



## E-commerce and information and communication technology (ICT) activity, 2008

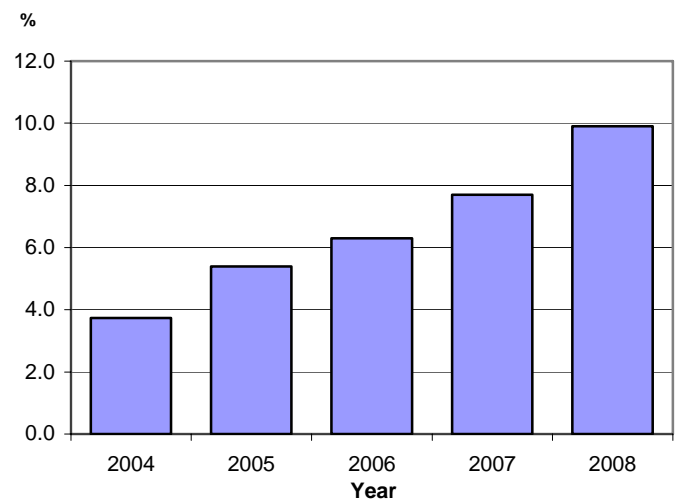
**Date:** 27 November 2009

**Coverage:** United Kingdom **Theme:** Economy

In 2008, Internet sales represented 9.8 per cent of the value of all sales of UK non-financial sector businesses. This was up from 7.7 per cent in 2007. The value of these sales rose to £222.9bn in 2008, an increase of 36.6 per cent from the 2007 figure of £163.2bn. Sales consisted of £104.7bn website sales and £118.2bn EDI (electronic data interchange) sales over the Internet.

The proportion of businesses using the Internet to sell rose from 14.4 per cent in 2007 to 15.2 per cent in 2008. The proportion using a website for their Internet sales was 12.6 per cent in 2008.

**Internet sales as a proportion of total sales, 2004 to 2008**



These estimates are based on the results of the 2008 e-commerce survey of businesses employing 10 or more people.

### Sales over the Internet by size of business, 2004 to 2008

Employment size	10 - 49	50 - 249	250 - 999	1000 +	All sizebands
Year	<i>£bn</i>				
2004	4.7	6.9	17.6	36.5	65.8
2005	7.2	17.4	28.9	48.4	101.9
2006	8.8	17.6	36.2r	64.1r	126.6r
2007	11.6r	27.0	43.7r	80.9r	163.2r
2008	14.6	33.9	65.9	108.5	222.9

Coverage: UK non-financial sector businesses with 10 or more employment

r - revised

## Overview

In 2008, businesses continued to use technology more actively. Employees were increasingly using the Internet from their work place, while more was being bought and sold over the Internet, by an ever increasing number of businesses. Newer technologies were also being exploited. There was growth in businesses maintaining a wireless internal computer network (WLAN) and the adoption of radio frequency identification (RFID) technology. This is the first year RFID has been measured.

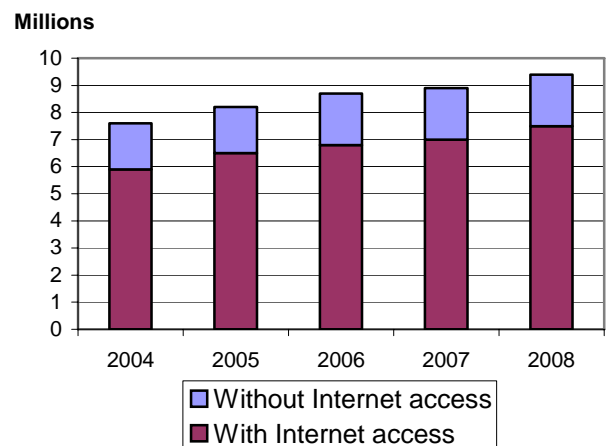
It remained the case that the largest businesses led the way with adoption of new technology; however, in 2008 the smaller businesses often closely matched the year on year (percentage point) growth in adoption of new technologies.

In 2008, 7.5 million people had Internet access at work. This represented 45.5 per cent of the employees in businesses within scope of the survey, and an increase of nearly half a million since 2007. Of those people using computers at work, 80 per cent had Internet access.

