

Information paper

Summary Quality Report for Civil Service Statistics

1 Introduction

This report is part of a rolling programme of quality reports being introduced by the Office for National Statistics (ONS). The full programme of work being carried out on [Statistical Quality](#)¹ is available on the ONS website. Summary Quality Reports are overview notes which pull together key qualitative information on the various dimensions of quality as well as providing a summary of methods used to compile the output.

This report relates to the [Civil Service Statistics Statistical Bulletin](#)² 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 and then transferred to ONS in 2006). The ACSES is a complete census of the Civil Service.

2 Summary of Quality

2.1 Relevance

The degree to which the statistical product meets user needs for both coverage and content.

What it measures	Detailed Civil Service Statistics. The survey collects information relating to the gender, ethnic origin, disability status, age, national identity, earnings, profession and regional distribution 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). All 'leavers' during the 12-month 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% unit response has been achieved since the ACSES survey commenced in 2007.
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, 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

ONS expanded its Public Sector Employment Statistics from Quarter 4 2004 (31 December 2004). A key component of this expansion was the formulation of a new quarterly data collection - the Quarterly Public Sector Employment Survey (QPSES) - which was established to fill gaps not met by other sources and improve the accuracy and coverage of estimates, one of which was accurate and timely estimates of Civil Service employment. When the survey was set up, it was possible to rationalise other data collections, therefore improving consistency across government with regards the publication of official employment statistics. The Cabinet Office previously carried out the Mandate collection which was sent to all Civil Service departments every six months requesting a wide range of detailed statistics e.g. employment, earnings, diversity, and region. With the introduction of QPSES, the Mandate collection became annual and in 2006 was transferred to ONS and rationalised into ACSES.

The survey methodology remains broadly similar to the Mandate collection but ACSES offers two key advantages:

Uniform collection – Previously 2 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 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 the Cabinet Office 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 clear 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 in his role of head of the Home Civil Service is able to understand the trends, issues and make-up of those that work across the many separate departments that constitute the Civil Service.

Government Equalities Office (GEO) - The GEO use the information collected on gross salary to produce a gender pay gap for the Civil Service and individual government departments and agencies. This information is published as part of the GEO ['Gender Pay Gap'](#)⁴ webpage. It is important to note that the calculation of a gender pay gap by the GEO for the Civil Service is not comparable with the ONS measure, as the two departments use a different methodology (see section 2.6).

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 Government Skills. The data collected on equality and diversity also provide Government Skills 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 Statistics Statistical Bulletin](#).²

2.2 Accuracy

The closeness between an estimated result and the (unknown) true value.

Due to the data collection being 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 85per 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.

2007/2009 non-response comparison

All employees

Variable	2007 (Per cent)	2009 (Per cent)	Difference (Per cent)
Gender	0.0	0.0	-
Age	0.0	0.1	0.1
Disability	29.0	27.8	-1.2
Ethnicity	21.7	21.6	-0.1
Gross salary	1.3	0.7	-0.6
Profession	25.3	21.8	-3.5
Responsibility level	0.8	0.5	-0.3

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 – as previously stated the 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 and professional skills (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.

In the event of a large error being detected with the data, the [Civil Service Statistics Statistical Bulletin](#)² 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](#)⁶ and the [ONS Statistical Policy on Revisions and Corrections](#).⁷

2.3 Timeliness and Punctuality

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

Civil Service Statistics has consistently met the target publication deadlines. In the unlikely event of a change to the release schedule, an announcement will be made at least two weeks in advance, as set out in the [Code of Practice for Official Statistics](#).⁵ For more details on the Civil Service Statistics releases, the [UK National Statistics Publication Hub](#)⁸ is available online and provides twelve months advance notice of release dates.

The time lag between publication and the reference period is 10 months.

2.4 Accessibility and Clarity

Accessibility is the ease with which users are able to access the data, also reflecting the format(s) in which the data are available and the availability of supporting information. Clarity refers to the quality and sufficiency of the metadata, illustrations and accompanying advice.

The [Civil Service Statistics Statistical Bulletin](#)² is published on the National Statistics website.

The [Civil Service Statistics Statistical Bulletin](#)² is available in a paper format directly from the press office and [time series data \(2006, 2007, 2008, 2009\)](#)⁹ 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 Public Sector Employment Results (PSER) team by phoning 01633 456756.

2.5 Comparability

The degree to which data can be compared over time and domain.

Time-series 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, the Annual Civil Service Employment Survey (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.

2.6 Coherence

The degree to which data that are derived from different sources or methods, but which refer to the same phenomenon, are similar.

Public Sector Employment Statistical Bulletin (Office for National Statistics)

A key measure of quality is the reconciliation between the [Civil Service Statistics Statistical Bulletin](#)² 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.

Government Equalities Office (GEO)

The GEO, as part of their government website, have a page entitled '[Gender Pay Gap](#)⁴'. The purpose of this webpage is to encourage companies to post their pay gap and be transparent about equality of pay between men and women. To encourage transparency the GEO posted pay gaps for Civil Service departments on their website. It is important to recognise that the GEO website does not use the UK-standard methodology for its calculation of a gender pay gap (comparing the median earnings). Instead their calculation is based on the mean salaries of full time and part time men and women.

2.7 Trade-off Between Dimensions of Quality

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, due to the way in which 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.

3 Summary of Methods Used to Compile the Output

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 123 Civil Service departments across Great Britain (as of 31 March 2009). The contributors (for example, Department for Work and Pensions (DWP), Home Office, Cabinet Office) 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 is 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 glean 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 is not always accurate. A large amount of time is spent validating the data and logical checking.

Process Decomposition - ACSES

Collection, validation and reporting of the survey is facilitated and controlled by computer software written using the 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. The primary function of the ACSES application was to reduce the amount of paper reports produced by the original (Mandate) system passed to the ONS from the Cabinet Office 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](#)¹¹ and also on the [Statistical Disclosure Control Methodology](#)¹² page of the ONS website.

4 References

	Title of Reference	Website Location
1	Statistical Quality	http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=13578&Pos=&ColRank=1&Rank=272
2	Civil Service Statistics Statistical Bulletin	http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=2899&Pos=&ColRank=1&Rank=422
3	Public Sector Employment Statistical Bulletin	http://www.statistics.gov.uk/statbase/Product.asp?vlnk=13615
4	Gender Pay Gap	http://www.equalities.gov.uk/what_we_do/women_and_work/gender_pay_gap/calculate_your_gender_pay_gap.aspx
5	Code of Practice for Official Statistics	http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html
6	National Statisticians Guidance: Presentation and Publication of Statistics	http://www.statisticsauthority.gov.uk/national-statistician/guidance/presentation-and-publication-of-official-statistics.pdf
7	ONS Statistical Policy on Revisions and Corrections	http://www.statistics.gov.uk/about/data/methodology/revisions/corp-stat-policy.asp
8	UK National Statistics Publication Hub	http://www.statistics.gov.uk/hub
9	Time Series Data - ONS	http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=2899&Pos=&ColRank=1&Rank=422
10	Time Series Data - Civil Service Website	http://www.civilservice.gov.uk/about/resources/stats-archive/archived-reports.aspx
11	National Statistician’s Guidance: Confidentiality of Official Statistics	http://www.statisticsauthority.gov.uk/national-statistician/guidance/confidentiality-of-official-statistics.pdf
12	Statistical Disclosure Control Methodology	http://www.statistics.gov.uk/about/data/methodology/general_methodology/sdc.asp

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