

# Assessment of compliance with the Code of Practice for Official Statistics

## Scottish Macro-Economic Statistics

*(produced by the Scottish Government)*

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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 of compliance with the Code of Practice for Official Statistics**

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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 reports<sup>1</sup> prepared under the provisions of the *Statistics and Registration Service Act 2007*<sup>2</sup>. The Act requires all statistics currently designated as National Statistics to be assessed against the Code of Practice for Official Statistics<sup>3</sup>. The report covers sets of National Statistics that are released by the Scottish Government in the following publications and web releases:

- *Quarterly Gross Domestic Product (GDP) for Scotland*<sup>4</sup>;
- *Input-Output Tables and Multipliers for Scotland*<sup>5</sup>; and
- *Scottish Quarterly Index of Manufactured Exports*<sup>6</sup>.

1.1.2 The report also covers statistics that are released by the Scottish Government in the following publications, which do not currently carry the National Statistics designation:

- *Scotland's Global Connections Survey* (see footnote 6); and
- *Retail Sales Index for Scotland (RSIS)*<sup>7</sup>.

The Scottish Government asked the UK Statistics Authority to assess these statistics. It also asked the Authority to assess later in 2011 related economic statistics that it publishes in the Scottish National Accounts Project<sup>8</sup> (SNAP) and these statistics will be the subject of a later assessment.

1.1.3 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 listed in 1.1.1 are designated as National Statistics and has determined that the statistics detailed in 1.1.2 can be designated as National Statistics, subject to the Scottish Government implementing the enhancements listed in section 1.5 and reporting them to the Authority by April 2011.

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

<sup>2</sup> [http://www.opsi.gov.uk/Acts/acts2007/pdf/ukpga\\_20070018\\_en.pdf](http://www.opsi.gov.uk/Acts/acts2007/pdf/ukpga_20070018_en.pdf)

<sup>3</sup> <http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html>

<sup>4</sup> <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/PubGDP>

<sup>5</sup> <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/PubInput-Output>

<sup>6</sup> <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/Exports>

<sup>7</sup> <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/PubRSI>

<sup>8</sup> <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/SNAP>

### **1.3 Summary of strengths and weaknesses**

- 1.3.1 These economic statistics produced by the Scottish Government provide good coverage of the Scottish economy, and are presented in a variety of formats. The Scottish Government has consulted with a range of user groups to ensure that the statistics meet their needs and have taken account of users' views in preparing plans to develop these statistics. The *Input-Output tables* were specifically commended by users for including detailed analysis which allowed for effective economic and environmental modelling. Interaction with key users is documented through the relevant ScotStat group minutes and published on the Scottish Government's website.
- 1.3.2 The quarterly statistical releases (see paragraphs 2.2 and 2.3) would benefit from further commentary and analysis to aid interpretation. Quarterly GDP statistics are released 16 weeks after the end of the reference period, and the Scottish Government is exploring options to reduce this time gap. There is scope for the Scottish Government to provide additional information about the methods used to produce these statistics, their accuracy and the extent of revisions.

### **1.4 Detailed recommendations**

- 1.4.1 The Assessment team identified some areas where it felt that the Scottish Government 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

- |                      |                                                                                                                                                                                                                                                                                            |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Requirement 1</b> | Publish relevant information and assumptions about the uses that are made of the Global Connections Survey and use them to support the use of these statistics (para 3.6).                                                                                                                 |
| <b>Requirement 2</b> | Publish additional explanation and commentary about the revised statistics published in <i>Gross Domestic Product (GDP) for Scotland</i> for the second quarter of 2010 (para 3.10).                                                                                                       |
| <b>Requirement 3</b> | Improve published documentation about how the output measure of Gross Domestic Product, the Retail Sales Index for Scotland and the Input-Output tables are produced (para 3.13).                                                                                                          |
| <b>Requirement 4</b> | Review the methods and quality assurance procedures for the Global Connections Survey to ensure that the statistics are produced to a level of quality that meets users' needs (para 3.14).                                                                                                |
| <b>Requirement 5</b> | Provide more detailed information about the accuracy of the output measure of GDP, the Retail Sales Index for Scotland, the Global Connections Survey and the Index of Manufactured Exports statistics, including information about the main sources of bias and other errors (para 3.15). |
| <b>Requirement 6</b> | Report annually the estimated costs imposed on businesses to the statistical surveys that ONS conducts on behalf of the Scottish Government, and the Global Connections Survey (para 3.23).                                                                                                |
| <b>Requirement 7</b> | Provide commentary and analysis that aid interpretation; and provide factual information about the policy and wider context of these statistics (para 3.27).                                                                                                                               |
| <b>Requirement 8</b> | Publish a timetable of releases for these statistics 12 months in advance and ensure that these statistics can be accessed from the National Statistics Publication Hub (para 3.33).                                                                                                       |
| <b>Requirement 9</b> | Provide links to ONS's Statement of Administrative Sources, if the sources used in the production of these outputs are documented there, or itself document the sources (para 3.36).                                                                                                       |

