey
C (10-14)	Mining and quarrying	✔		–
D (15-37)	Manufacturing	✔		✔
E (40-41)	Electricity, gas and water	✔		–
F (45)	Construction			✔
G (50-52)	Wholesale; retail; repairs		✔	✔
H (55)	Hotels, bars and restaurants		✔	✔[1]
I (60-64)	Transport, storage and communications		✔	✔
J (65-67)	Financial intermediation		✔[2]	✔[2]
K (70-74)	Real estate, renting and business activities		✔	✔
L (75)	Public administration and defence; social security		–	–
M (80)	Education		–	–
N (85)	Health and social work		–	–
O (90-93)	Other community, social and personal services		✔[3]	✔[3]
Size classes (persons engaged)				
1-2		–	✔	–
3-9		✔	✔	✔[4]
10 or more		✔	✔	✔

[1] Hotels were included in the e-commerce/ICT survey; bars and restaurants were not included.

[2] The information collected on Financial Intermediation is in a different format from other sectors and is not included in this report.

[3] The sectors covered under this heading relate to recreation (cinemas, sports events etc.) and to personal services (hairdressing etc.). Only Recreational, Cultural and Sporting activities sectors are included in Tables 3.2 to 3.7.

[4] Manufacturing enterprises with 3 or more employees were included in the e-commerce/ICT survey. The results for this survey in Chapter Three are for enterprises with 10 or more persons employed.

Appendix Three

Key to NACE Rev. 1.1 Classification

Industry – Divisions 10 to 41

10* Mining of coal and lignite; extraction of peat

11* Extraction of crude petroleum and natural gas; service activities incidental to oil and gas extraction, excluding surveying

12* Mining of uranium and thorium ores

13* Mining of metal ores

14* Other mining and quarrying

Manufacturing – Divisions 15 to 37

15 Manufacture of food products and beverages

16 Manufacture of tobacco products

17 Manufacture of textiles

18 Manufacture of wearing apparel; dressing and dyeing of fur

19 Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear

20 Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials

21 Manufacture of pulp, paper and paper products

22 Publishing, printing and reproduction of recorded media

23 Manufacture of coke, refined petroleum products and nuclear fuel

24 Manufacture of chemicals and chemical products

25 Manufacture of rubber and plastic products

26 Manufacture of other non-metallic mineral products

27 Manufacture of basic metals

28 Manufacture of fabricated metal products, except machinery and equipment

29 Manufacture of machinery and equipment n.e.c.

30 Manufacture of office machinery and computers

31 Manufacture of electrical machinery and apparatus n.e.c.

*Not included in results of e-commerce/ICT survey.

32 Manufacture of radio, television and communication equipment and apparatus

33 Manufacture of medical, precision and optical instruments, watches and clocks

34 Manufacture of motor vehicles, trailers and semi-trailers

35 Manufacture of other transport equipment

36 Manufacture of furniture; manufacturing n.e.c.

37 Recycling

40* Electricity, gas, steam and hot water supply

41* Collection, purification and distribution of water

Construction – Division 45

Services – Divisions 50 to 93

50 Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel

51 Wholesale trade and commission trade, except of motor vehicles and motorcycles

52 Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods

55 Hotels and restaurants
55.1 Hotels
55.2 Camping sites and other provision of short-stay accommodation
55.3* Restaurants
55.4* Bars
55.5* Canteens and catering

60 Land transport; transport via pipelines

61 Water transport

62 Air transport

63 Supporting and auxiliary transport activities; activities of travel agencies

64 Post and telecommunications

65 Financial intermediation, except insurance and pension funding

66 Insurance and pension funding, except compulsory social security

67 Activities auxiliary to financial intermediation

70 Real estate activities

71 Renting of machinery and equipment without operator and of personal and household goods

72 Computer and related activities

73 Research and development

74 Other business activities

75* Public administration and defence; compulsory social security

80* Education

85* Health and social work

90* Sewage and refuse disposal, sanitation and similar activities

91* Activities of membership organisations n.e.c.

92 Recreational, cultural and sporting activities

93* Other service activities

*Not included in results of e-commerce/ICT survey.

Appendix Four

Technical Explanations

Broadband	High-speed, always-on internet access running with a speed of greater than 128Kbps. It is able to carry very large amounts of information.
Digital products or services	Goods/services that can be ordered and delivered directly to a computer over the internet, eg music, videos, games, computer software, online newspapers, consulting services etc.
DSL	Digital Subscriber Line. DSL technologies are designed to increase bandwidth available over standard copper telephone wires. Includes IDSL, HDSL, SDSL, ADSL, RADSL, VDSL, DSL-Lite and xDSL.
Electronic commerce (e-commerce)	Transactions conducted over IP-based networks and over other computer mediated networks. The goods and services are ordered over those networks, but the payment and ultimate delivery of the goods or service may be conducted on or off-line. Orders received via telephone, facsimile and non-interactive e-mails are not counted as electronic commerce.
Electronic Data Interchange (EDI)	Electronic exchange of forms, such as for orders, between geographically dispersed locations.
E-mail	Electronic transmission of messages.
Extranet	A secure extension of an intranet that allows external users to access some parts of an organisation's intranet.
Information Technology (IT)	All aspects of managing and processing information with computers within companies.
Internet	Relates to IP-based networks: www, extranet over the internet, EDI over the Internet and Internet-enabled mobile phones.
Intranet	An internal company communications network using IP-based communications within an organisation.
ISDN	Integrated Services Digital Network.

LAN	Local Area Network. This relates to your company's computer network, usually within an office, building or closed geographical area.
Mbps	Megabyte per second.
Modem	Device that converts outgoing digital signals from a computer to analogue signals which can be transmitted via conventional copper telephone line, and which converts incoming analogue signals to digital.
Online payment	An online payment is an integrated order-payment transaction.
Website	Location on the World Wide Web identified by a Web address. A collection of Web files on a particular subject that includes a beginning file call a homepage. Information is encoded with specific languages (HTM., XML, Java) readable with a Web browser, like Netscape's Navigator or Microsoft's Internet Explorer.