Information paper

Quality and Methodology Information

General Details

Title of output:	Civil Service Statistics
Abbreviated title:	ACSES (Annual Civil Service Employment Survey)
Designation:	National Statistics
Geographic Coverage:	Great Britain - Nomenclature of Units for Territorial Statistics (NUTS)
Date of last SQR or QMI:	March 2010
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Executive Summary

This report relates to the Civil Service Statistical Bulletin[1] which provides detailed diversity information on the make-up and structure of the Civil Service on an annual basis.

Civil Service Statistics are sourced from the Annual Civil Service Employment Survey (ACSES) which, following a development programme in 2007, replaced the Mandate collection (previously run by Cabinet Office (CO) and transferred to Office for National Statistics (ONS) in 2006). The ACSES is a complete census of the Civil Service.

This document contains the following sections:
- Output quality
- About the output
- How the output is created
- Validation and quality assurance
- Concepts and definitions
- Other information, relating to quality trade-offs and user needs, and
- Sources for further information or advice

Output Quality

This document provides a range of information that describes the quality of the output and details any points that should be noted when using the output.

ONS has developed Guidelines for Measuring Statistical Quality[2] ; these are based upon the six European Statistical System (ESS) quality dimensions. This document addresses these quality dimensions and other important quality characteristics, which are:
- Relevance
- Timeliness and Punctuality
- Comparability
- Coherence
- Accuracy
- Output Quality Trade-Offs
- Assessment of User Needs and Perceptions, and
- Accessibility and Clarity

More information is provided about these quality dimensions in the sections below.

About the Output

Relevance

The degree to which the statistical outputs meet users' needs.

What it Measures	The survey collects information relating to the gender, ethnic origin, disability status, age, national identity, earnings, profession and regional location of every individual Civil Service employee.
Frequency	Annual collection.
Sample Size	All staff in post at the specified reference date (circa 500,000 civil servants). Includes all civil servants who have left the Civil Service during the 12-month period reference period.
Periods Available	Previously known and published as the Mandate Collection, data are available back to 1970 and are available from the Civil Service Statistics website.
Sample Frame	Complete Census of the Civil Service. All Civil Service departments are contacted and asked to complete a return which contains an individual record for each civil servant.
Sample Design	Census.
Weighting & Estimation	No weighting or estimation is used on the survey estimates. 100 per cent unit response has been achieved since the ACSES survey commenced in 2007. Statistics are based on actual returns only, no item non-response adjustment is applied.
Imputation	No imputation is undertaken.
Outliers	No filtering of outliers.

ONS publishes Civil Service Statistics annually on the National Statistics website. These annual statistics provide regional analyses and diversity and earnings statistics for the Civil Service population. The statistics provide a deeper look at the characteristics of those in the Civil Service and should be used alongside the statistics produced on a quarterly basis as part of the Public Sector Employment Statistical Bulletin[3].

The survey methodology remains broadly similar to the Mandate collection but ACSES offers two key advantages:
Uniform collection – Previously two collection tools were used. The Mandate collection accounted for approximately 85 per cent of the Civil Service and comprised comprehensive anonymised datasets generally extracted directly from the Human Resources (HR) systems of government departments and their agencies. For historical reasons, some departments supplied summary tables instead. These were called departmental returns and covered only a limited subset of data. ACSES follows the Mandate model for all departments and agencies

Relevance – In consultation with CO and government departments the content of the survey was reviewed. As such, a number of variables were removed from the survey as there was no clearly demonstrated requirement for their collection (e.g. marital status) and new information was collected to meet current policy needs (e.g. professional skills for government). This review process now takes place on an annual basis. All stakeholders are contacted before the annual specification is written and the content of the survey is amended accordingly based on the agreed outcomes of the consultation process

The survey receives a full response from all government departments and agencies.