## 2 Subject of the assessment

2.1 The Scottish Government produces a range of statistics that provide information about the performance of the Scottish economy. These economic statistics are used for a variety of purposes, including:

- to develop and monitor economic policy by the Scottish Government;
- economic modelling work by academics and consultants to help formulate economic policies;
- investment and location decisions by businesses;
- to monitor Scottish National Indicators and targets for the economy such as raising GDP growth rates to that of the UK and small independent EU countries<sup>9</sup> and growing exports at a faster average rate than GDP<sup>10</sup>; and
- to inform the public and the Scottish Parliament about developments in the Scottish economy.

2.2 The following two statistical releases are published quarterly to provide users with indicators of short-term changes in economic activity in Scotland:

- *Gross Domestic Product (GDP) for Scotland* presents provisional estimates of the latest quarterly changes in the volume of output of the Scottish economy. This is measured by the output measure of Gross Domestic Product (GDP(O)). It is published around 16 weeks after the reference period. It includes estimates for the whole Scottish (onshore) economy and for a wide range of industries based on the UK Standard Industrial Classification (SIC(2003)). The release also includes some comparisons with the UK economy back to 2006 on a quarterly basis and back to 1995 on an annual basis.
- *The Retail Sales Index for Scotland* is a new quarterly publication that was first released in February 2010. It presents estimates of quarterly changes in the volume of retail sales in Scotland. This is measured by the Retail Sales Index for Scotland (RSIS). The RSIS is produced by the Scottish Government using data from the Retail Sales Inquiry produced by the Office for National Statistics (ONS). ONS uses Retail Sales Inquiry data to produce the Retail Sales Index for Great Britain, which is the subject of a separate assessment report (see footnote 1). The retail sector accounts for around 5 per cent of the Scottish economy. The release is published around six weeks after the reference period, and provides an earlier indicator of developments in the Scottish economy than GDP(O) estimates.

2.3 The Scottish Government produces the following two statistical releases which provide further information about Scottish exports:

- The *Index of Manufactured Exports* is a quarterly release which presents estimates of changes in the volume of Scottish manufactured goods sold for export outside the UK. These estimates are measured by the Index of

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<sup>9</sup> <http://www.scotland.gov.uk/About/scotPerforms/purposes/economicgrowth>

<sup>10</sup> <http://www.scotland.gov.uk/About/scotPerforms/indicators/growExports>

Manufactured Exports (IME). The index is produced by the Scottish Government using data from ONS's Monthly Business Survey (MBS)<sup>11</sup>. The release presents quarterly and annual indices for Scottish manufactured exports for the last eight years, disaggregated by different manufacturing industries.

- *Scotland's Global Connections Survey* (GCS) presents annual statistics about Scottish exports by industry group and by international destination. Exports to other regions of the UK<sup>12</sup> ('Rest of UK') are released separately as '*statistics being developed*' (*experimental statistics*)<sup>13</sup>. The statistics are based on Scotland's Global Connections Survey (GCS), which is a voluntary survey of a representative sample of businesses which have operations in Scotland. The GCS is conducted by the Scottish Government in partnership with Scottish Development International (SDI)<sup>14</sup>. The GCS data are supplemented with data from UK surveys<sup>15</sup> carried out by ONS. The GCS data complement the quarterly estimates produced from the IME. The releases for the IME and the GCS explain that the two sets of results are partially aligned with each other. The GCS results are also used in the compilation of the *Input-Output tables*.

