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Chapter One

Introduction

This is the CSO's third 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 2005. It covered enterprises with ten or more persons engaged in industry and in a wide range of services sectors. The household survey was incorporated into the Quarterly National Household Survey in June 2005. 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 "Internet Security". 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 statistics are as follows:

The ICT Sector in Ireland

- In 2003, the ICT sector employed 80,100 people and accounted for 16% of total value added in industry and services. This compares to 82,100 people employed and 17% of total value added in 2002.
- The ICT sector accounted for 20% (€48 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 85% 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 18% of enterprises have a written ICT strategy.
- The main purposes for which businesses use the internet 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 and to make catalogues and price lists available.
- Sales using e-commerce account for just over a quarter of total manufacturing turnover.
- Almost 58% 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 by e-commerce.

Use of ICT by Households

- An estimated 797,700 households (or 54.9%) have a home computer. This compares to a figure of 649,400 (or 46.2%) in 2004.
- The number of homes with internet connections increased from 537,000 in 2004 to 655,000 in 2005. Just over 82% of households who had a home computer used it to connect to the internet.
- An estimated 54% (or 1,659,600 persons) of people aged 16 to 74 have used a computer at some time while 44.5% (or 1,369,600 persons) have used the internet.
- An estimated 817,300 people used a computer every day or almost every day.
- An estimated 528,800 people in Ireland used the internet at least once a day.
- The most popular activities on the internet relate to (1) *Information search and online services*, (2) *Communication (e-mail)* and (3) *Interaction with public authorities*.
- The most common internet purchases are (1) *Travel and holiday accommodation*, (2) *Films and music* and (3) *Tickets for events*.

Connecting to the Internet

- The number of broadband subscribers increased from 63,100 in the second quarter of 2004 to just over 176,000 in the corresponding quarter of 2005. The number of metered dial-up subscribers dropped from 595,000 to 542,000 over the same period.
- Enterprises who use broadband are more than twice as likely to have e-workers, show greater levels of e-business activity, and higher degrees of integration of their ICT systems.
- Households with internet access in the Southern and Eastern region are more than twice as likely to have a broadband connection than those in the Border, Midlands, and Western region.

Internet Security

- Virus checking or protection software was used by 87% of enterprises and 71% of persons who used the internet in 2005.

- Security problems resulting in either loss of information or time were encountered by 37% of enterprises and 43% of persons who used the internet in the previous year.

Telecommunications

- Total revenue in 2004 for the Telecommunications and Broadcasting sectors was €3.9bn.
- The mobile penetration rate for Ireland in the second quarter of 2005 reached 94% with 3.8 million subscribers, based on a population of just over 4 million.
- The number of SMS messages sent in 2004 was 3.6 billion which equated to an average of 887 text messages per person in that year.
- The volume of mobile voice minutes reached almost 4.8 billion in 2004.

International Comparisons

- The ICT sector in Ireland has one of the highest shares of business sector value added in EU and OECD countries.
- Irish enterprises are more likely to sell online than 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 and are among the lowest household users of broadband in the EU.
- One in four enterprises in the EU encountered an internet security problem while over one in three individuals had encountered a computer virus over the previous twelve months.
- 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 2003, which is the latest available.

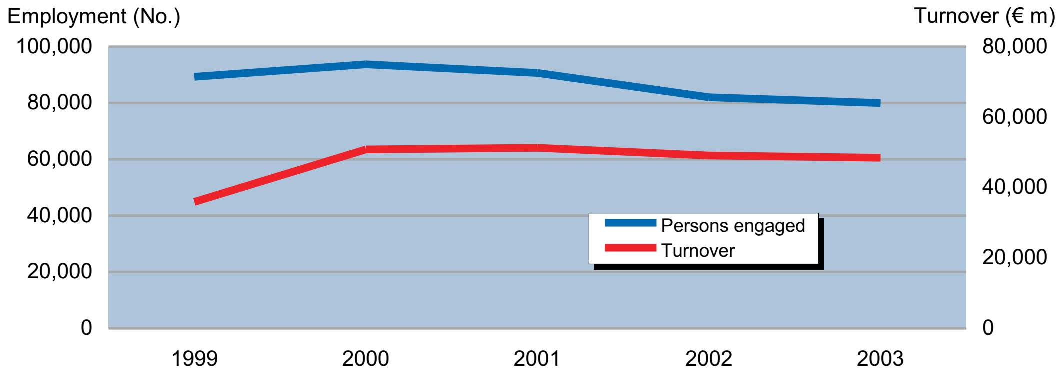
The ICT sector employed just over 80,000 people in 2003, which represented just over 8% of total employment in industry and services. The ICT manufacturing sector employed 30,700 and accounted for over 12% of manufacturing employment while 49,300 were employed in ICT services accounting for almost 7% of services employment. *See Table 2.1 and Appendix 2.*

The ICT sector accounted for just 5% of the total number of enterprises and 8% of total employment. However, in terms of turnover, it contributed 20% of total turnover in industry and services. Turnover in the ICT sector was over €48 billion in 2003, with 61% in manufacturing and 39% in services. Value added in the ICT sector, at just under €13 billion, accounted for about 16% of total value added in industry and services. *See Tables 2.1 and 2.2.*

The average ICT manufacturing enterprise employed 142 persons and had an average turnover of €137m. In contrast in the ICT Services sector enterprises tended to be smaller with an average employment of 12 and an average turnover of just €4.5m.

Figure 2.1 shows the trends in ICT sector employment and turnover over the period 1999 – 2003. It is evident that while turnover has remained relatively static since 2000 there has been a notable decline in employment over the same period. The decline in ICT employment in 2003 occurred in the ICT manufacturing sector, while the slight drop in ICT turnover was attributable to the ICT services sector. The share of the ICT sector in the total turnover of industry and services fell from 22% in 2002 to 20% in 2003.

Figure 2.1 ICT sector employment and turnover 1999 - 2003



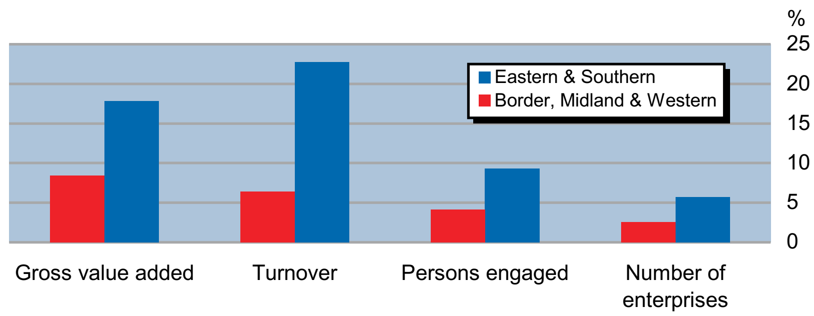
Source: CSO - Census of Industrial Production and Annual Services Inquiry

Regional analysis

In 2003, the Southern and Eastern region accounted for 87% of ICT enterprises, 89% of ICT employment and 95% 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 Tables 2.4 and 2.6.*

Figure 2.2 Total ICT as a percentage of Total Industry and Services by Region - 2003



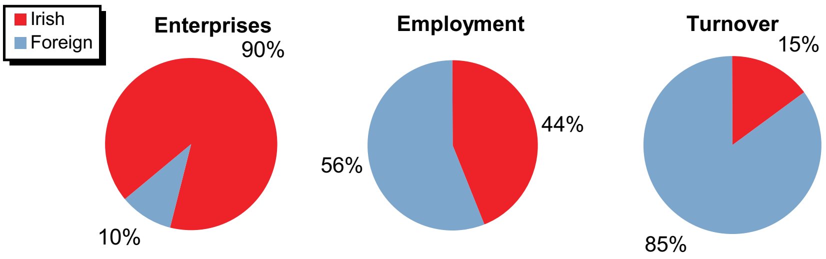
Source: CSO - Census of Industrial Production and Annual Services Inquiry

Nationality of ownership

Some 62% of ICT manufacturing enterprises are Irish-owned and 38% foreign-owned. This compares with 88% Irish-ownership for industry as a whole. Irish-owned ICT manufacturing enterprises employed 5,500 people while foreign-owned enterprises employed 25,200 in 2003. Foreign-owned ICT manufacturing enterprises tend to be on a larger scale with, on average, 304 persons engaged compared with an average of 41 employees for Irish-owned ICT manufacturers. *See Table 2.7.*

For ICT service enterprises, the balance between Irish and foreign ownership was quite different, with just over 91% Irish-owned. These Irish owned enterprises had 29,700 persons in employment while foreign-owned enterprises employed 19,600 people. ICT service enterprises were generally smaller than those involved in manufacturing: Irish owned enterprises had an average of 8 employees compared with 54 persons employed in foreign-owned enterprises in this sector.

Figure 2.3 Principal aggregates for the ICT sector by nationality of ownership - 2003



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

Output per employee, in terms of gross value added, was more than twice as high in foreign owned enterprises compared with indigenous ICT companies. The average GVA per employee in the foreign owned enterprises was €212,600 compared with €95,500 in indigenous enterprises.

In 2003 foreign owned enterprises accounted for 74% of the total gross value added of the ICT sector.

Composition of the ICT sector

The ICT sector includes the 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	2001	2002	2003
Ireland				
ICT Manufacturing (A)				
Number of enterprises	Number	246	233	216
Persons engaged	Number	41,993	33,488	30,744
Turnover	€ million	34,098	29,449	29,593
Gross value added	€ million	6,814	5,700	5,979
ICT Services (B)				
Number of enterprises	Number	3,925	3,900	4,226
Persons engaged	Number	48,720	48,572	49,307
Turnover	€ million	17,219	19,609	18,851
Gross value added	€ million	4,369	6,483	6,913
ICT Total (A + B)				
Number of enterprises	Number	4,171	4,133	4,442
Persons engaged	Number	90,713	82,060	80,051
Turnover	€ million	51,317	49,058	48,444
Gross value added	€ million	11,183	12,183	12,892

Table 2.2 Total ICT as a % of Total Industry and Services - Ireland

	Unit	2001	2002	2003
Ireland				
Total Industry and Services				
Number of enterprises	Number	77,175	81,308	89,134
Persons engaged	Number	880,415	922,719	972,619
Turnover	€ million	208,209	222,227	239,205
Gross value added	€ million	60,897	69,670	78,631
Total ICT as a % of Total Industry and Services[1]				
Number of enterprises	%	5	5	5
Persons engaged	%	10	9	8
Turnover	%	25	22	20
Gross value added	%	18	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	2001	2002	2003
Border, Midland and Western				
ICT Manufacturing (A)				
Number of enterprises	Number	54	48	48
Persons engaged	Number	6,468	4,665	4,786
Turnover	€ million	1,908	1,314	1,170
Gross value added	€ million	649	227	282
ICT Services (B)				
Number of enterprises	Number	382	433	514
Persons engaged	Number	5,637	3,772	3,634
Turnover	€ million	798	1,645	1,174
Gross value added	€ million	475	649	739
ICT Total (A + B)				
Number of enterprises	Number	436	481	562
Persons engaged	Number	12,105	8,437	8,420
Turnover	€ million	2,706	2,959	2,344
Gross value added	€ million	1,124	876	1,021

Table 2.4 Total ICT as a % of Total Industry and Services - Border, Midland and Western Region

	Unit	2001	2002	2003
Border, Midland and Western				
Total Industry and Services				
Number of enterprises	Number	18,992	20,117	21,712
Persons engaged	Number	180,975	187,872	204,417
Turnover	€ million	29,512	32,539	36,786
Gross value added	€ million	8,955	9,636	12,085
Total ICT as a % of Total Industry and Services[1]				
Number of enterprises	%	2	2	3
Persons engaged	%	7	4	4
Turnover	%	9	9	6
Gross value added	%	13	9	8

[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	2001	2002	2003
Southern and Eastern				
ICT Manufacturing (A)				
Number of enterprises	Number	192	185	168
Persons engaged	Number	35,525	28,823	25,958
Turnover	€ million	32,191	28,135	28,423
Gross value added	€ million	6,166	5,473	5,697
ICT Services (B)				
Number of enterprises	Number	3,543	3,467	3,712
Persons engaged	Number	43,083	44,800	45,673
Turnover	€ million	16,421	17,964	17,677
Gross value added	€ million	3,894	5,835	6,174
ICT Total (A + B)				
Number of enterprises	Number	3,735	3,652	3,880
Persons engaged	Number	78,608	73,623	71,631
Turnover	€ million	48,612	46,099	46,100
Gross value added	€ million	10,060	11,308	11,871

Table 2.6 Total ICT as a % of Total Industry and Services - Southern and Eastern Region

	Unit	2001	2002	2003
Southern and Eastern				
Total Industry and Services				
Number of enterprises	Number	58,183	61,192	67,422
Persons engaged	Number	699,440	734,846	768,202
Turnover	€ million	178,698	189,688	202,419
Gross value added	€ million	51,942	60,035	66,546
Total ICT as a % of Total Industry and Services[1]				
Number of enterprises	%	6	6	6
Persons engaged	%	11	10	9
Turnover	%	27	24	23
Gross value added	%	19	19	18