Uses and Users

Civil Service Statistics are used across government and feed into a number of wider publications and outputs. Some government departments use the total figures to facilitate policy making whereas others use specific components of the data collection. The main users are as follows:
Cabinet Office **-** Civil Service statistics on a headcount and full-time equivalent (FTE) basis are used to monitor changes in Civil Service numbers and form the basis for briefing the Cabinet Secretary. The statistics are also used to monitor equality and diversity issues across the Civil Service. A core function of the team who use these data is to build, maintain and disseminate a comprehensive and robust evidence base on the Civil Service, supporting the Cabinet Secretary in his duties. It is vitally important that the Cabinet Secretary and the head of the Home Civil Service are able to understand

the trends, issues and make-up of those that work across the many separate departments that constitute the Civil Service.

Government Skills (GS) **-** Government Skills use ACSES data to gain a better understanding of the numbers and grades of each professional group in each government department and location and to monitor changes from year to year. The data are also useful as a benchmark for measuring responses to surveys and other research carried out by GS. The data collected on equality and diversity also provide GS with useful cross-government indicators.

Other Users **-** A range of other users use the data collected by ACSES on a regular basis. Recent requests for data have included identifying the number of civil servants paid over certain thresholds and using the figures collected on professions to identify skill gaps across the Civil Service. A log of all data requests and responses is kept and maintained by the survey team.

Key Definitions

Civil Service Statistics follows UK National Accounts concepts and definitions, insofar as a department has to be classified to the Civil Service for it to be eligible for selection. The concept and definitions relating to Civil Service Statistics are included in the background notes of the annual Civil Service Statistical Bulletin[1].

Timeliness and Punctuality
Timeliness refers to the lapse of time between publication and the period to which the data refer. Punctuality refers to the gap between planned and actual publication dates.

Civil Service Statistics has consistently met the target publication deadlines.

For more details on related releases, the UK National Statistics Publication Hub[4] is available online and provides 12 months' advanced notice of release dates. If there are any changes to the pre-announced release schedule, public attention will be drawn to the change and the reasons for the change will be explained fully at the same time, as set out in the Code of Practice for Official Statistics[5].

How the Output is Created
Overview

The ACSES survey collects detailed statistics on individuals who work within Civil Service government departments. An Excel spreadsheet, along with a Specification Guide (a document detailing the requirements for the survey), is sent to the 106 Civil Service departments across Great Britain. The contributors (for example, Department for Work and Pensions (DWP), Home Office, CO) each supply a completed Excel file in a predefined format. The Excel files have in-built validation checks to improve the accuracy of response from the government departments. The individual files are then sent back to ONS where they are validated, checked and queried by an individual Results Manager from within the Public Sector Employment Results (PSER) team.

Once the information supplied by a government department has been confirmed, the data are amalgamated into a larger file (data from all government departments are merged) from which various analyses of the figures are published.

Response Chasing

Due to the nature of the data collection a lot of time is spent response chasing with government departments. In the first instance, the PSER team have to gain a response from a government department. This in itself is time consuming and experience has shown that even though the majority of the return will be from HR records the data supplied are not always accurate. A lot of time is spent validating the data.

Process Decomposition – ACSES

Collection, validation and reporting of the survey is facilitated and controlled by computer software written using the Statistical Analysis Software (SAS) language. The application, referred to as 'ACSES', comprises classic client/server architecture whereby team members initiate various actions by means of the ACSES application installed on their PC's. The primary function of the ACSES application is to reduce the amount of paper reports produced by the original (Mandate) system passed to ONS from the CO whilst at the same time facilitating improved validation, control and presentation of the intermediate validation reports.

Statistical Disclosure Control

Statistical disclosure control methodology is applied to Civil Service Statistics data. This ensures that information attributable to an individual is not identifiable in any published outputs. The Code of Practice for Official Statistics[5], and specifically the Principle on Confidentiality set out practices for how we protect data from being disclosed. The Principle includes the statement that ONS outputs should 'ensure that official statistics do not reveal the identity of an individual or organisation, or any private information relating to them, taking into account other relevant sources of information'. More information can be found in National Statistician's Guidance: Confidentiality of Official Statistics[6] and also on the Statistical Disclosure Control Methodology[7] page of the ONS website

Validation and Quality Assurance
Accuracy
The degree of closeness between an estimate and the true value.