2.4 The Input-Output Tables and Multipliers for Scotland are a set of tables that provide a complete picture of the flows of goods and services in the Scottish economy for a given year. The multipliers aim to estimate the direct and indirect effects of variations in final demand for a particular product to allow economic impact assessments to be conducted. The tables are also used to provide the weights used to compile the GDP estimates for Scotland, to provide annual benchmark levels for GDP, and for economic modelling. The data are publicised through a News Release<sup>16</sup> but are not accompanied by a statistical release. The 2007 tables include, for the first time, a table that provides estimates of greenhouse gas effects by industry. These estimates have been used to produce a high level carbon assessment of the Scottish Government's 2010-11 Draft Budget<sup>17</sup>.

2.5 Until recently the Scottish Government also produced a compendium release entitled *Scottish Economic Statistics*<sup>18</sup> (*SES*) which was last released in December 2008. This annual publication drew together a wide range of published economic data about the Scottish economy and was intended to be used as a primary source for economic data. In September 2010 the Scottish Government carried out a web based consultation about its plans to discontinue the *SES* and to focus its resources on delivering the Scottish

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<sup>11</sup> <http://www.ons.gov.uk/about/surveys/a-z-of-surveys/monthly-business-survey--production-and-services-/index.html>

<sup>12</sup> <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/Exports/RUKExports>

<sup>13</sup> *Experimental statistics* are new official statistics undergoing evaluation. They are published in order to involve users and stakeholders in their development and as a means to build quality at an early stage.

<sup>14</sup> <http://www.sdi.co.uk/>

<sup>15</sup> <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/Exports/GCS2004Grossing>

<sup>16</sup> <http://www.scotland.gov.uk/News/Releases/2010/10/14082706>

<sup>17</sup> <http://www.scotland.gov.uk/Publications/2009/09/17102339/0>

<sup>18</sup> <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/PubSES>

National Accounts Project (see paragraph 2.6). The Scottish Government plans to publish a report on the outcome of this consultation by the end of 2010.

- 2.6 In 2008 the Scottish Government launched the Scottish National Accounts Project (SNAP). This project aims to produce a wider range of consistent and comparable economic statistics for Scotland to accompany the quarterly release of GDP statistics. The Scottish Government currently releases these statistics as '*statistics being developed*' (*experimental statistics*).
- 2.7 The Scottish Government also produces the *Government Expenditure and Revenue Scotland*<sup>19</sup> (*GERS*) publication which is subject to a separate assessment, due to be published in early 2011.
- 2.8 The Scottish Government publishes an annual Scottish Economic Statistics Plan<sup>20</sup>. The report for 2010-11 shows that the Scottish Government incurred costs of £82,000 to purchase data from ONS and received £20,000 from SDI to assist with the costs of producing the GCS. The Scottish Government told us that the analytical staff costs associated with producing these statistics is approximately £343,000 in 2010-11.

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<sup>19</sup> <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/GERS>

<sup>20</sup> <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/ScotStat/SESP201011>

## 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 Scottish Government producer team told us that the main users of these statistics are Scottish Government colleagues responsible for developing and monitoring economic policy; and other expert users, mainly from academia and consultancy practices, who use the data for economic modelling and reporting. These statistics are widely reported in the media.
- 3.2 The Scottish Government engages with users of these statistics through the following channels:
- the Scottish Economic Statistics Consultants' Group<sup>21</sup> (SESCG) which meets one or two times a year to discuss planning arrangements for the production of economic statistics in Scotland and offers advice on methodological issues. This group consists of academics, consultants and central government representatives;
  - the Input-Output Expert Users' Group<sup>22</sup> (IOEUG), which is a sub-group of SESCOG and meets around once a year. It brings together users and producers of the Input-Output tables to share expertise and experiences. This group consists mainly of academic researchers who are the main users of the tables; and
  - general users of economic data are represented in a web-based user forum through ScotStat<sup>23</sup>, a network for users and providers of Scottish official statistics. ScotStat is open to everyone and registered users are sent details of each published output on the morning of publication. ScotStat also arranges separate consultation events and conferences in order to engage users directly. Its membership is drawn mainly from academia, the business sector, and central and local government.
- 3.3 Minutes from the meetings of SESCOG and IOUEG are published on the Scottish Government's website. These provide information about users' experiences and highlights topics under consideration and review. The minutes provide evidence of effective engagement between the Scottish Government and the users represented on these groups. The Assessment team considers that there is scope for the Scottish Government to strengthen its engagement with users of these statistics from other sectors; in particular we suggest that the Scottish Government review the membership of SESCOG with a view to strengthening expert user representation from the business community.