In the 2008 survey there have been changes in the measurement of e-commerce. See background note 1 for details. Table references in this bulletin

relate to the numbering of the full set set of tables available on the website at :[http://www.statistics.gov.uk/downloads/theme\\_economy/ecommerce-2008/2008-datasets.pdf](http://www.statistics.gov.uk/downloads/theme_economy/ecommerce-2008/2008-datasets.pdf)

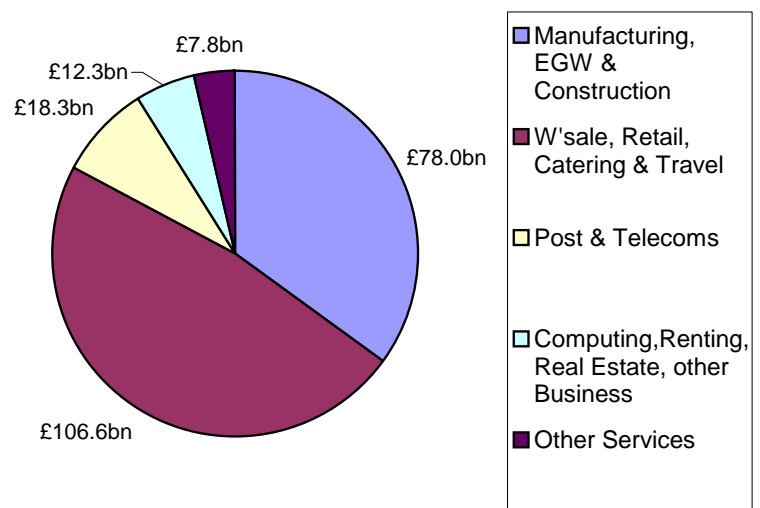
**People with computers and Internet access at work, 2004 to 2008**



## Internet sales (Tables 2 and 3)

Sales over the Internet increased significantly in 2008, across all employment sizebands. Businesses with 250 to 999 employees showed the largest proportional year on year rise in the value of Internet sales of 51 per cent, from £43.7bn in 2007 to £65.9bn in 2008.

**Sales over the Internet by broad industrial sector, 2008**



The Wholesale, Retail, Catering and Travel sector continued to lead the way, with £106.6bn of Internet sales, representing 48 per cent of the total value of sales.

### **ICT sales by destination (Table 8)**

In 2008, the majority of sales over ICTs were to UK customers, at £281.3bn, or 83 per cent of the total. Sales to customers in other EU countries were £36.8bn (11 per cent) while sales to the rest of the world were £20.1bn (6 per cent).

### **Selling over a website (Tables 15, 16 and 23)**

The proportion of businesses with a website increased to 73.5 per cent in 2008, up from 70.3 per cent in 2007. However, only 12.6 per cent of businesses used a website to sell, with the Post and Telecommunications sector having the largest proportion, at 23.5 per cent.

### **Purchases over ICTs (Tables 9 to 13)**

Purchases over ICTs represented just under 23 per cent of the total purchases of non-financial businesses in 2008, with a total value of £361.7bn. The Wholesale, Retail, Catering and Travel sector enjoyed the largest share of spending over ICTs, with £71 of every £100 spent. The estimates for purchases over ICTs are not directly comparable with those published for previous years due to changes in how ICT purchases are measured (see background note 1).

### **Internet Connections (Table 21)**

A DSL (digital subscriber line) connection continued to be the most popular way for businesses to connect to the Internet, at 80 per cent. However, mobile Internet connections continued to increase, with 37.6 per cent of businesses connecting in this way in 2008, up from 29 per cent in 2007. Adoption of mobile access to the Internet varies, with extremes of just over 87 per cent for the largest businesses compared with just over 32 per cent for the smallest businesses. The gap between the smallest and largest businesses in terms of broadband use has been decreasing, as the largest businesses approached saturation.