[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 - 2003

	Unit	Irish	Foreign	Total
Ireland				
ICT Manufacturing (A)				
Number of enterprises	Number	133	83	216
Persons engaged	Number	5,504	25,240	30,744
Turnover	€ million	920	28,673	29,593
Gross value added	€ million	258	5,721	5,979
ICT Services (B)				
Number of enterprises	Number	3,866	360	4,226
Persons engaged	Number	29,725	19,582	49,307
Turnover	€ million	6,399	12,452	18,851
Gross value added	€ million	3,107	3,806	6,913
ICT Total (A + B)				
Number of enterprises	Number	3,999	443	4,442
Persons engaged	Number	35,229	44,822	80,051
Turnover	€ million	7,319	41,125	48,444
Gross value added	€ million	3,365	9,527	12,892

Table 2.8 Total ICT as a % of Total Industry and Services - 2003

	Unit	Irish	Foreign	Total
Ireland				
Total Industry and Services				
Number of enterprises	Number	86,700	2,434	89,134
Persons engaged	Number	762,433	210,186	972,619
Turnover	€ million	120,107	119,096	239,205
Gross value added	€ million	34,569	44,062	78,631
Total ICT as a % of Total Industry and Services[1]				
Number of enterprises	%	5	18	5
Persons engaged	%	5	21	8
Turnover	%	6	35	20
Gross value added	%	10	22	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 - 2003

NACE Division	Sector	Enterprises	Persons engaged	Turnover	Gross value added
		Number	Number	€ million	€ million
	ICT Total - Manufacturing and Services	**4,442**	**80,051**	**48,444**	**12,892**
	ICT Manufacturing	**216**	**30,744**	**29,593**	**5,979**
30	Manufacture of office machinery and computers.	62	13,103	15,187	1,182
32	Manufacture of radio, television and communication equipment and apparatus.	55	9,408	3,566	1,474
3320	Manufacture of instruments and appliances for measuring, checking, testing, navigating and other purposes, except industrial process control equipment.	37	1,817	402	118
3330	Manufacture of industrial process control equipment.	14	263	34	6
2233, 3130	Reproduction of computer media. Manufacture of insulated wire and cable.	48	6,153	10,404	3,199
	ICT Services	**4,226**	**49,307**	**18,851**	**6,913**
72	Computer and related activities.	3,434	24,030	6,211	2,361
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).	792	25,277	12,640	4,552

Chapter Three

Use of ICT by Enterprises

Introduction

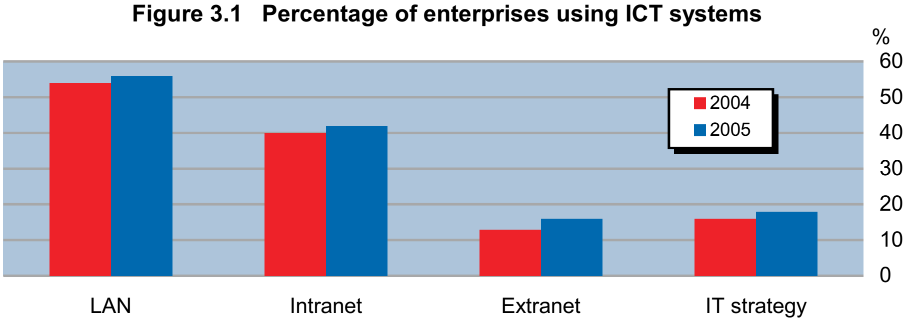
Virtually all enterprises use computers in one way or another today: 99% in industry and 96% in services. The majority also use e-mail and the internet while 60% of enterprises reported that they have a website or homepage.

The results were obtained from the March 2005 e-commerce and ICT survey and are based on a sample of just over 4,500 enterprises with ten or more persons employed in the manufacturing and selected service sectors. Tables 3.2 and 3.3 contain information on the number of respondents in the e-commerce and ICT survey and other background information. The main results of the survey are in Tables 3.4 to 3.7. Figures from this survey also appear in Chapters 5 (Connecting to the Internet) and 6 (Internet Security).

General use of ICT systems

The survey shows that 56% of enterprises indicated that they use a Local Area Network (LAN) while 42% indicated that they have an intranet. About one in six have an extranet (ie access by external users to some part of their intranet). The use of LANs and related technologies was slightly higher than in 2004. Eighteen percent of enterprises have a written IT strategy. The percentage of enterprises with such a strategy was slightly higher in industry than in services.

Figure 3.1 Percentage of enterprises using ICT systems



Source: CSO - e-Commerce and ICT Survey

Some 43% of enterprises had dedicated IT systems to manage the placing and receipt of orders in 2005. This was similar to the 2004 figure. The percentage was slightly higher in manufacturing than in services.

Table 3A gives an indication of the degree of integration of business processes in the manufacturing and services sectors. The manufacturing sector shows higher levels of integration for the internal business processes while the service sector displays greater levels of integration with its suppliers, and this is particularly evident in *Wholesale & Retail* and *Post & Telecommunications* sectors. The manufacturing and services sectors report a similar level of integration with their customers' business systems. *See Tables 3A, 3.4 and 3.5*.

Table 3A Percentage of all enterprises with an integrated ICT system - 2005

	Manufacturing	Services	Total
	%	%	%
Integration of ICT systems			
that link to			
Re-ordering replacement supplies	20	17	18
Invoicing and payment systems	33	26	28
Managing production, logistics or service operations	24	15	17
Your suppliers' business system	7	14	12
Your customers' business system	9	8	8

Source: CSO - e-Commerce and ICT Survey.

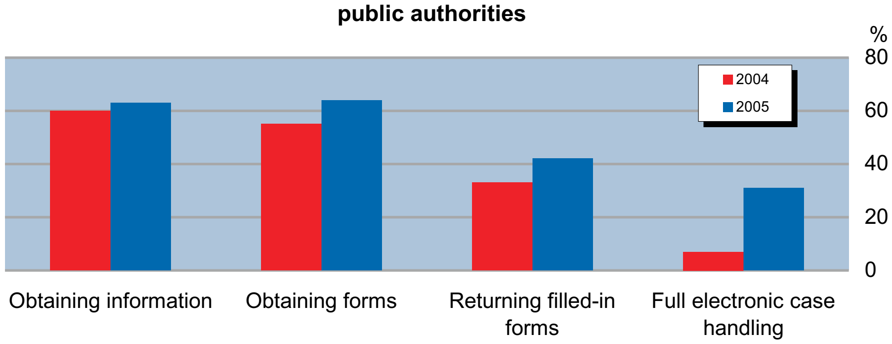
Use of the Internet

Just over two thirds of manufacturing enterprises have a company website compared with 58% in the services sector. About one in eight manufacturing enterprises and one in twenty in the services sector provide foreign language information on their website. Just 1% of enterprises indicated that their website contained information in the Irish language, while 5% of enterprises reported that their website had been specifically designed to be accessible by people with a disability.

The main reasons given by businesses for using the internet (as a consumer) were (1) *Information search*, (2) *Banking and financial services* and (3) *Market monitoring*. The same top three reasons were given in industry and services. The top three reasons for providing a website were (1) *Marketing the enterprise's products,* (2) *Facilitating access to catalogues and price lists* and (3) *Providing after sales support*. Again, a similar pattern exists for both industry and services. *See Tables 3.4 and 3.5*.

In 2005, about two thirds of enterprises said they had downloaded forms from a public authority website, while 42% had returned completed forms online. In 2004, 33% 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.*

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



Source: CSO - e-Commerce and ICT Survey

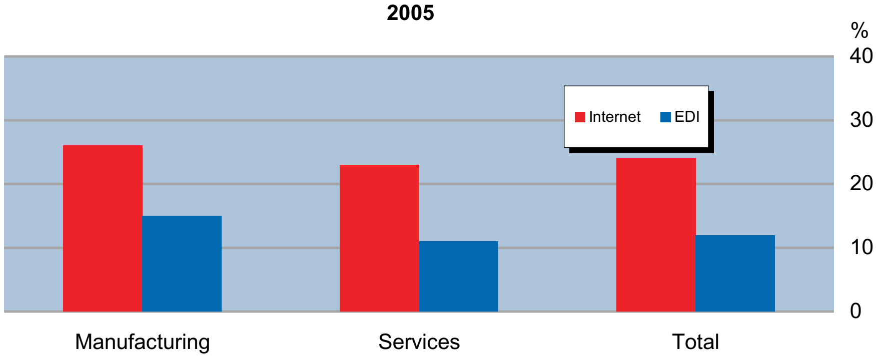
e-Commerce

An analysis of enterprise responses to questions relating to e-business over the period 2003-2005 indicated some interpretation problems with this topic, resulting in the overestimation of the number of enterprises who reported e-sales and e-purchases for 2004. The actual levels of sales and purchases by e-commerce have also been revised downwards but to a lesser extent. The 2004 e-business estimates have been revised downwards to take account of this issue and these revisions are contained in Table 3.6.

The 2005 survey found that the percentage of enterprises conducting sales via e-commerce (Internet or EDI) was slightly higher than the revised 2004 levels at 30%. In manufacturing, the percentage with e-commerce sales increased from 32% in 2004 to 35% in 2005. In services there was a slight increase to 29% over the same period.

Sales by e-commerce accounted for over a quarter of turnover in the manufacturing sector in 2005. EDI (Electronic Data Interchange) accounted for two thirds of these sales. In the services sector sales via e-commerce accounted for 16% of turnover. EDI had a smaller share of e-commerce 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, Table 3.6 and 3.7.*

Figure 3.3 Percentage of enterprises with e-commerce sales via the Internet or EDI - 2005



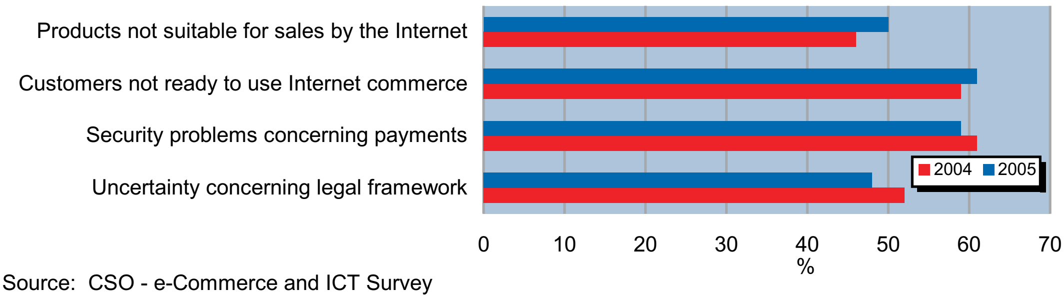
Source: CSO - e-Commerce and ICT Survey

The survey shows that 58% of all businesses purchased some goods using e-commerce. The percentage of total purchases completed in this way is small but has increased from 6% in 2004 to 10% in 2005. *See Tables 3.6 and 3.7.*

Barriers to e-Commerce

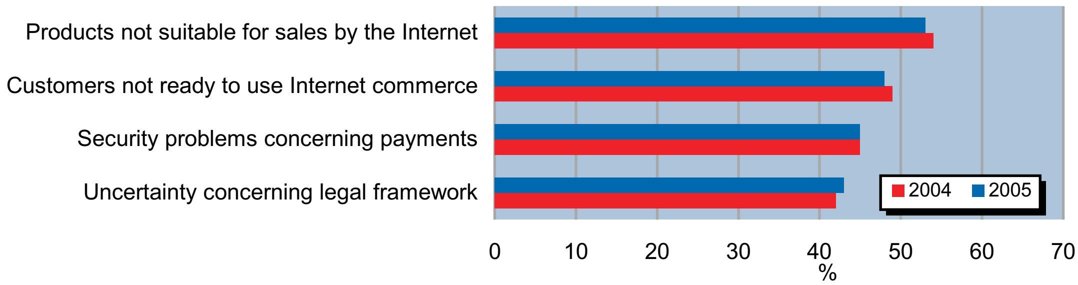
Businesses were also asked to rate the importance of possible barriers to e-commerce. The top concerns for those who were already selling online were whether customers were ready to shop online and security problems concerning payments. For those not selling online, the main barrier they perceived was that their products were unsuitable for online sales. The results show similar trends to 2004 levels. *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

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, selected services sectors, and very small enterprises.