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<sup>21</sup> <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/ScotStat/comms>

<sup>22</sup> <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/ScotStat/comms>

<sup>23</sup> <http://www.scotland.gov.uk/Topics/Statistics/scotstat>

- 3.4 In July 2010 the Scottish Government launched a web-based consultation<sup>24</sup> about GDP(O). The consultation asked respondents for information about their uses of GDP(O) and their views about the publication and background notes, including the methodology, commentary and layout. The consultation closed in October 2010. A similar web-based consultation<sup>25</sup> was launched in August 2010 for the RSIS. Scottish Government told us that it will publish the outcomes of these consultations on its website.
- 3.5 Some users and sections of the media have been critical of the timeliness of the Scottish Quarterly GDP(O) release which is released around three months after ONS publishes the preliminary estimate of quarterly GDP for the UK, and around 5 weeks after ONS publishes National Accounts statistics for the same quarter. The Scottish Government told us that the timing of the releases is primarily determined by when it receives data from its suppliers. The Scottish Government consulted SESCOG about options for producing a more timely estimate of changes in economic activity. The Scottish Government concluded from this consultation that it would be better to release early indicators for subsets of industries rather than to produce a more timely but less accurate estimate of quarterly GDP. These considerations informed the decision to introduce the new quarterly release for RSIS which is available sooner than the other economic statistics covered by this report. The Scottish Government has recently met the Committee of Scottish Clearing Bankers to discuss the possibility of getting banking sector data delivered earlier. This would enable the Scottish Government to bring forward the release of the GDP estimate by one or two weeks.
- 3.6 The Scottish Government uses the GCS to measure progress against its target for Scotland's exports to grow at a faster rate than GDP<sup>26</sup>. Scottish Development International (SDI) contributes to the funding of the GCS and uses the results to help and advise companies about investment locations and overseas markets. The Scottish Government provides little documentation about these and other uses of the GCS and the types of decisions it informs. Respondents to our consultation told us that they were unsure how GCS statistics could be used and due to the lack of regional data were less likely to be users. As part of the designation as National Statistics, the Scottish Government should publish relevant information and assumptions about the uses that are made of the Global Connections Survey and use them to support the use of these statistics<sup>27</sup> (Requirement 1).
- 3.7 In 2007 the Scottish Government created the Council of Economic Advisers<sup>28</sup> to advise the First Minister on the best way to improve Scotland's sustainable growth rate. In the Council's first annual report<sup>29</sup> in December 2008 they noted that the quality of economic statistics for Scotland did not meet the needs of government. It welcomed the steps which had been taken to improve the quality of these statistics and made a number of recommendations and considerations for further improvements. The Scottish Government published

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<sup>24</sup> <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/ScotStat/OtherCons/GDPsurvey>

<sup>25</sup> <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/ScotStat/OtherCons/retailsalessurvey>

<sup>26</sup> <http://www.scotland.gov.uk/About/scotPerforms/indicators/growExports>

<sup>27</sup> In relation to Principle 1 Practice 2 of the Code of Practice

<sup>28</sup> <http://www.scotland.gov.uk/News/Releases/2007/06/28162657>

<sup>29</sup> <http://www.scotland.gov.uk/Topics/Economy/Council-Economic-Advisers/Annual-Reports>

its response to these recommendations in January 2009<sup>30</sup> and published a progress report in February 2010<sup>31</sup>.

