

19

Knowledge Economy

- The ICT sector employed over 82,700 persons in 2005.
- In total, 57% of Irish households had access to the internet in the first quarter of 2007. Almost 31% of all households had a broadband connection.
- Nearly two thirds of businesses with 10 or more employees had a website or homepage in 2007.
- A mobile penetration rate of 114% was recorded in the second quarter of 2007.



Contents

Introductory text	329
Table 19.1 Contribution of the ICT sector to the Irish economy	332
Table 19.2 Main trends in household ICT use	332
Table 19.3 Activities on the internet in the previous 3 months	333
Table 19.4 Purchases on the internet	334
Table 19.5 Main results of enterprise ICT survey, as percentage of all enterprises - March 2007	334
Table 19.6 Levels of interaction with public authorities via the internet, as percentage of all enterprises - March 2007	335
Table 19.7 Purchases and sales via e-commerce, 2007	335
Table 19.8 Selected telecommunications and broadcasting data	336
Table 19.9 Innovation activity of enterprises as a percentage of all enterprises, 2004-2006	336

Introduction

This chapter presents information on the knowledge economy in Ireland. It contains statistics on the information society and telecommunications. The results have been obtained from a number of CSO enterprise and household surveys and also includes administrative data from the Commission for Communications Regulation (ComReg) on telecommunications and broadcasting.

ICT sector

The ICT sector employed over 82,700 people in 2005, which represented 9% of total employment in industry and services. The ICT manufacturing sector employed 27,900 persons, while 54,900 people were employed in ICT services, accounting for over 7% of total services employment.

The ICT sector accounted for just 6% of the total number of enterprises and 9% of total employment in industry and services. However, it contributed 22% of total turnover in industry and services. Total turnover in the ICT sector was over €63bn in 2005, of which 54% was in manufacturing and 46% in services. Value added in the ICT sector, at €19bn, accounted for 23% of total value added in industry and services. See table 19.1.

Use of ICT by households

In February 2007, an estimated 998,000 households (or 65% of all households) had a home computer. This was an increase of 130,500 households since February 2006, when 867,500 households had a home computer. Internet access also increased over this period, with 865,500 households (or 57%) having a computer connected to the internet in February 2007, compared with 722,200 in February 2006. In February 2006 just 13% of households had a broadband connection. This increased to 31% by February 2007. See table 19.2.

The most popular activity on the internet related to *Information search and online services*, eg finding information about goods and services, travel and accommodation etc. Next most popular is *Communication*, eg sending and receiving e-mails. See table 19.3.

In the twelve months prior to February 2007, 889,500 persons had ordered goods or services from the internet for private use. This compares with 709,200 in 2006. The most popular type of goods and services ordered on the internet were *Travel and holiday accommodation* (529,700), *Tickets for events* (303,200) and *Films/music* (262,900). See table 19.4.

Use of ICT by enterprises (with 10 or more employees)

Virtually all enterprises use computers in one way or another today: 98% in manufacturing, 98% in construction and 96% in services. The majority also use e-mail and the internet, while 64% of all enterprises reported that they have a website or homepage.

Some 42% of enterprises had dedicated IT systems to manage the placing and receipt of orders in 2007. See table 19.5.

In 2007, 82% of enterprises said they had downloaded forms from a public authority website, while 68% had returned completed forms online. See table 19.6.

In the manufacturing sector, 32% of enterprises had e-commerce sales, compared with 27% in services. Sales by e-commerce accounted for almost a fifth (19%) of total turnover in the manufacturing sector in 2007. EDI (Electronic Data Interchange) accounted for more than half of these sales. In the services sector sales via e-commerce accounted for 21% of turnover.

The results show that 55% of all businesses purchased some goods using e-commerce. The percentage of total purchases completed in this way was 21%. See table 19.7.

Telecommunications

There were just over 2.1 million fixed access paths in the second quarter of 2007. The total number of mobile subscribers in the same quarter was over 4.8 million, with pre-paid subscribers making up three quarters of the total. The mobile penetration rate for Ireland increased from 103% in the second quarter of 2006 to 114% in the same quarter of 2007.

In the second quarter of 2006, 68% of pay television subscribers had a digital subscription via satellite or digital cable. By the second quarter of 2007 this had increased to almost 75% of pay TV subscribers. See table 19.8.

Innovation activities

In the period 2004 to 2006 inclusive, over 47% of enterprises with ten or more persons engaged indicated that they were active innovators. Almost 57% of industrial enterprises were classed as innovation active while 41% of service enterprises were innovation active. In excess of 40% of industrial enterprises were engaged in product innovations compared to 29% of service enterprises. Just under 38% of enterprises in the industrial sector were process innovators compared to 26% of enterprises in the services sector. In total, over 33% of all enterprises with ten or more persons engaged were engaged in product innovations while 30% of enterprises were engaged in process innovations. See table 19.9.