The results for the period 2001 - 2003 show that industrial enterprises had adopted the internet earlier than service enterprises. In 2003, almost 79% of all industrial enterprises had e-mail, compared with just over 38% in the services sector. Similarly, nearly half of industrial businesses had a website, while just 16% 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, 2001 - 2003

	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							
2001	3-9	1,832	46.7	21.9	10.3	1,088	1.7
	10+	3,038	85.4	55.4	22.4	104,632	19.7
	Total	4,870	70.8	42.8	17.8	105,720	19.5
2002	3-9	1,940	55.7	27.6	13.0	1,160	1.4
	10+	3,056	87.4	59.0	27.8	106,523	19.7
	Total	4,996	75.1	46.8	22.1	107,683	19.5
2003	3-9	1,988	62.9	31.9	23.9	1,223	6.9
	10+	3,006	89.1	61.0	34.2	108,169	21.0
	Total	4,994	78.7	49.4	30.1	109,392	20.9
Services							
2001	1-9	65,180	36.6	12.9	7.1	25,384	1.4
	10+	7,126	67.0	39.0	16.8	77,105	7.1
	Total	72,306	39.6	15.5	8.1	102,489	5.7
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
Industry and Services							
2001	1-9 *	67,012	36.9	13.1	7.2	26,472	1.4
	10+	10,164	72.5	43.9	18.5	181,737	14.4
	Total	77,176	41.6	17.2	8.7	208,209	12.7
2002	1-9 *	68,965	30.0	10.6	4.3	24,627	0.4
	10+	12,343	70.6	44.3	18.5	197,599	13.9
	Total	81,309	36.2	15.7	6.4	222,227	12.4
2003	1-9 *	74,791	34.6	12.8	5.6	29,604	2.2
	10+	14,343	71.1	46.2	20.5	209,601	15.7
	Total	89,134	40.5	18.2	8.0	239,205	14.0

[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 2005

	Manufacturing sectors					Selected services sectors							Total
	15-22	23-25	26-28	29-37	Total	50-52	55.1-55.2	60-63	64	70-71 73-74	72	Total	
Enterprises with 10 or more persons employed													
Number of respondents to ICT survey	*377*	*148*	*173*	*332*	*1,030*	*588*	*127*	*98*	*33*	*382*	*63*	*1,291*	*2,321*
Number of enterprises in population[1]	1,105	354	548	793	2,800	4,425	679	782	106	1,837	427	8,256	11,056
Number of employees in population[1]	74,978	32,546	23,580	80,268	211,372	189,348	38,995	47,098	29,098	94,362	17,407	416,308	627,680
Total purchases (EUR m)[1]	28,313	16,023	2,950	23,198	70,484	46,978	1,026	4,612	4,363	3,594	3,933	64,506	134,991
Total turnover (EUR m)[1]	40,573	31,023	4,153	32,751	108,500	67,022	2,216	8,241	9,497	10,262	5,832	103,069	211,569

[1] Figures subject to revision

Table 3.3 Background statistics on the enterprise ICT survey by size class - March 2005

	Size class (persons engaged)			
	10-49	50-249	250+	Total
Enterprises with 10 or more persons employed				
Number of respondents to ICT survey	*1,425*	*709*	*187*	*2,321*
Number of enterprises in population[1]	8,724	1,958	374	11,056
Number of employees in population[1]	170,384	178,361	278,936	627,680
Total purchases (EUR m)[1]	26,968	33,895	74,128	134,991
Total turnover (EUR m)[1]	38,543	57,075	115,951	211,569

[1] Figures subject to revision

Table 3.4 Main results of enterprise ICT survey, as percentage of all enterprises - March 2004 and 2005

	Manufacturing sectors		Selected services sectors		Total	
	2004	2005	2004	2005	2004	2005
Enterprises with 10 or more persons engaged	2,913	2,800	5,912	8,256	8,825	11,056
%	100	100	100	100	100	100
General information about ICT systems						
Using a computer	98	99	95	96	96	97
Using e-mail	93	95	87	91	89	92
Using intranet	41	45	39	41	40	42
Using LAN	53	59	54	55	54	56
Using extranet	13	16	13	16	13	16
Using dedicated ICT systems for managing orders	44	45	43	42	43	43
Have a written ICT strategy	17	20	16	17	16	18
Use of the Internet						
Using the Internet	95	96	90	91	92	92
Having a website or homepage	62	67	59	58	60	60
Having website with information in a foreign language	10	12	6	5	7	7
Having website with information in the Irish language	1	1	1	1	1	1
Having website designed to be accessible by disabled persons	4	6	5	4	5	5
Purposes of using the Internet (as consumer)						
Market monitoring	35	37	33	36	33	36
Receiving digital products	26	30	20	29	22	29
Obtaining after sales services	15	18	15	17	15	17
Banking and financial services	71	78	65	69	67	71
Information search	83	88	73	76	76	79
Training and education	22	27	21	27	22	27
Interaction with public authorities via Internet						
For obtaining information	63	68	59	62	60	63
For obtaining forms	56	69	54	63	55	64
For returning filled-in forms	33	44	33	41	33	42
For full electronic case handling	5	32	8	31	7	31
Submit proposal by electronic tender system[1]	-	15	-	13	-	14
Purposes of using the Internet (as provider)						
Marketing the enterprise's products	50	56	47	48	48	50
Facilitating access to catalogues and price lists	27	28	27	24	27	25
Customised page for repeat clients	6	7	7	8	6	8
Delivering digital products	5	6	6	8	6	8
Providing after sales support	10	12	10	12	10	12

[1] Question not asked in this format in the 2004 survey.

Table 3.5 Main results of enterprise ICT survey, as percentage of all enterprises, by sector - March 2005

	Manufacturing sectors					Selected services sectors							Total
	15-22	23-25	26-28	29-37	Total	50-52	55.1-55.2	60-63	64	70-71 73-74	72	Total	
Enterprises with 10 or more persons engaged	1,105	354	548	793	2,800	4,425	679	782	106	1,837	427	8,256	11,056
%	100	100	100	100	100	100	100	100	100	100	100	100	100
General information about ICT systems													
Using a computer	98	100	98	100	99	95	96	94	100	97	100	96	97
Using e-mail	92	96	94	98	95	90	90	85	100	93	100	91	92
Using Intranet	44	47	39	51	45	34	31	38	62	52	80	41	42
Using LAN	55	67	53	65	59	50	37	49	70	66	98	55	56
Using extranet	16	18	12	20	16	12	7	16	31	19	49	16	16
Using dedicated ICT systems for managing orders	44	54	27	55	45	53	26	37	67	23	51	42	43
Have a written ICT strategy	18	32	12	25	20	11	9	17	43	28	48	17	18
Use of the Internet													
Using the Internet	93	98	94	99	96	89	92	87	100	93	100	91	92
Having website or homepage	60	74	62	75	67	46	77	65	82	68	96	58	60
Having website with information in a foreign language	9	21	4	17	12	1	7	15	22	6	19	5	7
Having website with information in the Irish language	1	3	1	2	1	0	6	2	–	0	–	1	1
Having website designed to be accessible by disabled persons	6	4	5	5	6	2	10	10	9	4	10	4	5
Purposes of using the Internet (as consumer)													
Market monitoring	38	37	29	40	37	32	48	37	46	33	57	36	36
Receiving digital products	33	27	20	36	30	23	27	25	49	35	67	29	29
Obtaining after sales services	16	21	13	22	18	16	11	17	18	15	49	17	17
Banking and financial services	77	82	75	80	78	66	53	69	69	77	79	69	71
Information search	84	91	85	93	88	71	68	75	74	87	98	76	79
Training and education	23	31	20	35	27	20	20	28	37	36	69	27	27
Interaction with public authorities via Internet													
For obtaining information	65	72	63	73	68	56	58	54	67	77	75	62	63
For obtaining forms	67	73	60	75	69	59	53	51	59	77	79	63	64
For returning filled-in forms	42	49	38	48	44	37	24	37	48	54	59	41	42
For full electronic case handling	32	35	27	35	32	29	17	23	27	40	46	31	31
Submit proposal by electronic tender system	12	16	17	17	15	11	6	6	23	21	25	13	14
Purposes of using the Internet (as provider)													
Marketing the enterprise's products	51	61	52	64	56	37	69	53	58	55	92	48	50
Facilitating access to catalogues and price lists	22	31	25	37	28	23	34	17	48	19	45	24	25
Customised page for repeat clients	6	5	6	11	7	6	11	8	27	7	27	8	8
Delivering digital products	8	2	4	8	6	4	7	14	17	8	46	8	8
Providing after sales support	8	9	8	20	12	8	7	20	27	7	50	12	12

Table 3.6 Purchases and sales via e-commerce - March 2004[1] and 2005

	Manufacturing sectors		Selected services sectors		Total	
	2004	2005	2004	2005	2004	2005
Use of e-commerce for purchases						
by Internet (as % of total enterprises)	52	56	47	53	49	54
by EDI (%)	10	9	12	13	11	12
by Internet or EDI (%)	56	59	52	58	53	58
Total value of purchases (EUR m)	**68,145**	**70,484**	**59,938**	**64,506**	**128,083**	**134,991**
Percentage of purchases by e-commerce						
Internet (as % of total purchases)	2	2	3	3	3	3
EDI (%)	2	7	6	8	4	8
Internet or EDI (%)	4	10	9	11	6	10
Use of e-commerce for sales						
by Internet (as % of total enterprises)	22	26	23	23	22	24
by EDI (%)	17	15	10	11	12	12
by Internet or EDI (%)	32	35	28	29	29	30
Total value of turnover (EUR m)	**103,245**	**108,500**	**81,495**	**103,069**	**184,740**	**211,569**
Percentage of sales by e-commerce						
Internet (as % of total turnover)	14	10	9	11	12	10
EDI (%)	10	18	5	5	8	11
Internet or EDI (%)	24	27	14	16	19	21

[1] Revised.

Table 3.7 Purchases and sales via e-commerce - March 2005

	Manufacturing sectors					Selected services sectors							Total
	15-22	**23-25**	**26-28**	**29-37**	**Total**	**50-52**	**55.1-55.2**	**60-63**	**64**	**70-71 73-74**	**72**	**Total**	
Use of e-commerce for purchases													
by Internet (as % of total enterprises)	53	57	50	65	56	49	33	52	64	62	85	53	54
by EDI (%)	10	6	5	11	9	19	3	10	10	5	11	13	12
by Internet or EDI (%)	56	58	52	67	59	57	34	55	64	63	85	58	58
Total value of purchases (EUR m)	**28,313**	**16,023**	**2,950**	**23,198**	**70,484**	**46,978**	**1,026**	**4,612**	**4,363**	**3,594**	**3,933**	**64,506**	**134,991**
Percentage of purchases by e-commerce													
Internet (as % of total purchases)	2	4	1	1	2	3	1	3	0	2	4	3	3
EDI (%)	2	10	0	13	7	10	0	2	0	0	3	8	8
Internet or EDI (%)	5	14	1	15	10	13	1	6	1	3	7	11	10
Use of e-commerce for sales													
by Internet (as % of total enterprises)	31	18	21	24	26	20	60	33	39	11	32	23	24
by EDI (%)	20	12	7	14	15	13	6	14	21	7	12	11	12
by Internet or EDI (%)	42	26	26	34	35	26	60	37	49	17	35	29	30
Total value of turnover (EUR m)	**40,573**	**31,023**	**4,153**	**32,751**	**108,500**	**67,022**	**2,216**	**8,241**	**9,497**	**10,262**	**5,832**	**103,069**	**211,569**
Percentage of sales by e-commerce													
Internet (as % of total turnover)	11	0	1	18	10	13	8	23	1	1	4	11	10
EDI (%)	22	13	5	18	18	6	0	2	0	3	5	5	11
Internet or EDI (%)	33	13	6	35	27	19	8	25	1	5	8	16	21

Chapter Four

Use of ICT by Households

Introduction

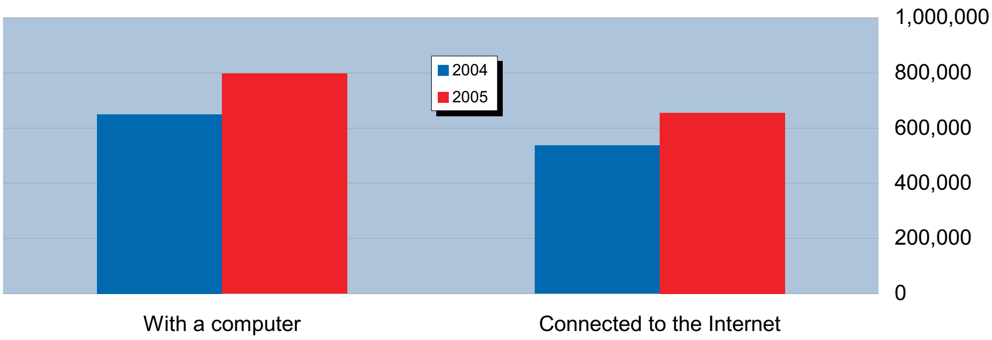
In June 2005, an estimated 797,700 households (or 54.9% of all households) had a home computer. This was an increase of over 148,000 households since June 2004, when 649,400 households had a home computer. Internet access also increased over this period, with 655,000 households (or 45.1%) having a computer connected to the internet in June 2005, compared with 537,000 in June 2004. *See Table 4A and Figure 4.1.*

Table 4A Main trends in household ICT use – 1998-2005

	1998	2000	2003	2004	2005
All households ('000)	**1,230.4**	**1,299.4**	**1,381.9**	**1,405.9**	**1,453.9**
Households with home computers ('000)	229.3	422.0	582.8	649.4	797.7
% of all households	*18.6*	*32.5*	*42.2*	*46.2*	*54.9*
Households with computers connected to Internet ('000)	61.2	266.0	463.2	537.0	655.0
% of all households	*5.0*	*20.5*	*33.5*	*38.2*	*45.1*
% of all households with home computers	*26.7*	*63.0*	*79.5*	*82.7*	*82.1*

Source: CSO - Quarterly National Household Survey.

