

Assessment of compliance with the Code of Practice for Official Statistics

Statistics on E-commerce and Information and Communication Technology Activity

(produced by the Office for National Statistics)

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About the UK Statistics Authority

The UK Statistics Authority is an independent body operating at arm's length from government as a non-ministerial department, directly accountable to Parliament. It was established on 1 April 2008 by the *Statistics and Registration Service Act 2007*.

The Authority's overall objective is to promote and safeguard the production and publication of official statistics that serve the public good. It is also required to promote and safeguard the quality and comprehensiveness of official statistics, and good practice in relation to official statistics.

The Statistics Authority has two main functions:

1. oversight of the Office for National Statistics (ONS) – the executive office of the Authority;
2. independent scrutiny (monitoring and assessment) of all official statistics produced in the UK.

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ASSESSMENT AND DESIGNATION

The *Statistics and Registration Service Act 2007* gives the UK Statistics Authority a statutory power to assess sets of statistics against the *Code of Practice for Official Statistics*. Assessment will determine whether it is appropriate for the statistics to be designated as National Statistics.

Designation as National Statistics means that the statistics comply with the *Code of Practice*. The *Code* is wide-ranging. Designation can be interpreted to mean that the statistics: meet identified user needs; are produced, managed and disseminated to high standards; and are explained well.

Designation as National Statistics should not be interpreted to mean that the statistics are always correct. For example, whilst the *Code* requires statistics to be produced to a level of accuracy that meets users' needs, it also recognises that errors can occur – in which case it requires them to be corrected and publicised.

Assessment Reports will not normally comment further on a set of statistics, for example on their validity as social or economic measures. However, Reports may point to such questions if the Authority believes that further research would be desirable.

Assessment Reports typically provide an overview of any noteworthy features of the methods used to produce the statistics, and will highlight substantial concerns about quality. Assessment Reports also describe aspects of the ways in which the producer addresses the 'sound methods and assured quality' principle of the *Code*, but do not themselves constitute a review of the methods used to produce the statistics. However the *Code* requires producers to "seek to achieve continuous improvement in statistical processes by, for example, undertaking regular reviews".

The Authority may grant designation on condition that the producer body takes steps, within a stated timeframe, to fully meet the *Code's* requirements. This is to avoid public confusion and does not reduce the obligation to comply with the *Code*.

The Authority grants designation on the basis of three main sources of information:

- i. factual evidence and assurances by senior statisticians in the producer body;
- ii. the views of users who we contact, or who contact us, and;
- iii. our own review activity.

Should further information come to light subsequently which changes the Authority's analysis, it may withdraw the Assessment Report and revise it as necessary.

It is a statutory requirement on the producer body to ensure that it continues to produce the set of statistics designated as National Statistics in compliance with the *Code of Practice*.

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1 Summary of findings

1.1 Introduction

1.1.1 This is one of a series of reports¹ prepared under the provisions of the *Statistics and Registration Service Act 2007*². The report covers statistics on *E-commerce and information and communication technology (ICT) activity* produced by the Office for National Statistics (ONS). The annual release³ is accompanied by the release of additional tables⁴ on ONS's website.

1.1.2 This report was prepared by the Authority's Assessment team, and approved by the Board of the Statistics Authority on the advice of the Head of Assessment.

1.2 Decision concerning designation as National Statistics

1.2.1 The Statistics Authority judges that the statistics covered by this report are readily accessible, produced according to sound methods and managed impartially and objectively in the public interest, subject to any points for action in this report. The Statistics Authority confirms that the statistics published in *E-commerce and information and communication technology (ICT) activity* are designated as National Statistics, subject to the ONS implementing the enhancements listed in section 1.5: Requirement 6 by July 2010; Requirements 1 to 5 by December 2010; and Requirement 7 by January 2011.

1.3 Summary of strengths and weaknesses

1.3.1 The survey collecting these statistics was one of the first in Europe to measure e-commerce of businesses in 2000. The statistics conform to international definitions. They are published in a timely manner.

1.3.2 Until 2005 the statistics were derived from a survey of all businesses within defined industry sectors. Since 2005 only businesses employing 10 or more people have been included in the survey; no information is published on the impact of excluding those businesses employing fewer than 10 people.

1.3.3 The statistics are published for the UK as a whole. At the request of some users ONS is investigating the feasibility of providing regional estimates of these statistics.