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<sup>30</sup> <http://www.scotland.gov.uk/Publications/2009/01/15111700/0>

<sup>31</sup> <http://www.scotland.gov.uk/Topics/Economy/Council-Economic-Advisers/1st-ann-report-progress>

## Principle 2: Impartiality and objectivity

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

- 3.8 These statistics are presented impartially and objectively and are accompanied by neutral commentary.
- 3.9 The Scottish Government publishes a revisions policy for these statistics<sup>32</sup> which is available on its website. The policy explains how planned and unplanned revisions are managed. This policy is in addition to the corporate policy<sup>33</sup> for revisions for all Scottish Government Official Statistics.
- 3.10 In October 2010, the Scottish Government published a revisions statement<sup>34</sup> to accompany the publication of *Gross Domestic Product (GDP) for Scotland* for the second quarter of 2010<sup>35</sup>. The statement described the revisions that had been made to the statistics for earlier periods and presented a series of charts showing the effect of the revised statistics for each of the main industries. The revisions bring the methodology and data sources used in Scotland more in line with the UK estimation process. Some of the revisions were substantial and have been subject to criticism in the media<sup>36</sup>. The Assessment team considers that neither the revisions statement nor the statistical release provides a full enough explanation or commentary about the nature of these major revisions. As part of the designation as National Statistics the Scottish Government should publish additional explanation and commentary about the revised statistics published in *Gross Domestic Product (GDP) for Scotland* for the second quarter of 2010<sup>37</sup> (Requirement 2).

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<sup>32</sup> <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/ScotStat/revisionspolicy>

<sup>33</sup> <http://www.scotland.gov.uk/Resource/Doc/933/0094725.doc>

<sup>34</sup> <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/GDP/GDP2010Q2Revisions>

<sup>35</sup> <http://www.scotland.gov.uk/Publications/2010/10/GDP2010Q2>

<sup>36</sup> <http://news.scotsman.com/billjamieson/Bill-Jamieson-Why-our-GDP.6606205.jp>

<sup>37</sup> In relation to Principle 2 Practice 6 of the Code of Practice

### **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.**

- 3.11 No incidents of political pressure, abuses of trust or complaints relating to the professional integrity, quality or standards were reported to or identified by the Assessment team.
- 3.12 There is considerable media interest in these statistics. The Scottish Government told us that media coverage was sometimes ill-informed. We suggest that the Scottish Government strengthen the engagement between the statisticians responsible for producing these statistics and the media to improve the way in which these statistics are communicated to a wider audience.

## 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.**

- 3.13 The statistical releases covered by this assessment include background notes which provide information about the methods used. The Scottish Government's website provides further information about the methods used to produce GDP<sup>38</sup>, the IME<sup>39</sup> and GCS<sup>40</sup>. For the Input-Output tables, the Scottish Government's website provides links to reference material, but provides little documentation about how the Scottish tables have been produced and about the data sources<sup>41</sup>. Similarly, the Scottish Government provides little information about how it produces RSIS and GDP. As part of the designation as National Statistics, the Scottish Government should improve published documentation about how the output measure of GDP, the Retail Sales Index for Scotland and the Input-Output tables are produced<sup>42</sup> (Requirement 3).
- 3.14 The Scottish Government told us that many businesses, especially national and international organisations, find the survey form for the GCS difficult to complete since their accounting systems are not designed to distinguish their Scottish activities from their activities elsewhere in the UK. Not all information is completed in all returns and some interpolation is required. Survey data are augmented with data from other sources including ONS's Inter-Departmental Business Register (IDBR) and the Retail Sales Index (RSI). The Assessment team sees the need for a review of both the uses and the quality of the GCS to address the user concerns outlined under Principle 1. As part of the designation of National Statistics, the Scottish Government should review the methods and quality assurance procedures for the Global Connections Survey to ensure that the statistics are produced to a level of quality that meets users' needs<sup>43</sup> (Requirement 4).
- 3.15 The Scottish Government has published information on its website about the quality assurance procedures it follows for these economic statistics<sup>44</sup>. This informs users about how the Scottish Government addresses each of the dimensions of the European Statistical System (ESS) Quality Framework<sup>45</sup>. There is scope for the Scottish Government to provide users with additional information about the accuracy of these statistics. For GDP, RSIS, GCS and IME the releases could provide some indication of the extent to which the numbers may subsequently be revised, based on what has happened in the

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<sup>38</sup> <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/GDP/GDPcalc>

<sup>39</sup> <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/Exports/IMEMethodology>

<sup>40</sup> <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/Exports/GCSMethodology>

<sup>41</sup> <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/Input-Output/DataSources>

<sup>42</sup> In relation to Principle 4 Practice 1 of the Code of Practice

<sup>43</sup> In relation to Principle 4 Practice 2 of the Code of Practice

<sup>44</sup> <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/ScotStat/EconStatsQA>