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 57.2%, than in the Border, Midland and Western region, at 48.4%. Computer ownership in the Southern and Eastern region increased from 508,000 in June 2004 to 608,800 in June 2005. In the Border, Midland and Western region, the number of households with a home computer increased from 141,300 to 188,900 over the same period. *See Table 4.1.*

Internet access was also more prevalent in the Southern and Eastern region, at 47.3%, than in the Border, Midland and Western region, where 38.8% 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 (28.5%), lack of skills (20.2%) and did not want the internet (20.0%). The number of households which do not have access to the internet has fallen over the year from 848,400 to 768,900. *See Table 4.4.*

Internet use

The results show that 1,659,600 persons aged 16-74 have ever used a computer while 1,369,600 have used the internet. In other words, more than half (54.0%) of the Irish population aged 16-74 have used a computer and 44.5% have used the internet. Since June 2004, computer and internet use increased across all age groups. As in previous surveys, there is a correlation between age and the use of IT. Nearly two-thirds of persons aged 16-34 have ever used a computer, compared to 13.8% of those aged 65-74. Similarly, approximately 57% of those aged 16-34 have used the internet compared to just 9% for those aged 65-74. *See Table 4.6.*

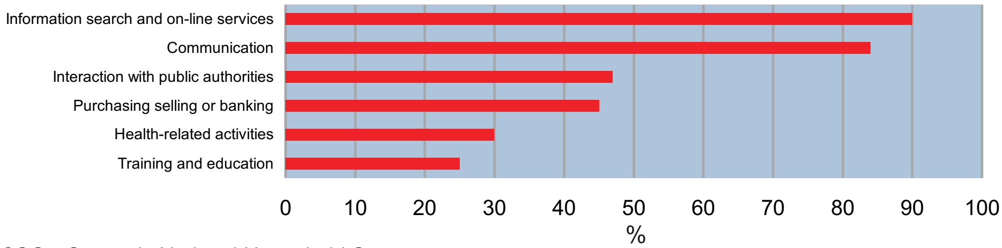
Computer and internet usage were more prevalent in the Southern and Eastern region (55.1% and 46.1% respectively) than in the Border, Midlands and West (50.8% and 40.3% respectively). Females continue to have higher rates of computer and internet usage than their male counterparts. Consistent with previous years, levels of both computer and internet usage were highest amongst students and those at work. *See Table 4.6.*

Nearly 1,350,000 persons had used a computer in the previous 3 months. Of these, 60% (or 817,300) used a computer every day or almost every day and a further 381,000 had used a computer at least once a week. During the same period 1,146,700 persons used the internet. Of these, 528,800 used the internet on a daily basis and a further 418,200 persons used it at least once a week. The most common places to use a computer and the internet are at home, at a place of 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* (1,033,200), e.g. finding information about goods and services, travel and accommodation. Next most popular was *Communication* (964,400), 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

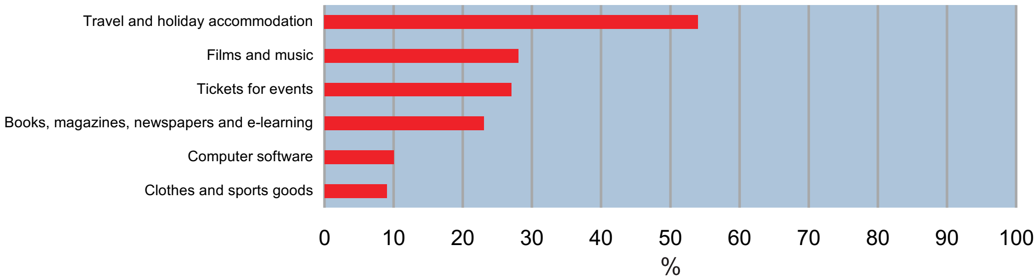


Source: CSO - Quarterly National Household Survey

Online purchases

In the 12 months to June 2005, over 587,000 persons had ordered goods or services from the internet for private use. The most popular types of goods and services ordered on the internet were *Travel and holiday accommodation* (318,600), *Films/music* (162,300) and *Tickets for events* (159,300). Nearly 80% of those who had ordered online in the previous 12 months had encountered no problems. *See 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 order off the internet were (1) that they had *no need* (354,500) and (2) that they *prefer to shop in person* (241,000). *See Table 4.11.*

Table 4.1 Households with a home computer - June 2005

	All households					Number of households with a computer permanently in the dwelling					*Percentage of households with a computer permanently in the dwelling*				
	1998	2000	2003	2004	2005	1998	2000	2003	2004	2005	*1998*	*2000*	*2003*	*2004*	2005
	’000	’000	’000	’000	’000	’000	’000	’000	’000	’000	*%*	*%*	*%*	*%*	*%*
Regional Authority															
Border, Midland and Western	323.2	344.8	368.8	376.8	389.9	41.1	92.4	125.4	141.3	188.9	*12.7*	*26.8*	*34.0*	*37.5*	*48.4*
Southern and Eastern	907.2	954.6	1,013.2	1,029.1	1,064.0	188.2	329.6	457.5	508.0	608.8	*20.7*	*34.5*	*45.2*	*49.4*	*57.2*
Sex of reference person															
Male	608.0	586.3	581.3	610.3	620.0	121.2	197.5	250.4	285.0	336.3	*19.9*	*33.7*	*43.1*	*46.7*	*54.2*
Female	622.4	713.1	800.7	795.6	833.9	108.0	224.6	332.4	364.3	461.3	*17.4*	*31.5*	*41.5*	*45.8*	*55.3*
Age group of reference person															
16-24 years	53.2	64.5	60.3	74.5	59.0	7.4	17.3	23.7	26.1	28.0	*14.0*	*26.8*	*39.3*	*35.0*	*47.5*
25-34 years	218.6	234.2	236.5	233.7	228.2	42.2	77.6	110.7	105.7	121.6	*19.3*	*33.1*	*46.8*	*45.2*	*53.3*
35-44 years	266.3	284.8	301.5	338.4	333.7	75.4	134.0	180.7	205.8	221.4	*28.3*	*47.1*	*59.9*	*60.8*	*66.3*
45-54 years	238.1	245.6	262.3	307.4	334.0	68.0	113.8	143.6	178.9	223.7	*28.6*	*46.3*	*54.7*	*58.2*	*67.0*
55-64 years	172.4	186.3	220.0	257.7	288.4	26.3	55.3	84.1	95.8	146.9	*15.2*	*29.7*	*38.2*	*37.2*	*50.9*
65-74 years	281.7	283.9	301.3	194.2	210.6	10.0	24.0	40.0	37.1	56.1	*3.5*	*8.5*	*13.3*	*19.1*	*26.6*
ILO Economic Status of reference person															
In employment	627.7	691.5	721.1	789.5	853.7	160.9	295.7	394.7	443.9	550.1	*25.6*	*42.8*	*54.7*	*56.2*	*64.4*
Unemployed	49.4	26.3	33.2	54.7	34.1	6.6	6.2	10.6	19.8	14.8	*13.3*	*23.4*	*31.9*	*36.2*	*43.4*
Not economically active	553.2	581.6	627.6	561.7	566.1	61.8	120.1	177.5	185.7	232.8	*11.2*	*20.7*	*28.3*	*33.1*	*41.1*
No. of persons employed in household															
None	358.6	352.0	388.8	339.6	324.0	14.1	27.5	50.5	62.2	77.6	*3.9*	*7.8*	*13.0*	*18.3*	*24.0*
1	400.8	419.8	419.1	447.0	476.2	75.8	137.9	179.0	195.2	244.5	*18.9*	*32.8*	*42.7*	*43.7*	*51.3*
2	340.6	386.8	419.0	461.3	480.9	98.9	185.1	260.0	293.4	344.1	*29.0*	*47.9*	*62.1*	*63.6*	*71.6*
3 or more	130.3	140.8	155.0	157.9	172.8	40.5	71.5	93.3	98.5	131.5	*31.1*	*50.8*	*60.2*	*62.4*	*76.1*
All households	**1,230.4**	**1,299.4**	**1,381.9**	**1,405.9**	**1,453.9**	**229.3**	**422.0**	**582.8**	**649.4**	**797.7**	***18.6***	***32.5***	***42.2***	***46.2***	***54.9***

Table 4.2 Households with an Internet connection via personal computer - June 2005

	All households					Number of households with an Internet connection via PC					*Percentage of households with an Internet connection via PC*				
	1998	2000	2003	2004	2005	1998	2000	2003	2004	2005	*1998*	*2000*	*2003*	*2004*	2005
	'000	'000	'000	'000	'000	'000	'000	'000	'000	'000	%	%	%	%	%
Regional Authority															
Border, Midland and Western	323.2	344.8	368.8	376.8	389.9	9.2	54.4	96.7	114.0	151.3	*2.8*	*15.8*	*26.2*	*30.3*	*38.8*
Southern and Eastern	907.2	954.6	1,013.2	1,029.1	1,064.0	52.0	211.6	366.6	423.1	503.7	*5.7*	*22.2*	*36.2*	*41.1*	*47.3*
Sex of reference person															
Male	608.0	586.3	581.3	610.3	620.0	34.1	128.0	202.3	239.6	283.1	*5.6*	*21.8*	*34.8*	*39.3*	*45.7*
Female	622.4	713.1	800.7	795.6	833.9	27.1	137.9	260.9	297.5	371.8	*4.4*	*19.3*	*32.6*	*37.4*	*44.6*
Age group of reference person															
16-24 years	53.2	64.5	60.3	74.5	59.0	2.1	9.2	17.6	19.0	21.5	*3.9*	*14.3*	*29.2*	*25.5*	*36.4*
25-34 years	218.6	234.2	236.5	233.7	228.2	14.0	51.2	86.6	86.3	100.6	*6.4*	*21.9*	*36.6*	*36.9*	*44.1*
35-44 years	266.3	284.8	301.5	338.4	333.7	19.4	84.7	141.3	167.1	180.2	*7.3*	*29.7*	*46.9*	*49.4*	*54.0*
45-54 years	238.1	245.6	262.3	307.4	334.0	16.6	72.9	117.9	150.5	185.4	*7.0*	*29.7*	*44.9*	*49.0*	*55.5*
55-64 years	172.4	186.3	220.0	257.7	288.4	6.8	34.0	69.5	83.2	123.0	*3.9*	*18.3*	*31.6*	*32.3*	*42.6*
65-74 years	281.7	283.9	301.3	194.2	210.6	2.3	14.1	30.2	30.9	44.2	*0.8*	*5.0*	*10.0*	*15.9*	*21.0*
ILO Economic Status of reference person															
In employment	627.7	691.5	721.1	789.5	853.7	44.8	191.8	323.0	371.6	456.9	*7.1*	*27.7*	*44.8*	*47.1*	*53.5*
Unemployed	49.4	26.3	33.2	54.7	34.1	1.3	3.3	9.1	16.4	10.3	*2.6*	*12.5*	*27.4*	*30.0*	*30.2*
Not economically active	553.2	581.6	627.6	561.7	566.1	15.1	70.8	131.1	149.0	187.7	*2.7*	*12.2*	*20.9*	*26.5*	*33.2*
No. of persons employed in household															
None	358.6	352.0	388.8	339.6	324.0	3.4	14.5	37.8	46.1	57.1	*0.9*	*4.1*	*9.7*	*13.6*	*17.6*
1	400.8	419.8	419.1	447.0	476.2	20.2	85.3	137.8	158.1	195.2	*5.0*	*20.3*	*32.9*	*35.4*	*41.0*
2	340.6	386.8	419.0	461.3	480.9	28.1	120.0	211.6	249.6	297.2	*8.3*	*31.0*	*50.5*	*54.1*	*61.8*
3 or more	130.3	140.8	155.0	157.9	172.8	9.6	46.1	75.9	83.2	105.5	*7.4*	*32.7*	*49.0*	*52.7*	*61.1*
All households	**1,230.4**	**1,299.4**	**1,381.9**	**1,405.9**	**1,453.9**	**61.2**	**266.0**	**463.2**	**537.0**	**655.0**	***5.0***	***20.5***	***33.5***	***38.2***	***45.1***

Table 4.3 Households classified by means of access to the Internet[1] - June 2005

	2003		2004		2005	
	'000	%	'000	%	'000	%
All households	**1,381.9**	***100.0***	**1,405.9**	***100.0***	**1,453.9**	***100.0***
with a computer connected to the Internet	463.2	*33.5*	537.0	*38.2*	655.0	*45.1*
Other types of Internet access						
- Handheld computer	17.7	*1.3*	13.5	*1.0*	6.5	*0.4*
- Television	14.4	*1.0*	4.5	*0.3*	5.1	*0.4*
- Mobile phone	31.1	*2.3*	33.7	*2.4*	67.8	*4.7*
- Games console	7.9	*0.6*	4.1	*0.3*	*	*
- Other means	3.9	*0.3*	2.9	*0.2*	*	*
All households with any Internet access	**490.8**	***35.5***	**557.4**	***39.7***	**685.0**	***47.1***

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

* Sample occurrence too small for estimation.