Technical Notes

Table 19.1

Table 19.1 contains data on the key economic variables for the ICT sector from the CSO's Census of Industrial Production and Annual Services Inquiries over the period 2003 to 2005.

Tables 19.2-19.4

Information on the usage of ICT by households and individuals is obtained from the CSO's Quarterly National Household Survey (QNHS). A sample of around 6,000 QNHS households is used annually for the purposes of the ICT and e-commerce survey module. It includes questions relating to the household and questions asked of each person aged 16 to 74. The reference periods for the years presented are as follows: June 2005, February 2006 and February 2007.

Tables 19.5-19.7

The results presented in tables 19.5-19.7 are obtained from the CSO's survey of ICT and e-commerce usage in enterprises. The results from this annual survey cover manufacturing and selected services enterprises with 10 or more employees and construction sector enterprises with 20 or more employees.

Table 19.8

The information contained in table 19.8 was provided by ComReg. Total fixed access paths include the total number of direct and indirect PSTN and ISDN access paths. Individual ISDN lines may have multiple access paths. Mobile penetration rates are based on active SIMS as a percentage of the total population.

Free-to-air television broadcasts are sent unencrypted and may be received via any suitable receiver. Although these channels are described as 'free', the viewer does pay for them by payment of a licence fee.

Table 19.9

The Community Innovation Survey (CIS) 2004-2006 is a survey of innovation activities of enterprises in Ireland over the period 2004 to 2006. The CIS was previously conducted in Ireland by Forfás but is now jointly conducted by the CSO and Forfás to increase efficiency in the collection of statistical data and to reduce the burden on the participating enterprises. The survey included enterprises with 10 or more persons engaged in the industrial and selected services sectors. Methodological changes have been introduced in the CIS 2004-2006. As a consequence of this, no conclusions should be drawn regarding the direction or scale of any real changes between CIS 2002-2004 (CIS4) and CIS 2004-2006.

Table 19.1 Contribution of the ICT sector to the Irish economy

	Unit	2003	2004	2005
ICT Manufacturing (A)				
Number of enterprises	No.	216	183	166
Persons engaged	No.	30,791	30,004	27,884
Turnover	€m	30,051	32,299	33,950
Gross value added	€m	6,038	6,779	7,120
ICT Services (B)				
Number of enterprises	No.	4,226	5,100	4,924
Persons engaged	No.	49,307	53,415	54,858
Turnover	€m	18,851	20,792	29,366
Gross value added	€m	6,913	7,913	11,902
ICT Total (A + B)				
Number of enterprises	No.	4,442	5,283	5,090
Persons engaged	No.	80,098	83,419	82,742
Turnover	€m	48,902	53,091	63,316
Gross value added	€m	12,951	14,692	19,022
Total ICT as a % of Total Industry and Services				
Number of enterprises	%	5.0	5.9	5.8
Persons engaged	%	8.4	8.6	8.5
Turnover	%	20.8	20.7	22.1
Gross value added	%	17.4	17.9	22.5

Source: CSO

Table 19.2 Main trends in household ICT use

	2005	2006	2007
All households ('000)	1,453.9	1,483.8	1,525.1
Households with home computers ('000)	797.7	867.5	998.0
% of all households	54.9	58.5	65.4
Households with computers connected to internet ('000)	655.0	722.2	865.5
% of all households	45.1	48.7	56.8
% of all households with home computers	82.1	83.3	86.7
Type of internet connection			
Modem/ISDN ('000)	552.1	523.7	386.3
Broadband ('000)	106.9	193.5	467.3
Other/don't know ('000)	48.1	35.1	18.9

Source: CSO

Table 19.3 Activities on the internet in the previous 3 months

'000

	2005	2006	2007
Communication	944.5	1,142.0	1,319.2
Sending and receiving e-mails	934.6	1,132.3	1,277.1
Telephoning/video conferencing	87.6	145.1	194.2
Other (use of chat sites etc)	83.4	155.4	252.0
Information search and on-line services	1,010.5	1,205.7	1,433.9
Finding information about goods and services	877.2	1,071.3	1,190.6
Travel and accommodation	733.9	938.2	1,045.4
Web radio/web television	118.0	222.2	255.4
Playing/downloading games, images and/or music	181.7	272.5	339.7
Downloading software	138.8	231.0	268.7
Reading/downloading newspapers or magazines	123.8	192.4	265.2
Looking for a job/sending job applications	71.0	147.5	173.4
Seeking health related information	–	200.6	331.9
Selling or banking	396.6	559.2	678.8
Internet banking	387.3	530.2	651.9
Selling goods or services	22.7	103.1	92.9
Interaction with public authorities	535.4	658.6	872.7
Obtaining information from web sites	439.0	545.6	697.9
Downloading official forms	357.2	487.0	593.9
Sending completed forms	280.0	366.3	519.9
All persons who used the internet in previous 3 months	1,120.2	1,292.9	1,534.5