### **ICT networks (Table 22)**

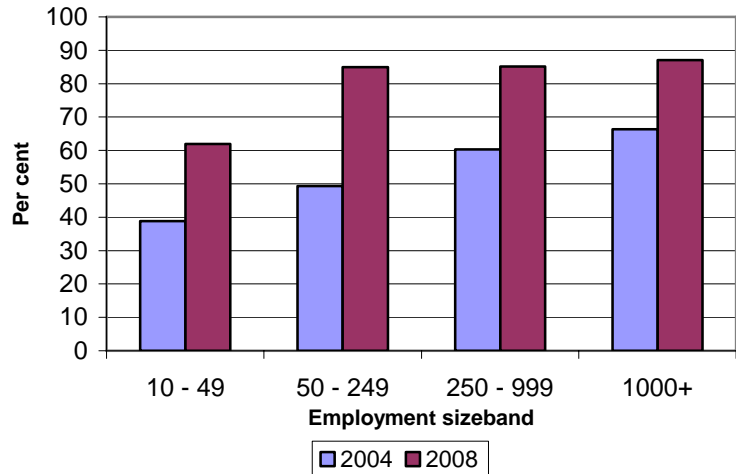
Just under 74 per cent of businesses used an internal computer network – for example, wirebased (LAN) or wireless (WLAN) – in 2008. An intranet for sharing information with employees was in use by just over 22 per cent of businesses, and an extranet by 14.5 per cent.

### Interaction with public authorities (Tables 25 and 26)

In 2008, 66 per cent of businesses used the Internet to interact with public authorities. The most popular reasons for interacting online were to obtain information (62 per cent) and to obtain forms (58 per cent).

Business size was closely linked to online interaction with public authorities. Just under 62 per cent of businesses with 10 to 49 staff interacted with public authorities online, compared with just over 87 per cent of companies with over 1000 employees. The chart opposite compares the levels of interaction with public authorities in 2004 and 2008, by employment sizeband.

**Businesses Internet interaction with public authorities, by sizeband, 2004 and 2008**



### Electronic management systems (Tables 22 and 28)

The proportion of businesses using a digital signature to authenticate messages rose to over 14 per cent in 2008, from 11.5 per cent in 2007 and 7.8 per cent in 2006. While electronic sales, purchases and use of websites offer some high profile measures of the impact of ICT, the productivity benefits of electronically linking business processes, or 'back room' systems, is of increasing interest. Following a similar pattern, supply chain management (SCM) systems are several times more likely to be in use by larger businesses than smaller ones. Businesses are increasingly using SCM systems to share information on the availability and delivery of products or services electronically with both customers and suppliers. The largest businesses continue to lead the way in the take-up and exploitation of these technologies.

### Business planning (Table 29)

Just under 6 per cent of businesses used an enterprise resource planning (ERP) system, which was a slight rise from 2007. Businesses with 1,000 or more employees were more than 10 times more likely to use ERP software than those with 10 to 49 employees, at 39.4 per cent and 3.1 per cent respectively. Similar patterns between small and large businesses can be seen in the use of many other ICTs, such as free or 'open source' operating systems.

The use of customer relationship management (CRM) systems has also grown over the last three years. Just over 14 per cent used CRM systems to share information about customers with other internal business systems in 2008, while 12.4 per cent used CRM to analyse information about their customers for marketing purposes.

### **Radio frequency identification technology (Table 31)**

Use of RFID was measured for the first time in the 2008 survey, with 1.4 per cent of businesses using this technology. Of businesses with 1,000 or more employment, 12.5 per cent used RFID. In contrast only 1 per cent of businesses with 10 to 49 employees had adopted RFID. The main reason for use was person identification or access control.

All the data referenced in this release, and more, are available at: [http://www.  
statistics.gov.uk/downloads/theme\\_economy/ecommerce-2008/2008-datasets.pdf](http://www.statistics.gov.uk/downloads/theme_economy/ecommerce-2008/2008-datasets.pdf)

## BACKGROUND NOTES

### Basic Quality Information

#### Key issues specific to this release

1. The 2008 annual e-commerce survey provides information on UK businesses' use of information and communication technologies (ICTs). The survey was sent to approximately 8,000 UK businesses with employment of 10 or more. Most sectors of the economy were covered (see background note 6 ).

The estimates in this release provide information to policy makers to help direct efforts to support ICT innovation and help businesses benchmark their ICT use against other comparable businesses. The survey is part of a European Union (EU) initiative providing EU-comparable estimates on ICT use and e-commerce. The definition of e-commerce used is that agreed by the Organisation for Economic Co-operation and Development (OECD) and the EU: it is the method by which the order is placed which determines whether a transaction is e-commerce – not the payment or delivery channels.

The 2002 survey results were designated as experimental statistics due to the methodological and questionnaire developments that were taking place in the first few years of the survey. This status remained until the 2005 results were published. In 2007 the survey was evaluated, and its methodological processes were compared with the criteria set by the ONS Quality Centre. As a result of this review, the 2006, 2007 and 2008 survey results are published with National Statistics status.

