The 2009 annual survey into e-commerce and ICT activity measures the use of information and communication technologies (ICTs) by businesses with 10 or more employees.

The key findings from the survey show that:

- the value of e-commerce sales by non-financial businesses was £408.3bn in 2009, an increase of 24.9 per cent on 2008
- sales over a website reached £115.0bn
- e-commerce non-website sales (e.g. EDI) were valued at £293.3bn
- 14.9 per cent of businesses sold over a website, while 6.9 per cent sold over ICTs other than a website
- 51.9 per cent of businesses purchased over computer networks, with a value of £466.3bn
- 76.0 per cent of businesses had a website

<table>
<thead>
<tr>
<th>Employment size</th>
<th>10 - 49</th>
<th>50 - 249</th>
<th>250 - 999</th>
<th>1000+</th>
<th>All sizebands</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>65</td>
<td>87</td>
<td>95</td>
<td>98</td>
<td>69</td>
</tr>
<tr>
<td>2006</td>
<td>66</td>
<td>89</td>
<td>96</td>
<td>98</td>
<td>70</td>
</tr>
<tr>
<td>2007†</td>
<td>66</td>
<td>89</td>
<td>96</td>
<td>98</td>
<td>70</td>
</tr>
<tr>
<td>2008</td>
<td>71</td>
<td>91</td>
<td>94</td>
<td>98</td>
<td>75</td>
</tr>
<tr>
<td>2009</td>
<td>72</td>
<td>92</td>
<td>97</td>
<td>99</td>
<td>76</td>
</tr>
</tbody>
</table>

Coverage: UK businesses with 10 or more employment

†estimates since 2007 have been revised
Overview

In 2009, the largest businesses continued to lead the way with adoption of new technology. However, smaller businesses were closing the gap with increasing numbers using broadband and mobile Internet, developing websites and using the Internet to interact with public authorities.

The value of purchases by businesses over computer networks reached a new high in 2009 with purchases valued at £466.3bn. In keeping with the large increase in the value of purchases, there was a significant increase in the proportion of businesses that purchased this way, from 33.3 per cent in 2008 to 51.9 per cent in 2009.

Just over 91 per cent of businesses had Internet access in 2009, with 87.4 per cent connecting via a broadband connection. Over a third of businesses used a 3G mobile connection, at 36.8 per cent. Businesses continued to provide staff with access to the Internet, with 6.8 million of those employees within scope of the survey able to access the Internet at the workplace.

The 2009 estimates are the first to be published under the new Standard Industrial Classification (SIC) 2007 basis. The 2008 estimates have also been reworked for comparison on this basis. See background note 2 for details. Table references in this bulletin relate to the numbering of the full set of tables available on the website at: http://www.statistics.gov.uk/downloads/theme_economy/ecommerce-2009/2009-datasets.pdf

ICT sales (tables 2 to 10 & 16)

In 2009, e-commerce sales increased by almost a quarter from the 2008 estimate of £326.9bn to £408.3bn. This figure represented 16.7 per cent of the value of all sales by UK non-financial sector businesses.

In 2009, just over three quarters of businesses had a website, at 76.0 per cent. The proportion of businesses selling over a website reached 14.9 per cent in 2009, up from 13.0 per cent in 2008.
Sales over a website were valued at £115.0bn in 2009, an increase of 23.6 per cent from the 2008 estimate of £93.1bn.

The Wholesale sector dominated website sales with sales valued at £48.2bn. The Transport and Storage sector also showed significant website sales, estimated at £14.1bn.

Sales over non-website ICTs (such as non-web EDI) of £293.3bn represented 12.0 per cent of the value of all sales of non-financial businesses. The manufacturing sector reported the largest sales over ICTs other than a website at £117.2bn.

### ICT purchases (tables 11 to 16)

In 2009, 51.9 per cent of businesses placed orders with suppliers over computer networks. These orders represented £466.3bn, an increase of 33.7 per cent from the 2008 estimate of £348.9bn. While there was a large increase in the value of purchases, there was also a significant increase in the proportion of businesses that purchased this way, from 33.3 per cent in 2008 to 51.9 per cent in 2009. The Wholesale sector placed the largest value of orders this way at £177.0bn.

### Internet access (tables 1 & 23)

In 2009, 91.1 per cent of businesses had Internet access. The most common type of connection was a DSL connection, with 83.0 per cent of businesses connecting this way. In 2009, connections via a 3G mobile connection were measured for the first time; 36.8 per cent of businesses accessed the Internet this way, enabling employees to access the Internet away from the workplace.

The number of employees who had Internet access in the workplace, at 6.8m, represented 48.9 per cent of employees in businesses within scope of the 2009 survey.