¹ <http://www.statisticsauthority.gov.uk/assessment/assessment-reports/index.html>

² http://www.opsi.gov.uk/Acts/acts2007/pdf/ukpga_20070018_en.pdf

³ <http://www.statistics.gov.uk/pdfdir/ecom1109.pdf>

⁴ http://www.statistics.gov.uk/downloads/theme_economy/ecommerce-2008/2008-datasets.pdf

1.4 Detailed recommendations

- 1.4.1 The Assessment team identified some areas where it felt that the ONS could strengthen its compliance with the Code. Those which the Assessment team considers essential to enable designation as National Statistics are listed in section 1.5. Other suggestions, which would improve the statistics and the service provided to users but which are not formally required for their designation, are listed at annex 1.

1.5 Requirements for designation as National Statistics

- Requirement 1** Take steps to develop a more complete understanding of the use made of the statistics, the needs of current and potential users, and user views on the service provided. Publish the relevant information and assumptions and use them to better support the beneficial use of the statistics (para 3.2).
- Requirement 2** Publish details of the methods adopted in the production of these statistics (para 3.7).
- Requirement 3** Include a statement in the release about the exclusion of, and possible impact of, not surveying businesses employing fewer than 10 employees (para 3.10).
- Requirement 4** Draw users' attention to the change in the statistics due to the change in definition of e-commerce introduced in 2008 (para 3.11).
- Requirement 5** Include in future releases some commentary about the UK's position relative to the rest of the EU (para 3.23).
- Requirement 6** Take appropriate steps to deposit business survey data with the relevant national archive (para 3.25).
- Requirement 7** Ensure that all releases are issued at 9.30am on the day of release (para 3.29).

2 Subject of the assessment

- 2.1 The release provides statistics for the last five years of the value, in £ billion, of purchases and sales over the Internet. For 2008, the sales are additionally analysed by the broad geographical (UK, EU and the rest of the world) destination of the goods. The release also includes the numbers of people who have Internet access at work, the types of Internet connection and other uses made of electronic systems in the businesses.
- 2.2 The e-commerce transactions of UK businesses survey was initiated in the UK in 2000 to measure the progress of businesses' use of e-commerce. This followed the Government's commitment to make the UK the 'best place to do e-business' as noted in the Government White Paper, *Digital Britain*⁵. The statistics were first collected for 2000 and were classified as National Statistics. In 2002 they were reclassified as experimental statistics when various data quality issues came to light. Following a Quality Review⁶, the statistics were reclassified as National Statistics from 2007.
- 2.3 Since 2004, the survey content has been co-ordinated by Eurostat, the Statistical Office of the European Commission, and run across the whole of the European Union. The survey is co-ordinated by Eurostat under regulation⁷. The ONS is one of six nationally-representative organisations forming the European Task Force for the survey and has a major influence on the content and operation of the survey. Each year the regulation sets out the coverage in terms of economic activities, business size and the required data. The design of the UK's survey questionnaire is undertaken within ONS and is similar in format to other ONS business survey questionnaires.
- 2.4 The main purpose of the statistics is to meet the European data requirements in assessing progress towards EU benchmarking indicators⁸. The statistics also inform industry and government about the increasing use of information and communication technology (ICT) in commerce. The Government uses the statistics as one of the measures of progress towards a digital economy. Many of the recommendations contained in *Digital Britain* have now been included in the *Digital Economy Act 2010*⁹ – though no explicit provisions relate to e-commerce.
- 2.5 The Office of Fair Trading has used e-commerce data for studies relating to businesses selling to consumers over the Internet. Many academics use the statistics to research e-commerce and ICT related business issues, particularly with reference to the impact of ICT use on productivity. The statistics are used within ONS to compare with those on Internet retailing in order to assess

⁵ <http://www.culture.gov.uk/images/publications/digitalbritain-finalreport-jun09.pdf>

⁶ <http://www.ons.gov.uk/about-statistics/methodology-and-quality/quality/qual-info-economic-social-and-bus-stats/quality-reports-for-business-statistics/summary-quality-report-for-e-commerce.pdf>

⁷ Initially Regulation (EC) No 808/2004 of the European Parliament and of The Council, extended by Regulation (EC) No 1006/2009 of the European Parliament and of The Council

⁸ Set out in the EU's i2010 benchmarking framework, http://ec.europa.eu/information_society/eeurope/i2010/docs/benchmarking/i2010_benchmarking_framework_nov_2006.doc

⁹ http://www.opsi.gov.uk/acts/acts2010/ukpga_20100024_en_1

comparative increases in e-commerce activity between households and businesses.