In the 2008 survey there have been changes in the measurement of e-commerce. Until the 2007 survey, the definition of e-commerce sales and purchases included transactions over manually typed email. From the 2008 survey onwards, this changed and email transactions are now excluded. This means that e-commerce sales over non-Internet ICTs in 2008 are also not directly comparable with the 2007 estimates. Similarly, purchases have been combined into purchases over all ICTs, so these estimates are not directly comparable with previous years.

The Internet/non-Internet split of transactions that had been included since the survey began will be discontinued after the 2008 survey. This will be replaced with a breakdown of website and non-website transactions. The 2008 survey results contain estimates on both bases to allow comparison between the end of the old series and the start of the new one.

This is the last release of e-commerce and ICT estimates to be based on SIC (standard industrial classification) 2003. The 2009 survey will be selected on SIC 2007 and the results will be published on this basis, in 2010.

### **Link to Summary Quality Report**

2. A Summary Quality Report for this publication is available at:  
<http://www.ons.gov.uk/about-statistics/methodology-and-quality/quality/qual-info-economic-social-and-bus-stats/quality-reports-for-business-statistics/index.html>

This report describes, in detail, the intended uses of the statistics presented in this publication, their general quality and the methods used to produce them.

## **Common pitfalls in interpreting the series**

### **Related information**

3. This report should not be confused with the Internet Access statistical bulletin. The latter is a separate release that contains estimates on Internet access and use of the Internet, by households and individuals.

### **Notes on tables**

4. The estimates of the percentages of businesses are weighted to be consistent with the number and profile of businesses in the UK economy. Results weighted by business give an equal weight to every business irrespective of size. This method of calculation better reflects the contribution made by the large number of small businesses and is appropriate when assessing, for example, ICT penetration. Employment weighted results give weight to businesses relative to their size ie each business' employment as a share of the employment total. This method of calculation is most appropriate when assessing the dominance of large businesses.

The annex in this report contains tables of estimates referred to in this release.

### **Rounding**

5. All estimates in the tables are rounded to one decimal place.

## Coverage

6. Most of the results from the e-commerce survey are based on the whole UK economy excluding the following sectors:

### UK SIC (2003)

Div	Title
01	Agriculture
02	Forestry, logging and related activities
05	Fishing
10	Mining of coal and lignite and extraction of peat
11	Extraction of crude petroleum and natural gas
12	Mining of uranium and thorium
13	Mining of metal ores
14	Other mining, quarrying
75	Public administration, defence and social security
80	Education
90	Sewage and refuse disposal and similar activities
91	Membership organisations not elsewhere classified
95	Private households as employers of domestic staff
99	Extra-Territorial organisations

Because of the difficulty in identifying and measuring the value of electronic trade in the Banking and Financial sector, these businesses are excluded from estimates of the proportions of businesses buying and selling, and the values of their sales and purchases. A small number of estimates relating to ICT use also exclude the Banking and Financial sector, as shown in the appropriate table footnotes. Estimates relate to businesses with 10 or more employment.

## Definition of broad industrial sectors

7. The following UK SIC (2003) Divisions define the broad sectors used in this report:

Manufacturing, Electricity, Gas and Water Supply and Construction - Div 15-45

Wholesale, Retail, Catering and Travel - Div 50-63

Post and Telecommunications - Div 64

Computing, Renting, Real Estate and Other Business Services - Div 70-74

Banking and Financial - SICs 65.12/1, 65.12/2, 65.22/2, 65.22/3, 65.22/9, 67.12/1, 67.12/2, 67.13, 67.2

Other Services - Div 85; 92-93.

## Relevance to users

### Sample information

8. In this release, estimates relate to businesses with 10 or more employment from most sectors of the economy (see background note 6).

Businesses with employment of less than 10 have not been included since the 2005 survey. These businesses had previously been included in the survey and the published estimates for 2002 to 2004. Therefore, estimates that relate to “all businesses” in this release are not comparable with estimates relating to “all businesses” in the releases that were published prior to the 2005 survey results.

The exclusion of the businesses with less than 10 employment has had an effect on the results published for 2005 to 2008, due to the relatively low ICT activity among smaller businesses and the number of businesses of that size. All estimates presented in this report, therefore, relate to businesses with 10 or more employment and are compared with previous years on that basis.