### Interaction with public authorities (table 26)

The use of the Internet to interact with public authorities continued to grow in 2009, with 66.7 per cent of businesses using the Internet in this way. This facility was used to a greater extent by the
larger businesses, with just over 90 per cent of those businesses with over 1000 employees using the facility, compared with 62.6 per cent of businesses with 10 to 49 employees. The main reason for using the Internet to interact with public authorities was to obtain information, at 63.2 per cent of all businesses.

Over half of businesses, at 50.7 per cent, used the Internet to complete an administrative task entirely electronically. Once again, it was the largest businesses that utilised this function the most, at 73.2 per cent.

**ICT security (table 28)**

A formally defined ICT security policy with a plan for regular review was in place for 29.1 per cent of businesses. This was in place for the majority of businesses employing over 1,000 employees, at 85.8 per cent, compared with just 22.3 per cent of businesses employing between 10 to 49 employees.

Compulsory training to make employees aware of ICT security issues was in place for 14.5 per cent of businesses.

Major ICT security incidents were rare in 2009, with just under 2 per cent of businesses experiencing unavailability of ICT services due to an attack from outside the business. Meanwhile 0.8 per cent of businesses experienced disclosure of confidential data due to intrusion, phishing or pharming attack.

**ICT networks and management systems (tables 24 & 27)**

Almost a quarter of businesses, 24.5 per cent, had an intranet system for sharing information with employees. This was again a system used predominantly by larger businesses with 89.0 per cent of those businesses with over 1,000 employees using this facility.

Free or open source operating systems were in use by 8.8 per cent of businesses, ranging from 6.5 per cent of those employing 10 to 49 employees to 40.5 per cent of the largest businesses.
BACKGROUND NOTES

Basic Quality Information

Key issues specific to this release

1. The 2009 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 16).

2. The 2009 estimates are the first to be published under the new Standard Industrial Classification (SIC) 2007 basis. This replaced the SIC 2003 classification system. All estimates up to and including those relating to the 2007 survey year are on a SIC 2003 basis. Results for the 2008 survey were originally compiled and published under SIC 2003, and have been re-estimated on the new SIC 2007 basis to enable comparisons to be made between 2008 and 2009. Results for 2008 on the old and new SIC bases differ due to slight differences in the economic activities covered by the survey under SIC 2003 and SIC 2007.

3. There were changes to the questions asked in the 2008 survey, which impacted on the published results. The Internet/non-Internet split of e-commerce transactions, that had been included since the survey began, was discontinued after the 2008 survey. This was replaced with a breakdown of website and non-website transactions. The 2008 results contained estimates on both bases to allow comparison between the end of the old series and the start of the new one.

4. 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 were excluded. This means that e-commerce sales over non-Internet ICTs in 2008 are not directly comparable with the 2007 estimates. Similarly, in 2008, the two categories of e-commerce purchases (Internet and non-Internet) were combined into purchases over all ICTs, so these estimates are not directly comparable with previous years.

5. The estimates of the 2009 ICT sales and purchases as a proportion of total sales and purchases were calculated using estimates from the 2008 Annual Business Inquiry.
6. This bulletin provides information on two areas of business activity, namely the values of e-commerce sales and purchases by businesses and the levels of use by businesses of various ICTs. In many cases the growth over time can be seen, where the ICT use has been measured in previous years. Examples of this includes the measurement of ICT activities such as Internet access, broadband and websites.

7. Results are presented by business employment sizeband. This allows comparisons to be made between businesses to highlight the greater levels of e-commerce trading and ICT activity by the larger businesses, compared to the smaller ones.

8. The survey results enable productivity impact analyses to be performed and they provide a better understanding of the contribution of new ICTs to productivity.

9. The survey is conducted across all EU member states. This allows comparisons to be made with other EU countries. See note 20 for more details.

Link to Summary Quality Report


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

11. 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.
Tables

12. 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 number of businesses give an equal weight to every business irrespective of size. This method of calculation 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. Employment weighted tables have not been separately published with the 2009 survey, but are available on request.