Table 4.4 Households classified by reasons for not having access to the Internet at home[1] - June 2005

	2003		2004		2005	
	'000	%	'000	%	'000	%
Reason[2]						
Have access to Internet elsewhere	96.3	*10.8*	121.7	*14.3*	110.5	*14.4*
Don't want Internet (content harmful, not useful etc.)	335.8	*37.7*	326.0	*38.4*	153.6	*20.0*
Do not need Internet	*n/a*	*n/a*	*n/a*	*n/a*	218.9	*28.5*
Equipment costs too high	133.2	*14.9*	116.3	*13.7*	93.5	*12.2*
Access costs too high	75.6	*8.5*	73.8	*8.7*	71.1	*9.2*
Lack of skills	150.2	*16.9*	161.6	*19.0*	155.0	*20.2*
Language barriers	3.7	*0.4*	4.7	*0.6*	*n/a*	*n/a*
Physical disability	2.5	*0.3*	4.0	*0.5*	*	*
Privacy or security concerns	7.0	*0.8*	15.0	*1.8*	6.7	*0.9*
Other	261.8	*29.4*	173.2	*20.4*	139.1	*18.1*
All households without Internet access	**891.1**	***100.0***	**848.4**	***100.0***	**768.9**	***100.0***

1 There were some changes to the questionnaire in the 2005 survey. Details are available from the CSO.

2 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.

Table 4.5 Number of households with ICT related appliances[1] - June 2005

	2003		2004		2005	
	'000	%	'000	%	'000	%
Appliance[2]						
TV	1,338.1	*96.8*	1,339.6	*95.3*	1,426.9	*98.1*
of which has:						
Satellite dish	215.8	*15.6*	320.3	*22.8*	357.8	*24.6*
Cable TV	577.5	*41.8*	586.2	*41.7*	586.2	*40.3*
Digital TV[3]	*n/a*	*n/a*	*n/a*	*n/a*	236.6	*16.3*
Mobile phone	1,028.1	*74.4*	1,109.3	*78.9*	1,286.9	*88.5*
of which Internet enabled mobile phone	156.6	*11.3*	172.5	*12.3*	310.5	*21.4*
Games console[4]	*n/a*	*n/a*	388.6	*27.6*	512.4	*35.2*
DVD player	461.4	*33.4*	734.0	*52.2*	1,008.9	*69.4*
Personal computer	582.8	*42.2*	649.4	*46.2*	797.7	*54.9*
Handheld computer	51.7	*3.7*	33.9	*2.4*	20.4	*1.4*
Car with a traffic navigation system[5]	15.1	*1.1*	7.8	*0.6*	*n/a*	*n/a*
None of the above	16.4	*1.2*	6.2	*0.4*	3.0	*0.2*
All households	**1,381.9**	***100.0***	**1,405.9**	***100.0***	**1,453.9**	***100.0***

[1] There were some changes to the questionnaire in the 2005 survey. Details are available from the CSO.

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

[3] This category was not included in the 2003 and 2004 surveys.

[4] This category was not included in the 2003 survey.

[5] This category was not included in the 2005 survey.

Table 4.6 Computer and Internet usage for persons aged 16-74[1] - June 2005

	All persons		People who have used a computer				People who have used the Internet				Not stated			
	2004	2005	2004		2005		2004		2005		2004		2005	
	'000	'000	'000	%	'000	%	'000	%	'000	%	'000	%	'000	%
Regional Authority														
Border, Midland and Western	784.9	807.0	375.9	*47.9*	410.1	*50.8*	288.4	*36.7*	325.1	*40.3*	90.6	*11.5*	105.1	*13.0*
Southern and Eastern	2,218.0	2,268.1	1,113.3	*50.2*	1,249.5	*55.1*	910.3	*41.0*	1,044.5	*46.1*	422.2	*19.0*	442.2	*19.5*
Sex														
Male	1,503.4	1,543.2	725.5	*48.3*	785.9	*50.9*	596.2	*39.7*	662.6	*42.9*	274.4	*18.3*	318.1	*20.6*
Female	1,499.6	1,531.9	763.7	*50.9*	873.7	*57.0*	602.5	*40.2*	707.0	*46.2*	238.4	*15.9*	229.2	*15.0*
Age														
16-24 years	639.5	637.3	404.3	*63.2*	414.0	*65.0*	337.4	*52.8*	360.8	*56.6*	163.8	*25.6*	162.9	*25.6*
25-34 years	650.2	681.6	400.3	*61.6*	447.8	*65.7*	336.4	*51.7*	389.0	*57.1*	105.1	*16.2*	118.8	*17.4*
35-44 years	583.6	597.0	328.0	*56.2*	372.3	*62.4*	268.7	*46.0*	302.2	*50.6*	94.5	*16.2*	94.0	*15.7*
45-54 years	495.8	506.3	221.0	*44.6*	242.3	*47.9*	166.9	*33.7*	186.0	*36.7*	68.7	*13.9*	76.8	*15.2*
55-64 years	380.6	394.4	105.2	*27.6*	147.5	*37.4*	71.4	*18.8*	108.4	*27.5*	55.5	*14.6*	60.5	*15.3*
65-74 years	253.2	258.3	30.5	*12.0*	35.6	*13.8*	17.9	*7.1*	23.2	*9.0*	25.2	*10.0*	34.3	*13.3*
ILO Economic Status														
In employment	1,771.9	1,869.9	1,013.2	*57.2*	1,157.1	*61.9*	838.0	*47.3*	976.4	*52.2*	325.4	*18.4*	339.3	*18.1*
Unemployed	106.6	92.0	40.7	*38.2*	38.5	*41.8*	30.6	*28.7*	25.8	*28.0*	21.9	*20.5*	28.7	*31.2*
Not economically active	1,124.5	1,113.1	435.4	*38.7*	464.0	*41.7*	330.2	*29.4*	367.3	*33.0*	165.5	*14.7*	179.4	*16.1*
Principal Economic Status														
At work	1,708.2	1,807.2	979.0	*57.3*	1,117.3	*61.8*	806.3	*47.2*	939.7	*52.0*	302.8	*17.7*	319.0	*17.7*
Unemployed	125.6	122.7	33.4	*26.6*	46.1	*37.6*	26.6	*21.2*	30.5	*24.9*	22.0	*17.5*	31.6	*25.8*
Student	338.0	316.6	244.0	*72.2*	221.7	*70.0*	216.8	*64.1*	209.2	*66.1*	86.0	*25.4*	82.6	*26.1*
Home duties	533.9	518.6	164.6	*30.8*	188.4	*36.3*	102.8	*19.3*	133.8	*25.8*	63.4	*11.9*	58.7	*11.3*
Retired	194.3	200.7	43.8	*22.5*	53.0	*26.4*	28.3	*14.6*	37.8	*18.8*	18.9	*9.7*	30.1	*15.0*
Other	102.9	109.4	24.4	*23.7*	33.1	*30.3*	18.1	*17.6*	18.6	*17.0*	19.8	*19.2*	25.3	*23.1*
All persons aged 16-74	**3,002.9**	**3,075.1**	**1,489.2**	***49.6***	**1,659.6**	***54.0***	**1,198.8**	***39.9***	**1,369.6**	***44.5***	**512.8**	***17.1***	**547.4**	***17.8***

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

Table 4.7 Use of computers classified by training activities, frequency and location of use[1] - June 2005

'000

	2003	2004	2005
Computer-related training course			
In the last 12 months	278.7	263.3	317.8
More that one year ago	503.6	563.7	821.0
Never	583.7	662.2	520.7
All persons who have ever used a computer	**1,366.0**	**1,489.2**	**1,659.6**
Frequency of use in the previous 3 months			
Every day or almost every day	667.5	727.3	817.3
At least once a week (but not every day)	324.5	367.0	381.0
At least once a month (but not every week)	107.0	102.5	109.6
Less than once a month	60.2	40.8	41.1
Location of use in the previous 3 months[2]			
Home	759.0	835.3	943.0
Place of work (other than home)	591.3	625.6	706.1
Place of education	166.8	202.7	138.1
Another person's home			55.0
Other places	58.5	59.8	84.2
All persons who used a computer in the previous 3 months	**1,159.4**	**1,237.6**	**1,348.9**

1 There were some changes to the questionaire in the 2005 survey. Details are available from the CSO.

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

Table 4.8 Use of Internet in the previous three months, classified by frequency, location and duration of use[1] - June 2005

'000

	2003	2004	2005
Frequency of use			
At least once a day	342.3	373.3	528.8
At least once a week (but not every day)	384.3	446.8	418.2
At least once a month (but not every week)	115.8	137.7	144.7
Less than once a month	53.4	48.6	55.0
Location of use[2]			
Home	610.5	674.5	789.9
Place of work (other than home)	381.0	437.8	524.7
Place of education	110.1	144.4	118.5
Public library	24.2	27.8	34.6
Community/voluntary organisation	4.1	1.5	3.7
Internet café	39.4	32.5	64.3
Neighbour, friend or relative's house	39.5	35.4	54.7
Other	12.6	10.0	9.7
All persons who used the Internet in previous 3 months	**896.2**	**1,006.4**	**1,146.7**

1 There were some changes to the questionaire in the 2005 survey. Details are available from the CSO.

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

Table 4.9 Activities[1] on the Internet in the previous 3 months[2] - June 2005

'000

	2003	2004	2005
Communication	**749.5**	**832.3**	**964.4**
Sending and receiving e-mails	736.1	820.2	953.9
Telephoning/video conferencing	59.3	58.6	89.1
Other (use of chat sites etc.)	116.2	75.6	87.2
Information search and on-line services	**760.2**	**841.0**	**1,033.2**
Finding information about goods and services	620.5	659.3	894.5
Travel and accommodation	483.3	536.9	743.6
Web radio/web television	72.2	77.0	124.1
Playing/downloading games, images and or music[3]	127.3	144.1	191.3
Downloading software[4]	*n/a*	*n/a*	141.9
Reading /downloading newspapers or magazines	144.5	160.1	125.5
Looking for a job/sending job applications	140.4	98.4	72.7
Purchasing, selling or banking	**367.5**	**450.5**	**521.6**
Internet banking	237.9	314.7	389.6
Other financial services	48.7	49.4	50.4
Purchasing/ordering goods/services	191.3	239.6	285.1
Selling goods or services	33.6	20.3	23.2
Interaction with public authorities	**346.2**	**423.8**	**542.7**
Obtaining information from web sites	283.2	340.9	444.2
Downloading official forms	193.7	260.0	362.2
Sending completed forms	144.1	190.4	283.6
Training and education	**235.9**	**294.0**	**281.0**
Formalised educational activities	179.6	208.6	191.2
Post educational courses	59.2	66.5	96.5
Other employment-related educational courses	100.2	108.6	98.5
Health-related activities	**198.5**	**175.4**	**341.0**
Seeking health information	190.8	167.9	322.2
Seeking medical advice from a practitioner	12.9	4.8	19.7
Making an appointment with a practitioner	11.9	4.5	3.4
Requesting a prescription	9.3	2.6	2.1
All persons who used the Internet in previous 3 months	**896.2**	**1,006.4**	**1,146.7**

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

[2] The results are subject to sampling error, which has a relatively larger effect on small estimates and annual trends.

[3] In 2003 this category was ' Playing/downloading games and or music' .

[4] This category was not included in 2003 and 2004 surveys.

Table 4.10 Purchases[1] on the Internet - June 2005

	'000	
	2004	2005
Types of goods and services ordered in last 12 months		
Food/groceries	17.1	36.2
Household goods[2]	*n/a*	41.0
Films/music	89.8	162.3
Books/magazines/newspapers/e-learning material	96.0	136.0
Clothes/sports goods	21.6	52.9
Computer software	18.1	61.5
Computer hardware	18.7	26.8
Electronic equipment	18.6	40.5
Share purchases/financial services/insurance	5.9	14.6
Travel and holiday accommodation	210.0	318.6
Tickets for events	64.9	159.3
Lotteries/betting	2.9	9.4
Other	40.0	28.7
Problems encountered[3]		
Uncertainty concerning guarantees	13.2	13.0
Delivery slower than indicated	17.4	25.6
Delivery costs higher than indicated	6.1	13.8
Final price higher than indicated	8.6	14.0
Wrong goods delivered	7.7	11.5
Damaged goods delivered	1.5	9.0
Lack of security of payments	5.3	6.6
Complaints and redress difficult	6.4	8.7
No satisfactory response after complaint	11.3	9.8
Other	38.6	42.7
None	386.5	465.6
All persons who have ever purchased on the Internet in the last 12 months	**490.7**	**587.4**

[1] Purchases includes both purchasing and ordering of goods and services. There were some changes to the questionaire in the 2005 survey and the results are not comparable with the corresponding tables in the 2003 and 2004 reports.
[2] This category was not included in the 2003 and 2004 surveys.
[3] Respondents could give more than one response to this question hence the sum of the categories does not equal the total.