<sup>45</sup> The six dimensions of the ESS Quality Framework are: relevance, accuracy, timeliness and punctuality, accessibility and clarity, comparability and coherence.

past and it could publish revisions triangles<sup>46</sup> for these statistics. Within the GDP estimate, output from the construction industry appears to be particularly prone to subsequent revisions. The *Global Connections Survey* release provides information about the sample size for the survey and how many businesses responded but it does not provide a standard breakdown of response rates or estimates of standard errors. As part of the designation as National Statistics, the Scottish Government should provide more detailed information about the accuracy of GDP(O), RSIS, GCS and IME statistics, including information about the main sources of bias and other errors<sup>47</sup> (Requirement 5). As part of addressing this Requirement, we suggest that the Scottish Government investigate whether numerical (as opposed to qualitative) estimates of data accuracy could be produced.

- 3.16 The methods used to produce these economic statistics are almost wholly determined by standard international conventions. Many of the statistical outputs produced in Scotland use the same data sources as used for the equivalent UK statistics produced by ONS. ONS provides the Scottish Government with the data for Scotland. Where the Scottish data are not sufficient for their intended uses in Scotland, the Scottish Government pays ONS for boosts to the sample size. This is currently the case for the MBS and the Business Register and Employment Survey<sup>48</sup>.
- 3.17 The Assessment team considers the Scottish Government's plans to extend the range and quality of economic statistics through the Scottish National Accounts Project (see paragraph 2.6) to be an example of good practice in seeking to achieve continuous improvements in statistical processes to meet users' needs. Users have been positive about the SNAP developments<sup>49</sup>.

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<sup>46</sup> Revisions triangles show how particular estimates are revised over time. Charts are usually provided in spreadsheet form. ONS has published guidance for producing revisions triangles:

[http://www.statistics.gov.uk/articles/economic\\_trends/ET614George.pdf](http://www.statistics.gov.uk/articles/economic_trends/ET614George.pdf)

<sup>47</sup> In relation to Principle 4 Practice 2 of the Code of Practice

<sup>48</sup> <http://www.ons.gov.uk/about/surveys/a-z-of-surveys/business-register-and-employment-survey/index.html>

<sup>49</sup> For example, see page 23 of *Fraser of Allander Economic Commentary*:

<http://www.strath.ac.uk/media/departments/economics/fairse/Latest-Fraser-of-Allander-Economic-Commentary.pdf>

## 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.**

- 3.18 The Scottish Government has assured us that it takes all necessary steps to protect the confidentiality of the data it collects. This includes storing the data securely on a separate statistical data server. Only the producer statisticians and administrative staff have access to these data.
- 3.19 The Scottish Government provides an information pack alongside the GCS questionnaire which describes how the data will be used and informs respondents how their confidentiality will be protected.
- 3.20 Data purchased from ONS is subject to a long-standing Service Level Agreement. Any disclosure of confidential information to third parties (for commissioned research, for example) must be agreed with ONS.
- 3.21 Data from the GCS was previously shared with a third party for a project on Foreign Direct Investment commissioned by Scottish Enterprise. Data were shared via ONS's Virtual Microdata Laboratory<sup>50</sup> (VML) and a data sharing agreement was drawn up and signed governing the use of this confidential data.

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<sup>50</sup> The VML is a facility within ONS which enables access to restricted microdata for research purposes. Researchers from government and academia use the VML to carry out research on ONS surveys and other confidential datasets.  
For further information see: <http://www.ons.gov.uk/about/who-we-are/our-services/vml>

## **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.**

- 3.22 The majority of the data used by the Scottish Government to produce these statistics come from ONS. Most of these data are provided free of charge but the Scottish Government pays ONS for some additional regional data to be collected through boost (top-up) surveys. The Scottish Government's Scottish Economic Statistics Plan for 2010-11 explains that the Scottish Government will work with ONS to try to establish a methodology for estimating the burden that these top-up surveys impose on business respondents.
- 3.23 The Scottish Government does not publish data at present relating to the burden placed on respondents to the GCS. It plans to publish an analysis of the time burden placed on businesses responding to the survey questionnaire in the 2010 release of the GCS. As part of the designation as National Statistics, the Scottish Government should report annually the estimated costs imposed on businesses to the statistical surveys that ONS conducts on its behalf and the GCS<sup>51</sup> (Requirement 6).