Because the data collection is a census in design and the fact that 100 per cent response is achieved across all government departments and agencies, standard errors are not calculated for the survey estimates.

However, it is still important to be aware of accuracy issues associated with the data collection. Departments are not always able to provide complete information for every variable collected and users should always consider under-coverage when interpreting the statistics, particularly over-time. This is especially important as the Mandate collection only accounted for approximately 85 per cent of the Civil Service.

Statistics are published on the gender, ethnicity, disability status, national identity and age of the Civil Service workforce. All diversity statistics relate to civil servants counted on a headcount basis. Employees declared as disabled are presented as a percentage of known disability status. Those employees who have either not responded or actively chosen not to declare their status are excluded from published calculations.

Item-level response and under-coverage, in general, has improved since the first ACSES collection in 2007. The most recent non-response comparisons are displayed below.

2010/11 non-response comparison
All employees

Variable	2010 (per cent)	2011 (per cent)	Difference (percentage points))
Gender	0.0	0.0	0.0
Age	0.0	0.1	0.1
Disability	0.0	0.1	0.1
Ethnicity	7.2	6.6	-0.6
Gross Salary	0.1	0.1	0.0
Profession	20.1	4.1	-16.0
Responsibility Level	0.5	0.6	0.1

There are a number of reasons for under-coverage:
New entrants and self-service – it can take time for HR systems to 'catch up' when a new employee joins a government department. Government departments are also increasingly moving to self-service systems which require individuals to maintain their personal information via an intranet service. While it is the responsibility of departments to review the quality of information held and encourage regular updates, an element of non-response is expected.

New requirements – ACSES is relatively new and some government departments are providing detailed information for the first time (previously they would have supplied a departmental return as part of the Mandate collection or a departmental return). While these first few collections have been very positive, it will inevitably take time for government departments to ensure that their systems can fully meet the requirements of the survey. Additionally, the supplying of new survey information, such as that related to professions (collected for the first time in 2006) has proved a major undertaking and it is acknowledged that the quality of returns from government departments in these areas will improve over time.

If a large error is detected with the data, the Civil Service Statistical Bulletin[1] and associated data will be revised in line with the Code of Practice for Official Statistics[5]. More information on revisions can be found in National Statisticians Guidance: Presentation and Publication of Statistics[8] and the ONS Statistical Policy on Revisions and Corrections[9].

Comparability and Coherence
Comparability is the degree to which data can be compared over time and domain e.g. geographic level. Coherence is the degree to which data that are derived from different sources or methods, but refer to the same topic, are similar.

Data are available from the Civil Service Statistics Website[10] back to 1970.

Following a development programme in 2007, the survey outputs are compiled from a single source, ACSES. Prior to 2007, government departments supplied information either via the Mandate collection or by a paper departmental return. The departmental returns lacked the coverage of the Mandate collection, departments were only required to supply certain fields in the form of summary tables, as such they did not supply individual records for each civil servant. The Mandate collection accounted for approximately 85 per cent of the Civil Service. In contrast the ACSES accounts for 100 per cent of the Civil Service population.

The reference dates for the survey have also changed overtime. It is important that users are aware of the reference date for the individual data collections before producing tabular or graphical outputs.

A key measure of quality is the reconciliation between the Civil Service Statistical Bulletin[1] and the quarterly Public Sector Employment Statistical Bulletin[3]. It is important to note, that whereas ONS works with government departments to minimise any differences between the two outputs, they will never be fully resolved.

Differences arise mainly due to timing variation. The quarterly survey is published 11 to 12 weeks after the end of the reference period. As only summary statistics are required, data can often be sourced by departments directly from payroll systems, whereas the Civil Service Statistics Statistical Bulletin is based on information held by HR systems. The timeliness of the survey means that HR systems continue to be updated after the snapshot date whereas payroll systems are static.

This live updating of systems means that there is always the possibility of differences arising before the more comprehensive annual collection is completed.

Concepts and Definitions
Concepts and definitions describe the legislation governing the output, and a description of the classifications used in the output.