Table 4.11 Reasons for not purchasing[1] via the Internet[2] - June 2005

'000

	2003	2004	2005
Reason[3]			
Have no need	301.1	401.1	354.5
Prefer to shop in person	153.8	201.5	241.0
Security concerns	44.8	46.2	47.2
Privacy concerns	12.7	11.6	14.7
Too expensive	11.6	15.2	21.0
Problematic to receive goods at home	7.2	3.2	6.6
Don't have a payment card	*n/a*	*n/a*	37.8
Lack of skills	*n/a*	*n/a*	24.1
Too long delivery times	*n/a*	*n/a*	3.6
Trust concerns	10.4	6.1	11.4
Speed of Internet connection is too slow	*n/a*	*n/a*	*
Force of habit	24.2	22.8	*n/a*
Other (including no credit card)	54.1	79.4	49.6
All persons who have never purchased via the internet	**544.0**	**708.1**	**703.5**

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

2 There were some changes to the questionnaire in the 2005 survey. Details are available from the CSO.

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

Chapter Five

Connecting to the Internet

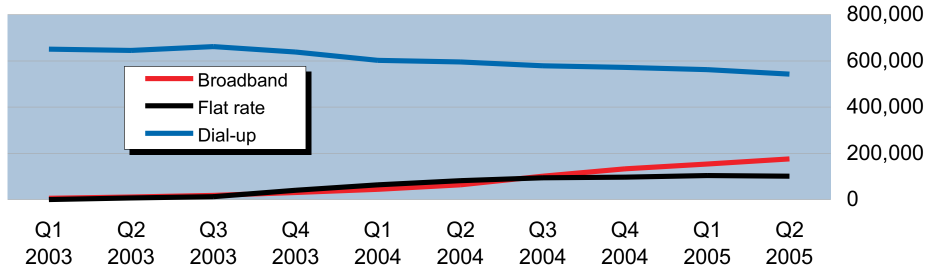
Introduction

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 of internet users who use the slower dial-up modem/ISDN connection types.

Aggregate Narrowband and Broadband connections

In the first quarter of 2003 broadband was used by just under 1% of subscribers to the internet. There has been a rapid growth in uptake since then, with broadband subscribers accounting for almost 22% of total subscribers in the second quarter of 2005. Traditional metered dial-up subscriptions decreased from 97% to 66% of total subscriptions over the same period. Narrowband flat rate subscriptions to the internet have shown a sharp increase for the same period going from just under 1% to 12%. *See Figure 5.1 and Tables 5.1 and 5.2.*

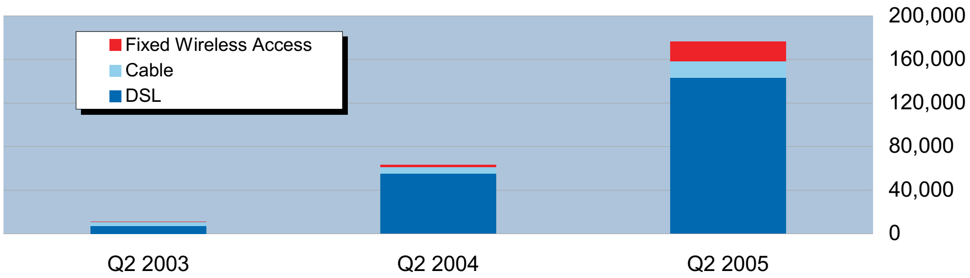
Figure 5.1 Number of Internet subscriptions by type



Source: ComReg

Almost 81% of broadband subscribers used DSL (Digital Subscriber Line) for their connection in the second quarter of 2005. Although the numbers connecting by cable and fixed wireless access increased, their share of the overall broadband market declined to 8% and 10% respectively. The distribution of broadband subscription by type of connection since the second quarter of 2003 is shown in Figure 5.2. *See Table 5.2.*

Figure 5.2 Number of subcribers to each type of broadband connection

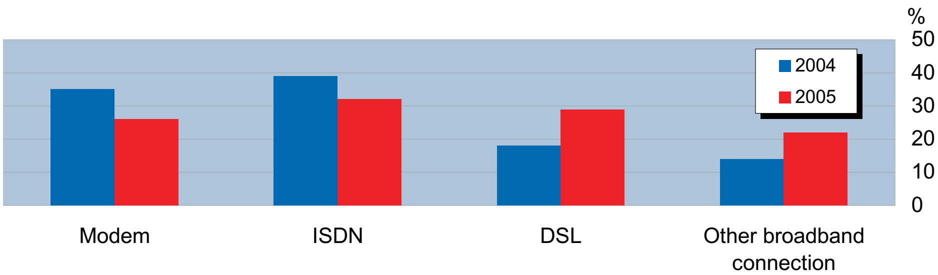


Source: ComReg

Enterprises

The results of the CSO survey show an increased use of broadband for connecting to the internet in 2005. DSL connections rose from 18% to 29% in 2005. These results relate to enterprises with 10 or more employees. The services sector reported a higher usage of broadband than that of the manufacturing sector. Twenty two percent of enterprises also reported using broadband connections other than DSL in 2005. Overall the *Computer and related activities* (NACE 72) area reported the highest levels of broadband usage with the *Hotels and other short stay accommodation* (NACE 55) sector reporting the lowest uptake levels. As a consequence of the increased uptake of broadband, use of ISDN connections fell from 39% in 2004 to 32% in 2005, while the number of enterprises using dial-up modems declined from 35% in 2004 to 26% in 2005. 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 more than twice as 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 who use broadband show greater levels of e-business activity and higher degrees of integration of their ICT systems.

Households

The results from the CSO Household survey on ICT usage show the growth in the household uptake of broadband from just under 2% to almost 16% over the 2003 - 2005 period. As a result the percentage share of connections by modem or ISDN decreased from 94% to 81% over the same period *See Figure 5.4 and Table 5A below.*

Table 5A Type of connection to the Internet

	Q2 2003	Q2 2004	Q2 2005
	(000)	(000)	(000)
Type of Internet connection			
Modem/ISDN	461.5	503.6	552.1
Broadband	8.5	40.4	106.9
Other/don't know	14.5	13.9	48.1
Total Households with an Internet connection	**490.8**	**557.4**	**685.0**

Source: CSO - Quarterly National Household Survey.

On a regional level, the results show a significantly higher uptake of broadband by households in the Southern and Eastern region where almost 19% of households with internet access connected using broadband. This compares with just under 8% of households in Border, Midlands, and Western region.

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

	Unit	Quarter 2 2003	Quarter 2 2004	Quarter 2 2005
Narrowband	Number	**651,500**	**677,000**	**643,000**
of which				
Dial-up	Number	645,000	595,000	542,000
Flat Rate	Number	6,500	82,000	101,000
Broadband	Number	**10,900**	**63,100**	**176,300**
of which				
DSL	Number	7,300	55,600	143,400
Cable	Number	3,200	5,400	14,900
Fixed Wireless Access	Number	400	2,200	18,000
All Subscribers	Number	**662,400**	**740,100**	**819,300**

Source: ComReg.

Table 5.2 Market shares of connection types for Internet subscribers

	Unit	Quarter 2 2003	Quarter 2 2004	Quarter 2 2005
Narrowband	%	**98**	**91**	**78**
of which				
Dial-up	%	99	88	84
Flat Rate	%	1	12	16
Broadband	%	**2**	**9**	**22**
of which				
DSL	%	67	88	81
Cable	%	29	9	8
Fixed Wireless Access	%	4	3	10
All Subscribers	%	**100**	**100**	**100**

Source: ComReg.

Table 5.3 External connection to the Internet, as a percentage of all enterprises, by sector - March 2004[1] and 2005

	Manufacturing sectors		Selected services sectors		Total	
	2004	2005	2004	2005	2004	2005
Enterprises with 10 or more persons engaged	2,913	2,800	5,912	8,256	8,825	11,056
%	100	100	100	100	100	100
Type of external connection to the Internet[2]						
Modem	36	24	34	27	35	26
ISDN	45	36	35	30	39	32
Broadband	31	47	34	49	33	49
Wireless connection	5	8	7	8	6	8
Enterprises with broadband						
Using extranet	24	24	24	25	24	25
Having employees who e-work[3]	43	41	48	42	46	42
Using dedicated ICT systems for managing orders	64	59	55	52	58	54
Purchases by Internet or EDI	76	71	77	76	77	75
Sales by Internet or EDI	43	41	39	38	40	39
Enterprises without broadband						
Using extranet	8	10	8	7	8	8
Having employees who e-work[3]	15	17	14	14	14	15
Using dedicated ICT systems for managing orders	35	33	36	33	36	33
Purchases by Internet or EDI	47	48	39	40	42	42
Sales by Internet or EDI	27	29	23	20	24	22

[1] Revised.

[2] Enterprises may have more than one Internet connection.

[3] Enterprises who 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 2005

	Manufacturing sectors					Selected services sectors							Total
	15-22	**23-25**	**26-28**	**29-37**	**Total**	**50-52**	**55.1-55.2**	**60-63**	**64**	**70-71 73-74**	**72**	**Total**	
Enterprises with 10 or more persons engaged	1,105	354	548	793	2,800	4,425	679	782	106	1,837	427	8,256	11,056
%	100	100	100	100	100	100	100	100	100	100	100	100	100
Type of external connection to the Internet													
Modem	26	20	25	22	24	32	34	22	27	16	11	27	26
ISDN	34	32	35	41	36	31	37	32	45	27	28	30	32
Broadband	47	55	38	49	47	43	40	46	62	61	80	49	49
Wireless connection	8	7	8	9	8	6	13	5	12	8	17	8	8
Broadband connection type as % of all enterprises													
DSL < 2Mb/sec	14	18	11	16	15	15	10	16	17	20	24	17	16
DSL >= 2Mb/sec	13	15	10	12	13	13	7	14	36	21	29	16	15
Other broadband connection	23	29	20	25	23	17	26	21	20	25	39	21	22
Enterprises with broadband													
Using extranet	21	24	20	31	24	22	14	24	47	24	53	25	25
Having employees who e-work[1]	45	41	25	44	41	34	23	42	59	45	85	42	42
Using dedicated ICT systems for managing orders	57	67	42	66	59	67	41	50	84	29	52	52	54
Purchases by Internet or EDI	65	69	73	79	71	77	49	78	70	77	89	76	75
Sales by Internet or EDI	52	26	34	38	41	40	76	49	58	21	35	38	39
Enterprises without broadband													
Using extranet	11	10	8	10	10	5	3	10	5	12	30	7	8
Having employees who e-work[1]	15	26	18	17	17	12	5	13	20	19	75	14	15
Using dedicated ICT systems for managing orders	33	36	18	44	33	42	16	26	39	13	44	33	33
Purchases by Internet or EDI	48	45	39	56	48	41	24	35	53	40	70	40	42
Sales by Internet or EDI	33	27	21	30	29	16	49	27	34	9	35	20	22

[1] Enterprises who 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

Internet Security

Introduction

This chapter presents information on the application of internet security measures by households and enterprises. It also contains information on security problems encountered by both sectors during 2005. In general, buying over the internet is perceived as relatively safe with only 1% of online shoppers reporting problems concerning security of payment. Of those internet users who did not purchase online in 2005, only 7% cited security concerns as a reason for not doing so. However, the ICT enterprise survey showed that almost 60% of enterprises who had e-commerce sales rated security problems concerning payments to be one of the principal barriers to e-commerce.

Enterprises

The use of IT security measures by enterprises rose again in 2005 with an increasing use of systems such as secure servers, firewalls, offsite data backup, virus checking or protection software and authentication mechanisms. Electronic digital signatures for customer authentication were used by 10% of enterprises in 2005. The percentage of enterprises using encryption for confidentiality showed no change from 2004 levels. About three quarters of enterprises had updated their security facilities in the previous three months. *See Tables 6A and 6.1*.

Table 6A Security facilities used by enterprises, as percentage of all enterprises

	2004	2005
Enterprises with 10 or more persons engaged	8,825	11,056
%	100	100
Security facilities used		
Secure servers	37	43
Firewalls	54	67
Encryption for confidentiality	12	12
Offsite data backup	38	42
Authentication	20	22
Virus checking or protection software	83	87

Source: CSO - e-Commerce and ICT Survey.