To ensure the best possible estimates are produced, the sample was re-optimised for the 2006 survey. As a consequence, some discontinuity between the 2005 and 2006 estimates may occur due to the sampling changes made. This should be taken into account when making comparisons.

### International developments

9. The survey is run in all countries of the European Union (EU) and also in some non-EU countries. The measurement of e-commerce and ICT usage are under continuing review and development, both within the EU and worldwide, in the context of the Statistical Office of the European Communities (Eurostat) and OECD discussions. Because of the dynamic nature of ICTs, the collection and outputs of the e-commerce survey are, therefore, likely to remain under continuous review and subject to change.

Comparative data for EU countries can be found at  
<http://epp.eurostat.ec.europa.eu>.

## Accuracy

### Revisions to earlier years

10. As in previous years, estimates are subject to revision, and some 2006 and 2007 estimates have been revised by businesses contacted in the process of validating the 2008 data. Where this is the case, the estimates are marked 'r'. 2004 and 2005 estimates have not been revised in this release.

As a result of the developments in the survey, and subsequent misreporting by businesses in the first two years' results, comparison is not advisable with any estimates prior to 2002, even at an aggregate level.

### Sampling variability

11. The Inter-Departmental Business Register (IDBR) was used as the sampling frame, and approximately 8,000 UK businesses were sampled. The estimates are subject to sampling variability, as are those from all sample surveys.

The estimates of the ICT sales and purchases as a proportion of total sales and purchases were calculated using estimates from the 2007 Annual Business Inquiry.

### Confidence intervals

12. The following table contains the 95 per cent confidence intervals for the 2008 estimates of sales and purchases over the Internet and other ICTs.

	Lower limit	Upper limit	Survey estimate
<i>£bn</i>			
Sales over the Internet	202.8	243.0	222.9
Sales over a website	91.5	118.0	104.7
Sales over ICTs other than the Internet	102.9	128.0	115.4
Purchases over ICTs other than the Internet	329.2	394.3	361.7

### Response rates

13. 70.8 per cent of the 2008 survey questionnaires were returned and validated. Response by employment sizeband of business is shown below.

Employment sizeband	Response rate
10 to 49	76.5%
50 to 249	73.9%
250 to 999	66.5%
1000+	61.7%

### Editing rates

14. In all, 73.2 per cent of returned questionnaires were edited during the validation process, before inclusion in the final results.

### Imputation process

15. No imputations were made for contributor or item non-response as all data items on a questionnaire had to be validated prior to feeding into results. The only exceptions to this were where, under certain conditions, a missing value data item was estimated based on other contributors in the same employment sizeband and SIC. For this to take place, the business had to have returned all non-value data items and all these items had to have passed validation.

### Coherence

16. ONS conducts an annual survey of households and individual's use of the Internet and other ICTs. Further information is available at:  
<http://www.statistics.gov.uk/statbase/Product.asp?vlnk=5672>

All ONS produced ICT, e-commerce and related reports are available here:  
[http://www.statistics.gov.uk/about/Methodology\\_by\\_theme/e-commerce\\_related\\_activities/default.asp](http://www.statistics.gov.uk/about/Methodology_by_theme/e-commerce_related_activities/default.asp)

### Disclosure

17. Statistical disclosure control methodology is applied to the e-commerce estimates. This ensures that information attributable to an individual business is not disclosed in any

publication. The Code of Practice for Official Statistics sets out principles for how ONS protects data from being disclosed.

### Tables

18. The following symbols are used in the tables:
- '-' estimate is greater than zero but less than 0.04(9)
  - 'r' revised estimate
  - 'D' estimate is disclosive
  - '..' estimates not available

### Publication policy

19. Details of the policy governing the release of new estimates are available from the ONS press office.
20. National Statistics are produced to high professional standards set out in the Code of Practice for Official Statistics. They undergo regular quality assurance reviews to ensure that they meet customer needs. They are produced free from any political interference. © Crown copyright 2009.

**Next publication:** November 2010

**Issued by:** Office for National Statistics, Government Buildings, Cardiff Road, Newport NP10 8XG

#### Media contact:

Tel        **Media Relations Office 0845 6041858**  
             **Emergency on-call 07867 906553**  
E-mail    **press.office@ons.gsi.gov.uk**

#### Statistical contact:

Tel        **Mark Pollard 01633 456769**  
E-mail    **mark.pollard@ons.gsi.gov.uk**

#### Website:

[www.ons.gov.uk](http://www.ons.gov.uk)