- 2.6 The survey was sent to 8,000 businesses in 2008 and the total of staff costs and other direct costs was £245,000.

3 Assessment findings

Principle 1: Meeting user needs

The production, management and dissemination of official statistics should meet the requirements of informed decision-making by government, public services, business, researchers and the public.

- 3.1 The main consultation with users is through the Innovation Surveys Advisory Group (ISAG) which advises ONS on Eurostat's new data requirements for the e-commerce survey and the feasibility of collecting the information. ISAG comprises government departments, devolved administrations, regional offices, academics and business representative bodies. ISAG appears to be an effective consultation medium with these users but includes no representatives of the wider user community.
- 3.2 The Assessment team was provided with documentation about user needs including those set out in the EU Regulations. The list of user needs was compiled five years ago. As part of the designation as National Statistics, ONS should take steps to develop a more complete understanding of the use made of the statistics, the needs of current and potential users, and user views on the service provided. Publish the relevant information and assumptions and use them to better support the beneficial use of the statistics ¹⁰ (Requirement 1).
- 3.3 ONS receives requests for data but appears not to consider whether the release could be changed to incorporate a wider range of statistics to meet the identified needs. We suggest that requests for data be analysed to identify any common requirements which may improve the content of the tables issued alongside the release.

¹⁰ In relation to Principle 1 Practice 2 of the Code of Practice

Principle 2: Impartiality and objectivity

Official statistics, and information about statistical processes, should be managed impartially and objectively.

- 3.4 The commentary in the release is impartial.
- 3.5 ONS has a departmental revisions policy¹¹ which is followed in producing these statistics.

¹¹ <http://www.statistics.gov.uk/about/data/methodology/revisions/corp-stat-policy.asp>

Principle 3: Integrity

At all stages in the production, management and dissemination of official statistics, the public interest should prevail over organisational, political or personal interests.

- 3.6 No incidents of political pressure, abuses of trust or complaints relating to professional integrity, quality or standards were reported to or identified by the Assessment team.

Principle 4: Sound methods and assured quality

Statistical methods should be consistent with scientific principles and internationally recognised best practices, and be fully documented. Quality should be monitored and assured taking account of internationally agreed practices.

- 3.7 The methods used to collect these statistics are agreed by Eurostat following discussion with EU Member States. A description of the methods was made available to the Assessment team but is not published. As part of the designation as National Statistics, ONS should publish details of the methods adopted in the production of these statistics¹² (Requirement 2).
- 3.8 All variations to the data collected and methods used are subject to an extensive process of consideration led by the Eurostat Task Force on e-commerce statistics. ONS told us that it is very active on the relevant groups and responds to all of the consultation papers produced by Eurostat.
- 3.9 Both a quality summary¹³ (2009) and quinquennial review¹⁴ (2006) have been published on ONS's website. Quality assurance procedures have been adopted for these statistics. A summary of quality is included in the release.
- 3.10 Until the 2005 survey, the smallest businesses (those employing fewer than 10 people) were included in the survey sample: the costs of this were paid by the then Department of Trade and Industry (DTI) until it withdrew its financial support. The impact of not including them was described in the First Release following the exclusion, but not since. We were told that ONS has not estimated e-commerce sales for these small businesses. As part of the designation as National Statistics, ONS should include a statement in the release about the exclusion of, and possible impact of, not surveying businesses employing fewer than 10 employees¹⁵ (Requirement 3).
- 3.11 From the 2008 survey, the definition of e-commerce was changed to exclude transactions resulting from manually typed emails. The extent of non-comparability on the time series is not described in the release. As part of the designation as National Statistics, ONS should draw users' attention to the change in the statistics due to the change in definition of e-commerce¹⁶ (Requirement 4).
- 3.12 The ISAG minutes of January 2009 noted that some users had requested regional results from this survey. ONS statisticians are considering how this might be achieved, although they have told us that it would need to address some difficult conceptual issues – for example, some businesses have a central electronic ordering point but may not retain sufficient data to analyse requests or delivery by region.
- 3.13** Both historic and future changes to the data collected in this survey are described in the release.

¹² In relation to Principle 4 Practice 1 of the Code of Practice.