The main security problem encountered by enterprises was a computer virus which resulted in either loss of data or working time. Over one in three enterprises reported such problems. Other less significant security problems included unauthorised access and blackmail or threats to the enterprises' computer systems or data. The results show that one in eight enterprises in the *Computer and related activities* (NACE 72) sector reported problems relating to unauthorised access to their computer systems or data. *See Table 6.1*.

Households

Over 92% of all persons who used the internet indicated that they took security precautions. The main security measure, taken by 71% of persons using the internet, was the use of a virus checking program. Firewalls were used by 29% , while almost 50% used online authentication. Just over half of internet users either installed or updated their internet protection facility in the previous three months.

Table 6B Security precautions taken on the Internet by individuals who used the Internet during the last 3 months

	Q2 2005
	(000)
Security precaution taken	
Internet device protected by a virus checking program	812.0
Internet device protected by a hardware/software firewall	337.5
Internet protection installed/updated in last 3 months	590.8
Used on-line authentication in last 3 months	564.7
No security precautions taken	85.5
All persons who used the Internet in last 3 months	**1,146.7**

Source: CSO - Quarterly National Household Survey.

The results show that 43% of persons encountered security problems on the internet during the previous 12 months. The main problems encountered were the receipt of Spam (the receipt of unsolicited e-mails) and computer viruses which resulted in the loss of information or time. Over 30% of people received Spam while nearly 17% indicated that they had encountered a problem with a computer virus. Less than 1% of persons reported problems relating to the fraudulent use of a payment card while just over 1% indicated problems with abuse of personal information sent on the internet.

Table 6C Security problems encountered by individuals who have used the Internet in the previous 12 months - Q2 2005

	Q2 2005
	(000)
Security problem encountered	
Computer virus with loss of information or time	212.4
Fraudulent payment (credit/debit) card use	7.6
Abuse of personal information sent on the Internet	16.5
Spam - unsolicited e-mails sent to you	385.7
No security problems encountered	731.6
All persons who have used the Internet in the previous 12 months	**1,279.7**

Source: CSO - Quarterly National Household Survey.

Table 6.1 Enterprises use of security facilities and security problems encountered, as percentage of all enterprises, by sector - March 2005

	Manufacturing sectors					Selected services sectors							Total
	15-22	23-25	26-28	29-37	Total	50-52	55.1-55.2	60-63	64	70-71 73-74	72	Total	
Enterprises with 10 or more persons engaged	1,105	354	548	793	2,800	4,425	679	782	106	1,837	427	8,256	11,056
%	100	100	100	100	100	100	100	100	100	100	100	100	100
Security facilities used													
Secure servers	44	50	35	47	44	36	38	42	71	52	86	43	43
Firewalls	69	78	57	77	70	59	54	64	91	77	100	66	67
Encryption for confidentiality	7	15	7	16	11	9	7	12	36	14	35	12	12
Offsite data backup	45	51	39	52	47	34	25	35	62	53	78	40	42
Authentication	23	22	16	30	24	18	16	25	48	23	42	21	22
Virus checking or protection software	87	94	84	93	89	84	84	80	96	91	100	86	87
Electronic digital signature for customer authentication	9	9	8	12	10	9	3	11	23	11	14	9	10
Updated any of it's security facilities in the last three months[1]	77	77	67	84	77	65	72	70	91	81	100	72	73
Security problems encountered													
Computer virus attack resulting in loss of data or working time	38	36	35	41	38	32	38	37	44	36	47	35	36
Unauthorised access to enterprise computer systems or data	2	1	2	3	2	2	4	2	6	2	12	3	3
Blackmail or threats to enterprise computer systems or data	1	1	2	1	1	2	3	2	2	1	2	2	2
Any of the above	39	38	37	42	40	33	41	38	44	38	49	36	37
None of the above	61	62	63	58	60	67	59	62	56	62	51	64	63

[1] Includes automatic updates

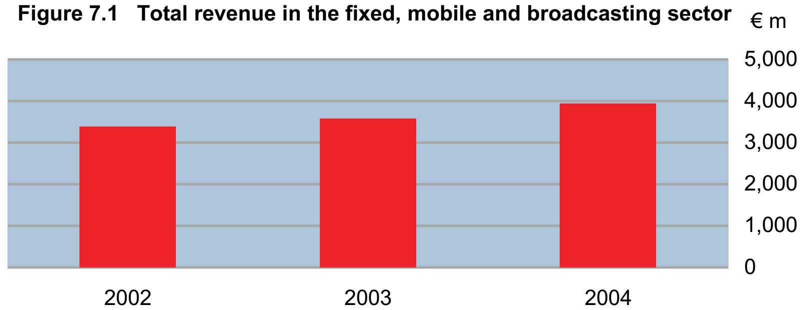
Chapter Seven

Telecommunications

Introduction

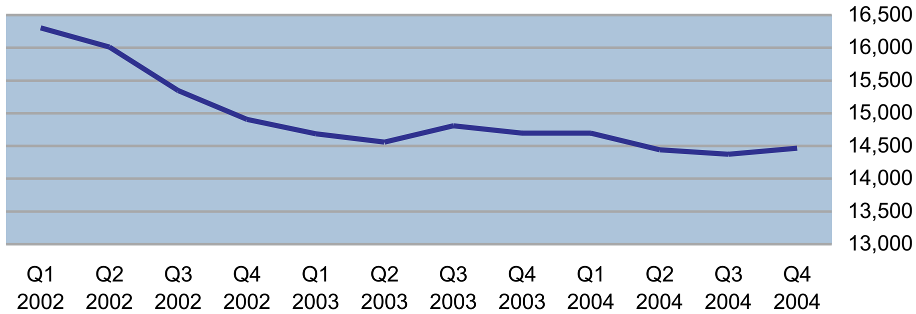
This chapter presents information, supplied by the Commission for Communications Regulation (ComReg), on the telecommunications sector in Ireland. The average annual number of employees working in the fixed, mobile and broadcasting sectors in 2004 was almost 14,500 with overall revenues in that year totalling €3.9bn. The total volume of fixed and mobile voice time for 2004 was almost 14.4 billion minutes with over 3.6bn SMS messages sent in the same period. *See Figures 7.1 and 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

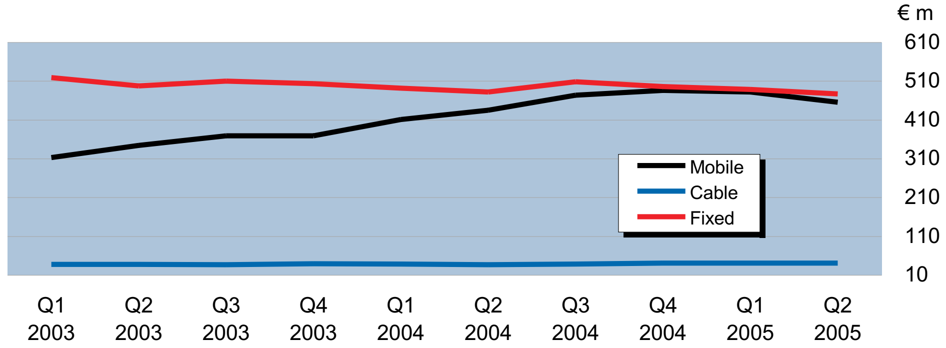


Source: ComReg

Fixed Market

The total number of direct and indirect fixed telephone lines was just over 2.0 million in the second quarter of 2005. The total amount of retail voice time generated by means of both direct and indirect fixed voice calls was nearly 9.7 billion minutes in 2004. This was a 3.8% increase on the corresponding figure for 2003. The call volumes are made up of national, international, calls to mobile and other calls (includes calls made from payphones). *See Figure 7.3, Tables 7.1 and 7.2.*

Figure 7.3 Revenue for Fixed, Mobile and Cable

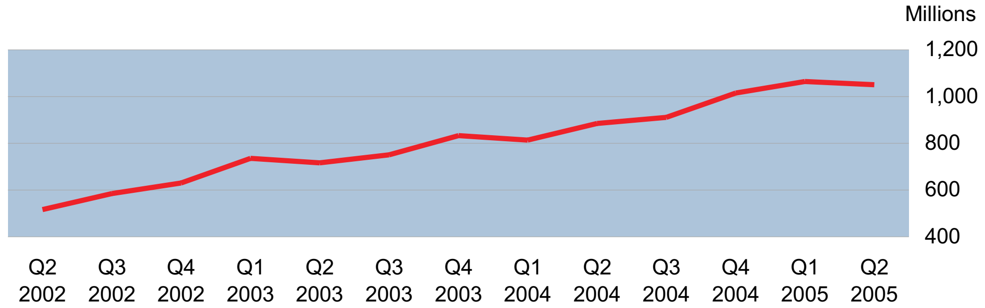


Source: ComReg

Mobile Market

The total number of mobile subscribers in the second quarter of 2005 was over 3.8 million. Pre-paid subscribers made up three quarters of this. The mobile penetration rate (based on active SIMs as a percentage of the total population) for Ireland has increased from 81% in the second quarter of 2003 to 94% in the same quarter of 2005. Revenue in the mobile sector reached €1.8bn in 2004, an increase of 29% on the previous year. The Mobile voice time for 2004 was 4.8 billion minutes, which was up 11% on 2003 levels. The volume of SMS messages was up 19% over the same period. *See Figure 7.4 and Tables 7.1 and 7.2.*

Figure 7.4 Number of SMS message sent quarterly

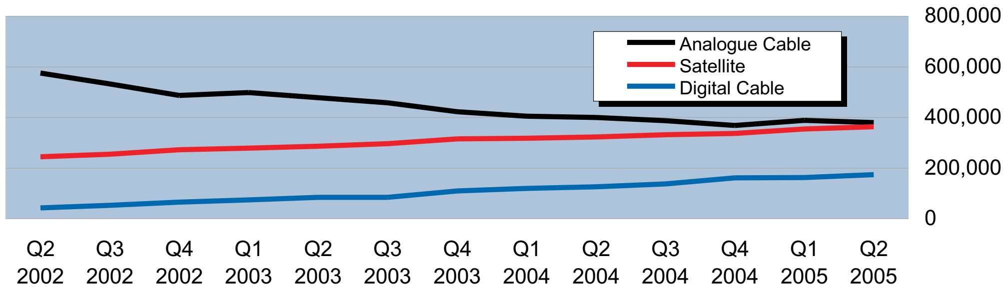


Source: ComReg

Broadcasting

The increase in the number of digital (cable and satellite) subscribers over the period 2002 – 2005 is shown in Figure 7.5 below. In the second quarter of 2002 only one in three pay television subscribers had a digital subscription. By the second quarter of 2005 this had increased to almost 59% of the total pay TV subscribers. *See Figure 7.5 and Tables 7.1 and 7.2.*

Figure 7.5 Number of subscribers to pay television



Source: ComReg

Price Trends

The CSO's Consumer Price Index (CPI) measures price changes in telephone and communication services. The CPI showed that the cumulative price increase of these services was 3.4% in the three years from 2002 to 2005. *See Table 7A.*

Table 7A Consumer Price Index series for Telephone and Communication services 2002 - 2005

	2002	2003	2004	2005
Index[1]	100.6	101.7	104.1	104.0

Source: CSO - Consumer Price Index.

[1] Base year 2001=100.

Table 7.1 Selected telecommunications and broadcasting data for Q2 of 2003 - 2005

	Unit	Quarter 2 2003	Quarter 2 2004	Quarter 2 2005
Ireland				
Fixed				
Total fixed access paths[1]	Number	2,072,000	2,024,000	2,047,000
Mobile				
Post-paid subscribers	Number	887,000	920,000	965,000
Pre-paid subscribers	Number	2,287,000	2,578,000	2,866,000
Total	Number	**3,174,000**	**3,499,000**	**3,831,000**
Penetration rates[2]	%	81	89	94
Television				
Number of subscribers by platform	Number	**848,000**	**849,000**	**917,000**
of which				
Analogue cable	Number	478,000	400,000	380,000
Satellite	Number	286,000	323,000	363,000
Digital cable	Number	84,000	126,000	174,000

[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 2002 - 2004

	Unit	2002	2003	2004
Ireland				
Revenues				
Fixed	€ million	2,061	2,031	1,979
Mobile	€ million	1,183	1,396	1,806
Cable	€ million	140	153	156
Total	€ million	**3,384**	**3,580**	**3,941**
Volumes				
Fixed telephone voice	000 mins	9,580,012	9,302,701	9,659,809
Mobile voice	000 mins	*	4,305,193	4,783,741
Mobile SMS	000 number	*	3,035,396	3,623,696

* Data is not available for the full year for 2002.

Source: ComReg.

Chapter Eight

International Comparisons

Introduction

This chapter presents some international comparisons which show how Ireland compares with other countries in respect of various aspects of the Information Society. The relative contribution of ICT is examined on a global perspective while some of the latest EU results from the enterprise and household surveys are presented. The EU enterprise survey results also include coverage of the *Construction, Motion picture and video activities* and *Radio and television activities* sectors for all member states. The results for these sectors are not included in the earlier chapters.