Headcount statistics are based on the number of employees with an employment contract who are being paid by the organisation. Employees can be permanent, on a fixed-term contract or employed on a casual basis. The self-employed, contract workers and agency workers are excluded. Employees not on the payroll and not being paid during the reference period are also excluded, for example, those on unpaid maternity leave, unpaid sick absence and career breaks.

Full-time employees are those who are contracted to work 37 hours per week (36 hours per week in London). Part-time employees are those who work less than the normal contracted hours.

Full-time equivalents are based on converting part-time employees' hours into a full-time employees' equivalent and provide a better indicator of total labour input than a headcount.

Permanent employees are employees with a contract that has no agreed expiry date or a fixed term contract of more than 12 months. Temporary/casual employees are those with a fixed term contract of 12 months or less or employed on a casual basis. Casual employees must be paid through the departments' payroll. Employees hired through agencies are not included.

Entrants and leavers are employees entering or leaving the Civil Service in the 12 months survey reference period of 1 April to 31 March. The figures exclude transfers and loans between departments. Employees leaving on 31 March of a survey reference period are counted as both staff in post and leavers. A number of departments are unable to provide a date of entry for civil servants in their employment. Some departments are also unable to distinguish between those civil servants entering their department for the first time via transfer or loan and those new to the Civil Service. As

such, the number of net entrants and leavers will not reconcile with the change in employment between two consecutive survey reference periods.

Gross salary is the annual salary inclusive of basic pay (including consolidated performance pay) and pay-related allowances such as regional and skills allowances. It does not include bonuses. The headline earnings statistics are based on the median rather than the mean. The median is the value below which 50 per cent of employees fall. It is preferred over the mean for earnings data as it is influenced less by extreme values and because of the skewed distribution of earnings data.

Responsibility levels - Since 1 April 1996 all departments and agencies have had delegated responsibility for the pay and grading of their employees, except for those in the Senior Civil Service (SCS). The concept of broad 'responsibility levels' is therefore used, in which departmental grades have been assigned to levels broadly equivalent (in terms of pay and job weight) to the former Service-wide grades.

Senior Management
SCS – Senior Civil Service

Other Management Grades
Grade 6
Grade 7
SEO - Senior Executive Officer
HEO - Higher Executive Officer
EO - Executive Officer

Administrative Grades
AO - Administrative Officer
AA - Administrative Assistant

The professions of civil servants were collected for the first time in 2007. The professions relate to the post occupied by the person and are not dependent on any qualifications the individual may have. The range of professions includes economics, engineering, finance, human resources, law, science, tax professionals etc. Employees can alternatively be assigned to operational delivery (delivering front line services) or policy delivery (designing or enhancing services to the public). If a post could be considered operational delivery but also matches one of the specific professions, the person is assigned to the specific profession. It should not be assumed that those classified to Operational Delivery represent the sum of all those delivering front line services

Regional statistics are presented in this publication at Government Office for the Regions level. More detailed geographical breakdowns are available in the Civil Service Statistical Bulletin[1].

Other Information
Output Quality Trade-Offs
Trade-offs are the extent to which different dimensions of quality are balanced against each other.

The key strength of the ACSES is that it offers complete coverage of the Civil Service. All government departments and agencies supply data. This is in contrast to the Mandate Collection which only had 85 per cent coverage of the Civil Service (supplemented by departmental returns for key reporting variables).

A limitation of the survey is that change is very difficult to implement and enforce. If a new requirement is made for the survey because of the way the data are supplied, usually from HR records, it often takes a considerable amount of time for departments to ensure that their systems can fully meet the additional demands.

Assessment of User Needs and Perceptions
The processes for finding out about users and uses, and their views on the statistical products.

ACSES is exempt from the Prime Minister's instruction on the Control of Statistical Surveys that requires surveys to be reviewed at least once every three years. This is because the survey does not impose a burden on businesses or local authorities. As already stated, ACSES is crucial as a tool for CO to understand the make-up of the Civil Service and to inform policy making decisions.

ONS, CO and representatives from government departments control the scope of collection by reviewing legislation and user needs via a Civil Service Statistics Working Group.