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<sup>51</sup> In relation to Principle 6 Practice 1 of the Code of Practice

## 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.**

- 3.24 The Scottish Government told us that sufficient resources are available to produce these statistics to the standards of the Code and to carry out modest developmental work.
- 3.25 The Scottish Government's annual Scottish Economic Statistics Plan describes plans for developing these statistics and identifies the staff resources that are available for each of the main statistical outputs. This shows that 7.8 Full Time Equivalent (FTE) employees are involved in the production of these statistical outputs. The Scottish Government told us that it believes that this is a modest amount considering the number of outputs and the attention they receive.
- 3.26 The Scottish Government reported that £65,000 is spent each year purchasing data from ONS with an additional £17,000 spent on boosting the Scottish element of the business surveys conducted by ONS. The Scottish Government is in the process of reviewing the Service Level Agreement with ONS to discuss future data priorities and value for money.

## Principle 8: Frankness and accessibility

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

- 3.27 The statistical releases covered by this assessment share similar formats. They include a chart showing recent trends, provide some bullet points that summarise the main findings and include a set of tables that present the statistics as time series. The releases for GDP(O) and RSIS provide comparable statistics for the UK and GB, respectively. However, technical terms such as ‘basic prices’ in GDP(O) are not explained and the releases provide little information about the policy context and wider uses of the statistics. With the exception of *Global Connections Survey*, the releases provide little commentary about the latest statistics. For example, the release of GDP(O) statistics for the second quarter of 2010<sup>52</sup> shows substantial growth in the construction sector for the latest period. This would benefit from some explanation and commentary. As part of the designation as National Statistics, the Scottish Government should provide commentary and analysis that aid interpretation; and provide factual information about the policy and wider context of these statistics<sup>53</sup> (Requirement 7).
- 3.28 The Scottish Government releases the Input-Output tables on its website in Excel and PDF format, along with links to a user guide, reference material and information about recent developments concerning these tables. The data are publicised through a News Release<sup>54</sup> but are not accompanied by a statistical release. The statistics are in the form of very large matrices and the Scottish Government considers these to be unsuitable for a paper-based format. The latest tables are for 2007 and tables are also available for previous years back to 1998. The tables are revised each year to take account of new data and definitional changes.
- 3.29 The Scottish Government’s website has a section for economic statistics<sup>55</sup> which provides an accessible route to statistical publications and related information. It includes topic pages which provide a high-level summary of trends, including some comparisons with the equivalent figures for the UK and EU. The high-level summary of trends<sup>56</sup> is released in Excel and PDF.
- 3.30 Most of the supporting data in the macro-economic releases is provided in web format along with downloadable PDF files and Excel spreadsheets to enable and encourage re-use.
- 3.31 The Scottish Government ensures that its macro-economic statistics are publicised to known users via its user groups and the wider ScotStat membership. Recent releases are also highlighted on the main Scottish Government website.

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<sup>52</sup> <http://www.scotland.gov.uk/Publications/2010/10/GDP2010Q2>

<sup>53</sup> In relation to Principle 8 Practice 2 of the Code of Practice

<sup>54</sup> <http://www.scotland.gov.uk/News/Releases/2010/10/14082706>

<sup>55</sup> <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy>

<sup>56</sup> <http://www.scotland.gov.uk/Resource/Doc/933/0102344.pdf>

## **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.**

3.32 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.**

- 3.33 The Scottish Government's policy is to pre-announce the month of publication for statistical releases 12 months in advance and to pre-announce the date of release the month before. The list of forthcoming statistical publications is available on the Scottish Government website<sup>57</sup>. In addition there is a detailed economic statistics publication list, available on the Scottish Government website<sup>58</sup>. However, releases for the Input-Output Tables and Multipliers and *Scotland's Global Connections* could not be accessed from the National Statistics Publication Hub. As part of the designation as National Statistics, the Scottish Government should publish a timetable of releases for these statistics 12 months in advance and ensure that these statistics can be accessed from the National Statistics Publication Hub<sup>59</sup> (Requirement 8).
- 3.34 The Scottish Government provided us with a list of those who are granted pre-release access to the separate macro-economic products. This list is maintained on the Scottish Government records management system. We suggest that the Scottish Government publish records of those granted pre-release access to these statistics in their final form.