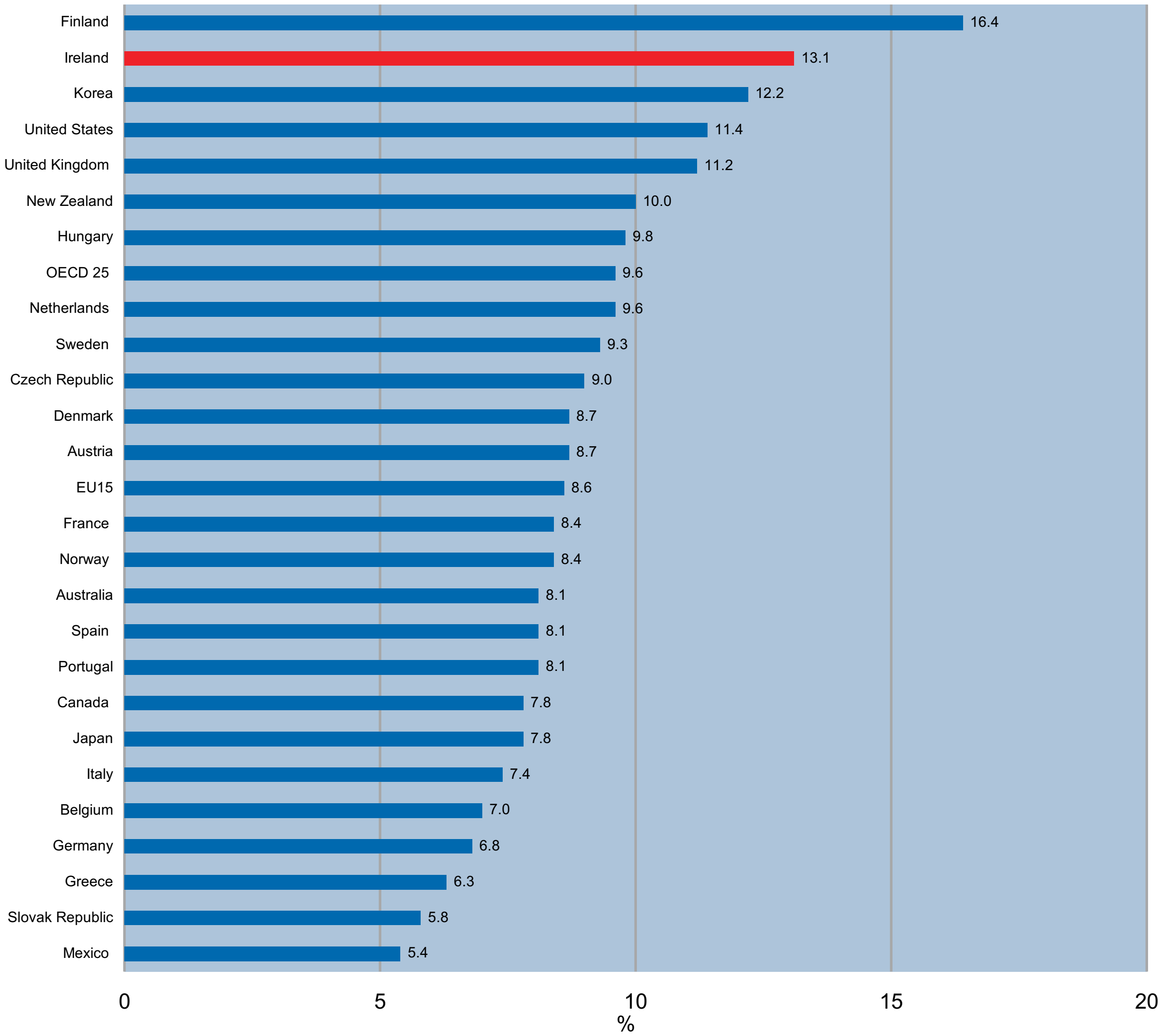
The ICT sector

Figure 8.1 shows the key indicator concerning the share of ICT value added in the business sector value added for the period 2001, the latest period for which comparable data is available. In order to show a global perspective data is shown for all EU15 Member States, with the exception of Luxembourg, and corresponding data for other selected OCED countries.

In 2001, the ICT sector in Ireland had one of the highest shares of business sector value added, second only to Finland. At 13.1% of total value added, Ireland was significantly above the EU15 average (8.6%) and the corresponding figure for OECD 25 (9.6%). Ireland also showed a higher proportion of value added than the United States (11.4%), the United Kingdom (11.2%) and Japan (7.8%). *See Figure 8.1.*

It should be noted that in many international publications, the reproduction of computer media is not included as ICT. This sector is included in Chapter 2 of this publication as it makes a significant contribution to industry in Ireland, but is excluded from the international comparison. As a consequence the figure referred in Chapter 2 is much higher than the value shown in this comparison.

Figure 8.1 Share of ICT value added in the Business sector value added, EU15 and selected OECD countries - 2001



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

Use of ICT by Enterprises

In 2005, almost one in three enterprises in Denmark said they received orders online in the previous year. The corresponding level of online sales in Ireland was 21%, significantly above the EU average of 12%. *See Table 8.1.*

Table 8.1 Percentage of enterprises who received orders on-line during the previous year - 2005

	Unit	2005
European Union (EU25)	%	12
Belgium	%	16
Czech Republic	%	13
Denmark	%	32
Germany	%	16
Estonia	%	8
Greece	%	7
Spain	%	3
France[1]	%	:
Ireland	**%**	**21**
Italy	%	3
Cyprus	%	4
Latvia	%	1
Lithuania	%	6
Luxembourg	%	10
Hungary	%	4
Malta[1]	%	:
Netherlands	%	14
Austria	%	10
Poland	%	5
Portugal[1]	%	:
Slovenia	%	12
Slovakia	%	7
Finland	%	17
Sweden	%	23
United Kingdom	%	25

[1] Data not available.

Source: Eurostat.

Use of ICT by Households

The Netherlands had the highest EU rate of internet access in the home with 78% of all households having access in 2005. In Luxembourg, Denmark and Sweden the figures were at a similarly high level with about three quarters of households having internet access. Forty five percent of Irish households had a connection to the internet which was slightly below the EU average of 48%. *See Table 8.2.*

Table 8.2 Percentage of households having access to the Internet at home - 2005

	Unit	2005
European Union (EU25)	%	48
Belgium	%	50
Czech Republic	%	19
Denmark	%	75
Germany	%	62
Estonia	%	39
Greece	%	22
Spain	%	36
France[1]	%	:
Ireland	**%**	**45**
Italy	%	39
Cyprus	%	32
Latvia	%	42
Lithuania	%	16
Luxembourg	%	77
Hungary	%	22
Malta[1]	%	:
Netherlands	%	78
Austria	%	47
Poland	%	30
Portugal	%	31
Slovenia	%	48
Slovakia	%	23
Finland	%	54
Sweden	%	73
United Kingdom	%	60

[1] Data not available.

Source: Eurostat.

Connecting to the Internet

In 2005, the percentage of enterprises with broadband connection reached 48%. This was below the EU average of 63%. The highest rates were in Sweden, Denmark and Finland, all above 80%. The level of broadband access for business in Greece, Cyprus, Latvia, Hungary, Poland and Slovakia was similar to Ireland's. *See Table 8.3.*

Irish households also reported a lower level of broadband uptake compared to their EU counterparts. Just 16% of households with an internet connection in 2005 used broadband, compared to an EU average of 48%. High levels of broadband uptake were recorded in Belgium, Estonia and Lithuania. *See Table 8.4.*

Table 8.3 Percentage of enterprises with a broadband connection - 2005[1]

	Unit	2005
European Union (EU15)	%	63
Belgium	%	78
Czech Republic	%	52
Denmark	%	82
Germany	%	62
Estonia	%	67
Greece	%	44
Spain	%	76
France[1]	%	:
Ireland	**%**	**48**
Italy	%	57
Cyprus	%	40
Latvia	%	48
Lithuania	%	57
Luxembourg	%	64
Hungary	%	48
Malta[1]	%	:
Netherlands	%	71
Austria	%	61
Poland	%	43
Portugal[1]	%	:
Slovenia	%	74
Slovakia	%	48
Finland	%	81
Sweden	%	83
United Kingdom	%	65

Source: Eurostat.

[1] Data not available.

Table 8.4 Households with a broadband connection as a percentage of households with Internet access at home - 2005

	Unit	2005
European Union (EU25)	%	48
Belgium	%	81
Czech Republic	%	27
Denmark	%	68
Germany	%	38
Estonia	%	77
Greece	%	3
Spain	%	58
France[1]	%	:
Ireland	**%**	**16**
Italy	%	34
Cyprus	%	14
Latvia	%	30
Lithuania	%	73
Luxembourg	%	51
Hungary	%	49
Malta[1]	%	:
Netherlands	%	69
Austria	%	50
Poland	%	51
Portugal	%	63
Slovenia	%	40
Slovakia	%	31
Finland	%	67
Sweden	%	55
United Kingdom	%	52

[1] Data not available.

Source: Eurostat.

Internet Security

Just over a quarter of enterprises in the EU encountered an internet security problem resulting in the loss of information or work time during 2004. Enterprises in eight member states, including Ireland, reported a higher incidence of security problems than enterprises in other EU states. *See Table 8.5.*

Irish individuals who used the internet however, were less likely to encounter a security problem than those in many other EU member states. Just under 17% of Irish internet users encountered a computer virus compared with an EU average of 35%. The highest rate of incidence was encountered by internet users in Spain and Luxembourg. *See Table 8.6.*

Table 8.5 Percentage of enterprises who encountered a security problem in the last year - 2005

	Unit	2005
European Union (EU25)	%	27
Belgium	%	23
Czech Republic	%	24
Denmark	%	26
Germany	%	20
Estonia	%	22
Greece	%	25
Spain	%	24
France[1]	%	:
Ireland	**%**	**37**
Italy	%	47
Cyprus	%	30
Latvia	%	16
Lithuania	%	32
Luxembourg	%	21
Hungary	%	51
Malta[1]	%	:
Netherlands	%	20
Austria	%	34
Poland	%	21
Portugal[1]	%	:
Slovenia	%	31
Slovakia	%	19
Finland	%	55
Sweden	%	24
United Kingdom	%	20

[1] Data not available.

Source: Eurostat.

Table 8.6 Percentage of individuals using the Internet who encountered a computer virus in the previous 12 months - 2005

	Unit	2005
European Union (EU15)	%	35
Belgium[1]	%	:
Czech Republic	%	14
Denmark	%	35
Germany	%	33
Estonia	%	10
Greece	%	18
Spain	%	48
France[1]	%	:
Ireland	**%**	**17**
Italy	%	41
Cyprus	%	25
Latvia	%	17
Lithuania	%	40
Luxembourg	%	46
Hungary	%	30
Malta[1]	%	:
Netherlands[1]	%	:
Austria	%	27
Poland	%	30
Portugal	%	23
Slovenia	%	40
Slovakia	%	26
Finland	%	31
Sweden	%	24
United Kingdom	%	37

[1] Data not available.

Source: Eurostat.

Telecommunications

The total number of SMS messages sent in selected EU member states in 2004 is shown in Table 8.7 below. Irish mobile subscribers were among the highest users of SMS messaging in the EU, in terms of messages per capita, in 2004. Denmark, Cyprus and Malta also recorded large volumes of SMS per capita. *See Table 8.7.*

Table 8.7 Total number of SMS - 2004

	Unit	2004
European Union (EU15)[1]	000	:
Belgium[1]	000	:
Czech Republic	000	5,710,760
Denmark	000	6,554,569
Germany	000	20,100,000
Estonia	000	112,488
Greece[1]	000	:
Spain	000	12,801,000
France[1]	000	:
Ireland	**000**	**3,624,000**
Italy[1]	000	:
Cyprus	000	960,991
Latvia1	000	:
Lithuania	000	1,387,646
Luxembourg	000	195,000
Hungary	000	1,204,926
Malta	000	392,457
Netherlands[1]	000	:
Austria	000	1,589,000
Poland	000	7,988,427
Portugal	000	2,563,616
Slovenia	000	413,364
Slovakia	000	1,224,352
Finland	000	2,193,500
Sweden	000	2,045,000
United Kingdom[1]	000	:

[1] Data not available.

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. *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 home computing was included for the first time in June 2003 and repeated annually since then, in June of each year. It included questions relating to the household and questions asked of each person aged 16 to 74. Full details of the questionnaire are available from the CSO. 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.

The June 2005 results are based on a sample of just under 5,700 households. The grossing procedure aligns the distribution of persons covered in the sample with independently determined population estimates at the level of sex, five-year 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-to-year trends.

There were some differences between the questionnaires used in the 2003 and 2004 ICT modules and these may affect comparability of the results. These are indicated in the tables. *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 2005 survey. The survey covered manufacturing enterprises (with three 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, sport events etc.) and to personal services (hairdressing etc.). These sectors have not been 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

45* Construction

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.