Sources for Further Information or Advice
Accessibility and Clarity
Accessibility is the ease with which users are able to access the data, also reflecting the format in which the data are available and the availability of supporting information. Clarity refers to the quality and sufficiency of the release details, illustrations and accompanying advice.

ONS's recommended format for accessible content is a combination of HTML webpages for narrative, charts and graphs, with data being provided in usable formats such as CSV and Excel. The ONS website also offers users the option to download the narrative in PDF format. In some instances other software may be used, or may be available on request. Available formats for content published on the ONS website but not produced by the ONS, or referenced on the ONS website but stored elsewhere, may vary. For further information please refer to the contact details at the beginning of this document.

For information regarding conditions of access to data, please refer to the links below:
- Terms and conditions (for data on the website) http://www.ons.gov.uk/ons/site-information/information/terms-and-conditions/index.html
- Copyright and reuse of published data: http://www.ons.gov.uk/ons/site-information/information/creative-commons-license/index.html
- Pre-release access (including conditions of access): http://www.ons.gov.uk/ons/guide-method/the-national-statistics-standard/code-of-practice/pre-release-access/index.html
- Access to unpublished data: http://www.ons.gov.uk/ons/about-ons/who-we-are/services/unpublished-data/index.html
- Access to microdata via the Virtual Microdata Laboratory:http://www.ons.gov.uk/ons/about-ons/who-we-are/services/vml/index.html
- Accessibility: http://www.ons.gov.uk/ons/site-information/information/accessibility/index.html

In addition to this Quality and Methodology Information, Basic Quality Information relevant to each release is available in the background notes of the relevant Statistical Bulletin (Civil Service Statistical Bulletin[1]).

The Civil Service Statistics Statistical Bulletin[1] is published on the National Statistics website.

The Civil Service Statistics Statistical Bulletin[1] is available in a paper format directly from the press office. Civil Service Statistics for reference years 2006, 2007, 2008, 2009 and 2010[11] are available from the National Statistics website to download free of charge. Information about staffing in the Civil Service has been collected and published since 1950, and data since 1970 is available to view on the Civil Service Statistics website[10].

Further information and analysis can be obtained from the PSER team by phoning 01633 456741.

References

	Title of Reference	Website Location
1	Civil Service Statistics Statistical Bulletin	http://www.ons.gov.uk/ons/dcp171778_237745.pdf
2	Statistical Quality	http://www.ons.gov.uk/ons/guide-method/method-quality/quality/guidelines-for-measuring-statistical-quality/index.html
3	Public Sector Employment Statistical Bulletin	http://www.ons.gov.uk/ons/rel/pse/public-sector-employment/q1-2011/stb-q1-2011.pdf
4	UK National Statistics Publication Hub	http://www.statistics.gov.uk/hub/index.html
5	Code of Practice for Official Statistics	http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html
6	National Statistician's Guidance: Confidentiality of Official Statistics	http://www.statisticsauthority.gov.uk/national-statistician/ns-reports--reviews-and-guidance/national-statistician-s-guidance/confidentiality-of-official-statistics.pdf
7	Statistical Disclosure Control Methodology	http://www.ons.gov.uk/ons/guide-method/method-quality/general-methodology/statistical-disclosure-control/index.html
8	National Statisticians Guidance: Presentation and Publication of Statistics	http://www.statisticsauthority.gov.uk/national-statistician/ns-reports--reviews-and-guidance/national-statistician-s-guidance/presentation-and-publication-of-official-statistics.pdf

9	ONS Statistical Policy on Revisions and Corrections	http://www.ons.gov.uk/ons/guide-method/revisions/revisions-and-corrections-policy/index.html
10	Civil Service Statistics Releases – Civil Service Website	http://webarchive.nationalarchives.gov.uk/20110620155535/www.civilservice.gov.uk/about/resources/stats-archive/archived-reports.aspx
11	Civil Service Statistics Releases - ONS	http://www.ons.gov.uk/ons/publications/all-releases.html?definition=tcm%3A77-21840