¹³ <http://www.ons.gov.uk/about-statistics/methodology-and-quality/quality/qual-info-economic-social-and-bus-stats/quality-reports-for-business-statistics/summary-quality-report-for-e-commerce.pdf>

¹⁴ http://www.statistics.gov.uk/articles/nojournal/Ecommerce_Quinquennial_Review.pdf

¹⁵ In relation to Principle 4 Practice 2 of the Code of Practice

¹⁶ In relation to Principle 4 Practice 2 of the Code of Practice

Principle 5: Confidentiality

Private information about individual persons (including bodies corporate) compiled in the production of official statistics is confidential, and should be used for statistical purposes only.

- 3.14 ONS assured the Assessment team that it takes all necessary steps to protect the confidentiality of the data it collects. These steps include strict controls on access to the data and confidentiality agreements for those people allowed access to the data.
- 3.15 The e-commerce microdata are made available to researchers in ONS's Virtual Microdata Laboratory (VML). Strict controls¹⁷ are placed on access to and use of data held in the VML.

¹⁷ An article describing access to confidential data in the Virtual Microdata Laboratory is at <http://www.statistics.gov.uk/CCI/article.asp?ID=1996&Pos=&ColRank=1&Rank=224>

Principle 6: Proportionate burden

The cost burden on data suppliers should not be excessive and should be assessed relative to the benefits arising from the use of the statistics.

- 3.16 Completion of questionnaires for business surveys is a statutory requirement under the *Statistics of Trade Act 1947*¹⁸. ONS told us that its emphasis is on engaging with businesses and helping them to complete questionnaires, rather than relying on the statutory obligation.
- 3.17 Larger businesses receive survey questionnaires from ONS quite regularly, and so are aware of what is required of them. Businesses selected for a survey for the first time are sent a leaflet about ONS, the survey process and the confidentiality of the data supplied. ONS engages with small businesses through the National Statistics Small Business Forum¹⁹ (which defines a small business as having 'less than 20 in employment'). ONS told us that this raises awareness of what ONS does, and enables small businesses to provide feedback to ONS. As a result of recent feedback, ONS is reviewing the content of the leaflets, the timing of reminders and aspects of the training for the Respondent Relations Team. The current leaflets do not include any information about the importance of the data that they supply and how they are used. We suggest ONS ensure that the information supplied to businesses describes the uses of the statistics, to encourage participation through informed consent.
- 3.18 ONS reports the estimated costs of responding to the Annual e-Commerce Survey transactions of UK Businesses in its annual *Simplification Plan*²⁰.

¹⁸ http://www.opsi.gov.uk/acts/acts1947/pdf/ukpga_19470039_en.pdf

¹⁹ <http://www.ons.gov.uk/about/surveys/small-businesses-and-the-survey-burden/the-ns-small-business-forum>

²⁰ <http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=14683&Pos=&ColRank=1&Rank=272>

Principle 7: Resources

The resources made available for statistical activities should be sufficient to meet the requirements of this Code and should be used efficiently and effectively.

- 3.19 The production of e-commerce statistics appears to be adequately resourced to produce statistics at the current level of quality and disaggregation. The extension of the survey to provide regional estimates is currently being investigated and, if implemented, may require additional resources.
- 3.20 The planning for each year's survey follows appropriate and clear processes. Detailed timetables help ensure delivery of the release on the pre-announced date.
- 3.21 A centralised recruitment process in ONS ensures that appropriately skilled people are employed in the production process. Appropriate competency frameworks are in place and staff are supported in developing their skills.

Principle 8: Frankness and accessibility

Official statistics, accompanied by full and frank commentary, should be readily accessible to all users.

- 3.22 The statistics are published annually in two parts. The first is a release with commentary, charts and a summary table which lacks a summary of findings: we suggest that a summary of findings be provided. The second part is a set of 48 additional tables available in a re-usable format on the ONS website. The tables are issued in four separate Excel workbooks. We suggest that a list of tables in each workbook be provided to assist the user.
- 3.23 The release includes a link to the home page of Eurostat for other European countries' statistics, but the release does not include any commentary about the other countries' levels of e-commerce. As part of the designation as National Statistics, ONS should include in its future releases some commentary about the UK's position relative to the rest of the EU²¹ (Requirement 5).
- 3.24 In addition to the availability of the e-commerce statistics, the microdata are made available to UK academic, government and other researchers in the VML. The VML can be accessed remotely.
- 3.25 As part of the designation as National Statistics, ONS should take appropriate steps to deposit business survey data with the relevant national archive²² (Requirement 6).