Source: CSO

Table 19.4 Purchases on the internet

'000

Types of goods and services ordered in last 12 months	2005	2006	2007
Food/groceries	35.5	50.8	44.9
Household goods	40.8	57.5	69.1
Films/music	158.1	221.0	262.9
Books/magazines/newspapers/e-learning material	135.2	223.8	214.0
Clothes/sports goods	52.5	92.3	137.3
Computer software	60.6	148.2	131.9
Computer hardware	26.5	66.2	50.8
Electronic equipment	40.5	79.4	96.8
Share purchases/financial services/insurance	14.6	35.1	40.9
Travel and holiday accommodation	317.6	450.1	529.7
Tickets for events	157.0	273.6	303.2
Lotteries/betting	9.1	15.1	17.9
Other	28.3	34.6	43.9
All persons who have purchased on the internet in the last 12 months	580.7	709.2	889.5

Source: CSO

Table 19.5 Main results of enterprise ICT survey, as percentage of all enterprises - March 2007

	Manufacturing sectors	Construction sector	Selected services sectors	Total
Enterprises with 10 or more persons engaged (No.)	2,631	728	8,406	11,765
General information about ICT systems				
Using a computer	98	98	96	96
Using e-mail	97	97	93	94
Using intranet	47	41	46	46
Using LAN	65	52	62	62
Using extranet	18	10	19	18
Using dedicated ICT systems for managing orders	46	21	42	42
Having a written ICT strategy	20	8	18	18
Use of the internet				
Using the internet	97	97	94	95
Having a website or homepage	70	53	63	64
Type of external connection to the Internet				
Modem	21	23	20	20
ISDN	31	37	31	31
Broadband	71	64	67	68

Source: CSO

Table 19.6 Levels of interaction with public authorities via the internet, as percentage of all enterprises - March 2007

	Manufacturing sectors	Construction sector	Selected services sectors	Total
Enterprises with 10 or more persons engaged (No.)	2,631	728	8,406	11,765
Interaction with public authorities via internet				
For obtaining information	83	86	77	79
For obtaining forms	84	88	81	82
For returning filled-in forms	70	66	68	68
For full electronic case handling	58	58	60	59
Submit proposal by electronic tender system	21	29	21	21

Source: CSO

Table 19.7 Purchases and sales via e-commerce, 2007

	Manufacturing sectors	Construction sector	Selected services sectors	Total
Enterprises with 10 or more persons engaged (No.)	2,631	728	8,406	11,765
Use of e-commerce for purchases (as % of total enterprises)				
By internet or EDI	61	43	54	55
By internet	60	42	51	52
By EDI	6	1	9	8
Use of e-commerce for sales (as % of total enterprises)				
By internet or EDI	32	8	27	27
By internet	24	6	23	23
By EDI	13	1	7	8
Total value of purchases (€m)	71,946	10,297	98,730	180,973
Percentage of purchases by e-commerce (as % of total purchases)				
By internet or EDI	24	2	21	21
By internet	15	2	6	9
By EDI	9	0	14	11
Total value of turnover (€m)	117,036	15,203	141,534	273,772
Percentage of sales by e-commerce (as % of total turnover)				
By internet or EDI	19	1	21	19
By internet	9	1	10	9
By EDI	10	0	10	10

Source: CSO

Table 19.8 Selected telecommunications and broadcasting data

	Unit	Q2 2005	Q2 2006	Q2 2007
Fixed				
Total fixed access paths	'000	2,047	2,039	2,105
Mobile				
Post-paid subscribers	'000	965	1,055	1,236
Pre-paid subscribers	'000	2,866	3,317	3,592
Total Mobile	'000	3,831	4,372	4,828
Mobile penetration rates	%	93	103	114
Television				
Number of subscribers by platform	'000	1,427	1,458	1,458
<i>of which</i>				
Analogue cable	'000	380	319	268
Satellite	'000	363	427	497
Digital cable	'000	174	251	297
Free-to-air	'000	510	461	396

Source: Comreg

Table 19.9 Innovation activity of enterprises as a percentage of all enterprises, 2004-2006

	Unit	Industrial sectors	Selected services sectors	All enterprises
Type of innovation				
Product innovation	%	40.4	28.9	33.3
Process innovation	%	37.8	25.6	30.3
Ongoing/Abandoned innovation	%	3.0	1.8	2.3
Any innovation	%	56.7	41.3	47.2

Source: CSO/Forfás Community Innovation Survey 2004-2006