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<sup>57</sup> <http://www.scotland.gov.uk/Topics/Statistics/Forthcoming>

<sup>58</sup> <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/Publications>

<sup>59</sup> In relation to Protocol 2 Practice 2 and Practice 3 of the Code of Practice

### **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.**

- 3.35 The Scottish Government has published a Statement of Administrative Sources<sup>60</sup> which includes information about the administrative data available to the Scottish Government.
- 3.36 ONS uses administrative data sources to provide additional data for Scotland, to supplement the data collected through its Monthly Business Survey. These sources are not included in the Scottish Government's Statement of Administrative Sources. As part of the designation as National Statistics, the Scottish Government should provide links to ONS's Statement of Administrative Sources, if the sources used in the production of these outputs are documented there, or itself document the sources<sup>61</sup> (Requirement 9).

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<sup>60</sup> <http://www.scotland.gov.uk/Topics/Statistics/About/StatementAdminSources/Q/EditMode/on>

<sup>61</sup> In relation to Protocol 3 Practice 5 of the Code of Practice.

## Annex 1: Suggestions for improvement

A1.1 This annex includes some suggestions for improvement to the Scottish Government macro-economic statistics, 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.

- |                     |                                                                                                                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Suggestion 1</b> | Review the membership of SESCOG with a view to strengthening expert user representation from the business community (para 3.3).                                                                             |
| <b>Suggestion 2</b> | Strengthen the engagement between the statisticians responsible for producing these statistics and the media to improve the way in which these statistics are communicated to a wider audience (para 3.12). |
| <b>Suggestion 3</b> | Investigate whether some numerical (as opposed to qualitative) estimates of data accuracy could be produced, as part of implementing Requirement 5 (para 3.15).                                             |
| <b>Suggestion 4</b> | Publish records of those granted pre-release access to these statistics in their final form (para 3.34).                                                                                                    |

## Annex 2: Summary of assessment process and users' views

A2.1 This assessment was conducted from September 2010 to November 2010.

A2.2 The Assessment team – Neil Jackson and David Duncan-Fraser – agreed the scope of and timetable for this assessment with representatives of the Scottish Government in August 2010. The Written Evidence for Assessment was provided on 3 September 2010. The Assessment team subsequently met the Scottish Government during September 2010 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 14 responses from the user consultation. The respondents were grouped as follows:

Scottish Government, Local Authority and agencies	4
Academia	5
Consultants	4
Media	1

A2.5 The responses received were detailed and provided the Assessment Team with a wealth of information on the types of uses for the statistics. Users were generally positive about the coverage and nature of the statistical reports being assessed. The input-output tables were specifically commended for including detailed analysis which allowed for effective economic and environmental modelling.

A2.6 Users were positive about the level of consultation with the Scottish Government and the Office of the Chief Economic Advisor (OCEA) via the ScotStat forum and the relevant expert user groups. Many users commended the working relationship they have with Scottish Government statisticians. Users told us that the Scottish Government engages effectively with users through SESCOG, IOEUG and the wider ScotStat membership. Some users were critical of the time taken to release the quarterly GDP(O) figures and felt that more could be done to investigate further improvements. Other users suggested that more information could be provided with *Scotland's Global Connections* as they were unsure of the accuracy of the data presented.

- A2.7 In addition to the user consultation outlined, the Assessment team was invited to attend the Scottish Economic Statistics Consultants' Group (SESCG) on 18 October 2010. This was used to discuss specific details and questions that arose during the earlier consultation.
- A2.8 The majority of SESCg members use the data for economic modelling and informing the Government about policy decisions. The statistics were commended for being relevant to regional and Scottish policy and debate. Users felt that the UK statistics are often too far removed to provide detailed analysis across the disparate countries and regions of the UK. These statistics for Scotland are valuable for operational policies of business which are often determined by geographies. For example, the business community use economic statistics by detailed industrial sectors and by region. From an operational perspective, it is the detailed, disaggregated data that provides the information required by Small and Medium Sized Enterprises (SMEs) to make marketing and location decisions, and for policy makers to make informed policy decisions.

**Key documents/links provided**

Written Evidence for Assessment document