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

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

Coverage

15. The economic activities covered by the 2009 survey changed slightly, following the introduction of SIC 2007.

16. Most of the results from the survey are based on the whole UK economy excluding the following sectors:

SIC 2003 sectors excluded (2005 to 2008)

<table>
<thead>
<tr>
<th>Div</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Agriculture</td>
</tr>
<tr>
<td>02</td>
<td>Forestry, logging and related activities</td>
</tr>
<tr>
<td>05</td>
<td>Fishing</td>
</tr>
<tr>
<td>10</td>
<td>Mining of coal and lignite and extraction of peat</td>
</tr>
<tr>
<td>11</td>
<td>Extraction of crude petroleum and natural gas</td>
</tr>
<tr>
<td>12</td>
<td>Mining of uranium and thorium</td>
</tr>
<tr>
<td>13</td>
<td>Mining of metal ores</td>
</tr>
</tbody>
</table>
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

**SIC 2007 sectors excluded (2009)**

<table>
<thead>
<tr>
<th>Section/Div</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section A</td>
<td>Agriculture, Forestry and Fishing</td>
</tr>
<tr>
<td>Section B</td>
<td>Mining and Quarrying</td>
</tr>
<tr>
<td>Div 75</td>
<td>Veterinary Activities</td>
</tr>
<tr>
<td>Section O</td>
<td>Public Administration and Defence, Social Security</td>
</tr>
<tr>
<td>Section P</td>
<td>Education</td>
</tr>
<tr>
<td>Section Q</td>
<td>Health and Social Work</td>
</tr>
<tr>
<td>Section R</td>
<td>Arts, Entertainment and Recreation</td>
</tr>
<tr>
<td>Section S</td>
<td>Other Service Activities except SIC 95.1, Repair of computers</td>
</tr>
</tbody>
</table>

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.

**Definition of broad industrial sectors**

17. The following UK SIC (2003) Divisions define the broad sectors used in this report for 2005 to 2008 results:

- 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
The following UK SIC (2007) Divisions define the broad sectors used in this report for 2009 results:

Manufacturing: Div 10-33
Utilities: Div 35-39
Construction: Div 41-43
Wholesale: Div 45-46
Retail: Div 47
Transport and Storage: Div 49-53
Accommodation and Food Services: Div 55-56
Information and Communication: Div 58-63
Other Services: Div 68-74, 77-82, 95.1

Sample information

18. In this release, estimates relate to businesses with 10 or more employment from most sectors of the economy. Businesses with employment of less than 10 have not been included since the 2005 survey. These businesses had previously been included in the published estimates for 2002 to 2004 but have been removed in order to provide continuity in the statistics published over the period 2002 to 2009.

19. The decision to cease collection of information from businesses with less than 10 employment was made on the grounds of resources available to run the survey considered alongside their relatively small engagement in IT activity and the burden placed on them in requiring them to take part in the survey. In 2004 ONS estimated that these businesses represented 6.6 per cent of total sales over the Internet.

International developments

20. 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 nature of
ICTs, the collection and outputs of the e-commerce survey are, therefore, likely to remain under continuous review and subject to change.


21. The most recent results published by Eurostat show the UK to be near the top of the EU table for making purchases and receiving orders online. This is also true for the percentage of GDP made up by technology expenditure. ONS will carry out its own analysis comparing UK ecommerce results with the rest of the EU and will publish the analysis on the National Statistics website in 2011.

**Revisions to earlier years**

22. As in previous years, estimates are subject to revision, 2007 and 2008 estimates have been revised by businesses contacted in the process of validating the 2009 data. 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 and confidence intervals**

23. 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.

24. The table overleaf shows sampling variability for estimates relating to e-commerce sales and purchases. These contain the ‘95 per cent confidence intervals’, which means that it is expected that in 95 per cent of samples the range would contain the true value.
### Confidence Intervals 2009

<table>
<thead>
<tr>
<th></th>
<th>Lower limit</th>
<th>Survey estimate</th>
<th>Upper limit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>£bn</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales over a website</td>
<td>98.2</td>
<td>115.0</td>
<td>131.8</td>
</tr>
<tr>
<td>Sales over non website</td>
<td>263.9</td>
<td>293.3</td>
<td>322.7</td>
</tr>
<tr>
<td>ICTs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchases over ICTs</td>
<td>409.9</td>
<td>466.3</td>
<td>522.7</td>
</tr>
</tbody>
</table>

### Response rates

25. 74.3 per cent of the 2009 survey questionnaires were returned and validated. Response by employment sizeband of business is shown below.

<table>
<thead>
<tr>
<th>Employment sizeband</th>
<th>Response rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 to 49</td>
<td>78.2%</td>
</tr>
<tr>
<td>50 to 249</td>
<td>74.7%</td>
</tr>
<tr>
<td>250 to 999</td>
<td>72.0%</td>
</tr>
<tr>
<td>1000+</td>
<td>68.9%</td>
</tr>
</tbody>
</table>

### Imputation process

26. 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

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

Disclosure

28. 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.

Publication policy

29. Details of the policy governing the release of new estimates are available from the ONS press office.

30. 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 2010.

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