²¹ In relation to Principle 8 Practice 2 of the Code of Practice.

²² In relation to Principle 8 Practice 7 of the Code of Practice and previously specified in Assessment Report 34.

Protocol 1: User engagement

Effective user engagement is fundamental both to trust in statistics and securing maximum public value. This Protocol draws together the relevant practices set out elsewhere in the Code and expands on the requirements in relation to consultation.

3.26 The requirements for this Protocol are covered elsewhere in this report.

Protocol 2: Release practices

Statistical reports should be released into the public domain in an orderly manner that promotes public confidence and gives equal access to all, subject to relevant legislation.

- 3.27 These statistics are neither sensitive nor market-moving. This is borne out by the fact that we could find no government statements about e-commerce that used these statistics. Appropriately, no pre-release access is given to these statistics.
- 3.28 The timetable prepared by the producer is detailed and sets an appropriate publication date. The announcement of the next release is both in the current release and on the National Statistics Publication Hub.
- 3.29 The Code requires National Statistics releases to be issued at 9.30am on the day of publication. The ONS website systems do not enable releases to be published simultaneously, which means that there is sometimes a delay beyond 9.30am. ONS informed us that this matter is being reviewed as part of the web development programme, which is due to be completed in early 2011. As part of the designation as National Statistics, ONS should ensure all releases are issued at 9.30am on the day of release²³ (Requirement 7).

²³ In relation to Protocol 2 Practice 4 of the Code of Practice and previously specified in Assessment Report 34.

Protocol 3: The use of administrative sources for statistical purposes

Administrative sources should be fully exploited for statistical purposes, subject to adherence to appropriate safeguards.

3.30 As a department, ONS uses a lot of administrative data. ONS has published a Statement of Administrative Sources²⁴ which lists the administrative sources used in the production of official statistics, and those with a potential use.

²⁴ <http://www.ons.gov.uk/about-statistics/ns-standard/cop/statement-of-administrative-sources/index.html>

Annex 1: Suggestions for improvement

A1.1 This annex includes some suggestions for improvement to the *E-commerce and information and communication technology activity* statistics produced by ONS, in the interest of the public good. These are not formally required for designation, but the Assessment team considers that their implementation will improve public confidence in the production, management and dissemination of official statistics.

- Suggestion 1** Analyse requests for data to identify any common requirements which may improve the content of the additional tables issued alongside the release (para 3.2).
- Suggestion 2** Ensure that the information supplied to businesses describes the uses of the statistics, to encourage participation through informed consent (para 3.17).
- Suggestion 3** Provide a summary of key findings in the release (para 3.22).
- Suggestion 4** Provide a list of tables in each workbook to assist the user (para 3.22).

Annex 2: Summary of assessment process and users' views

A2.1 This assessment was conducted from January to March 2010.

A2.2 The Assessment team – Ed Swires-Hennessy and Cecilia MacIntyre – agreed the scope of and timetable for this assessment with representatives of the ONS in January. The Written Evidence for Assessment was provided on 22 February. The Assessment team subsequently met with the ONS during March to review compliance with the Code of Practice, taking account of the written evidence provided and other relevant sources of evidence.

Summary of users contacted, and issues raised

A2.3 Part of the assessment process involves our consideration of the views of users. We approach some known and potential users of the set of statistics, and we invite comments via an open note on the Authority's website. This process is not a statistical survey, but it enables us to gain some insights about the extent to which the statistics meet users' needs and the extent to which users feel that the producers of those statistics engage with them. We are aware that responses from users may not be representative of wider views, and we take account of this in the way that we prepare assessment reports.

A2.4 The Assessment team received 9 responses from the user consultation. The respondents were grouped as follows:

ONS	4
Other government departments	3
Others	2

Overall summary

A2.5 The users who responded were satisfied with the engagement by the producer team both in the methods of consultation and their responsiveness to requests and queries.

A2.6 The following areas for additional statistics were identified by users: delivered broadband speed, levels of on-line trade with other countries, and information about UK regions. One user suggested that more use could be made of commercial websites for data collection. One user noted that the survey was not sufficiently responsive to UK user needs as it is heavily influenced by the need to satisfy EU regulations. This user also commented that the survey did not respond quickly enough to technological change, and was more focused on maintaining time series.

Key documents/links provided

Written Evidence for Assessment document

