

Public Sector Employment Statistics Methodology

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Introduction

ONS produces estimates of UK Public Sector Employment (PSE) which are compiled from a multiplicity of administrative and survey information.

The Public Sector Employment estimates are published each quarter on the National Statistics website, with breakdowns by sector (central government, local government, public corporations) and by industry (Health, education, police etc.). The key variables published are headcount and full-time equivalents. The time series is published on a non-seasonally adjusted basis.

Working with the devolved administrations and government departments means that ONS is able to draw on a range of statistics in producing estimates of public sector employment and cross-government work to harmonise definitions is improving the coherence and timeliness of these sources.

Statistics sourced from other government departments and devolved administrations cover the National Health Service, HM Forces, Police (including civilians), National Probation Service, Scottish Local Authorities and the whole of the public sector for Northern Ireland.

However, in some areas, improved data collection was required and ONS has developed a new survey, the Quarterly Public Sector Employees Survey (QPSES).

This paper outlines the definitions, sources and methods employed in producing regular quarterly estimates of Public Sector Employment, with a particular focus on the new survey.

Definitions

Public Sector

The United Kingdom National Accounts defines the public sector as comprising of central government, local government and public corporations.

Central government includes all administrative departments of government and other central agencies and non-departmental public bodies.

City academies are also classified to central government.

Local Government covers those types of public administration that only cover a locality and any bodies controlled and mainly financed by them. The sub-sector includes all areas of administrative authorities, magistrates courts, the probation service in England and Wales and police forces and their civilian staff. Trading activities within local government which produce market output (for example, housing and municipally owned markets) are regarded as quasi-corporations (organisations which behave like corporations) and appear under public corporations.

Public corporations are companies or quasi-corporations controlled by government. Examples include British Nuclear Fuels plc and Royal Mail. These companies receive more than half their income from the sales of goods or services into the market place.

The estimates of Civil Service employees count all home Civil Service employees. Civil Service employees can be classified to central government or public corporations. Examples of public corporations include the Patent Office, the Forensic Science Service and the Driving Standards Agency. Civil Service estimates exclude the Northern Ireland Civil Service, the Diplomatic Service and other Crown servants. Employees in these groups, though, are included in estimates of central government employment.

Sector classifications

The Sector Classifications Guide (MA23) provides information on the classification of organisations and institutions in the National Accounts.

<http://www.statistics.gov.uk/CCI/SearchRes.asp?term=ma23>

Industry classifications

Estimates of public sector employment broken down by industry are based on the Standard Industrial Classifications (SIC 2003) and not on the Classification of the Functions of

Government (COFOG). The published industry breakdowns are for:

- i) Construction (Division 45)
- ii) Public administration and defence; compulsory social security (Division 75)
 - HM Forces
 - Police (including civilians)
 - Public administration

A breakdown of Public administration, defence and compulsory social security (Standard Industrial Classification Division 75) has been provided for the police, HM Forces and public administration. The public administration series spreads across the activities of central government, local government and public corporations. It covers activities like central and local government administration, social security administration, justice and judicial activities, fire services, foreign affairs, supporting services for the government like archives maintenance.

- iii) Education (Division 80)
- iv) Health and social work (Division 85)
 - National Health Service
 - Other health and social work
- v) Other public sector.

Other public sector potentially covers all divisions of SIC 2003 not mentioned above. It is roughly half local government and half public sector bodies. The local government element covers a wide range of activities including leisure centres, catering, industrial cleaning, accountancy, call centres, and architecture and engineering. Examples of public sector bodies would be organisations like Royal Mail, British Nuclear Fuels, transport bodies, housing associations, tourist bodies etc.

Standardising definitions

One area of improvement to the quality of Public Sector Employment information is to harmonise the definitions used within the sources of Public Sector Employment. A number of definitions have been agreed by an interdepartmental working and steering group and implementing these definitions in existing sources is now underway. Below is a summary of these definitions:

Public Sector Employment statistics should count the number of employees with an employment contract who are being paid by the organisation. Estimates should include only those employees who are consuming organisational resource. Self-employed, contract workers and agency temporary workers should be excluded.

Estimates should include employees working overseas, for example, those employees working in the Armed Forces, Diplomatic Service and the British Council serving abroad. Locally engaged staff, however, are excluded as these are not considered UK residents.

Estimates should include casual employees and employees with a fixed-term contract. Employees with fixed-term contracts of more than 12 months should be classed as permanent employees (regardless of the amount of time remaining on the contract). Employees with fixed-term contracts of 12 months or less should be classed as temporary employees.

Estimates should count the number of employees in the organisation rather than the number of jobs/posts.

There is a difference between counting employees (which is a measure of people) compared to jobs or posts (where one person may have more than one job). For example, where an individual works for a local authority run leisure centre they may work as a lifeguard and a fitness instructor.

Full-time equivalents (FTEs) estimates should be made available and based on contracted hours. For example, if someone who is contracted to work 25 hours per week then the FTE should be calculated by dividing 25 by the number of 'standard' contracted hours of a full-time employee, for example, 37 hours. The number of hours worked are those that the employee is contracted to work for each week and so both paid and unpaid overtime should be excluded from the calculations. The contracted hours of those people on leave should be those that they were working before they left.

Part-time employees should be defined as those who work less than standard contracted hours.

Workers who only work part of the year (e.g. those on casual or annualised hours contracts)

should be counted at the time they are being paid for - if they are not working but are still being paid they should be included. If they are not working and not being paid at the reference point they should be excluded from the statistics.

Employees on secondment or loan should be in an organisation's estimate of the number of employees only if they are paying for the majority or all of their wages.

Employees on different types of leave should be treated in the following way:

- All those on paid maternity or paternity leave to be included.
- All those on paid sick leave (being paid either in full or part) to be included. Those on unpaid sick leave excluded.
- All those on paid special leave to be included.
- Those employees on short-term unpaid leave (for example for bereavement, or

parental leave) to be included if they are on leave for a period less than their pay period - they should be included even if they are absent on the reference date. If they are off for a period longer than their pay period then they should be excluded from estimates.

- Employees on career breaks to be excluded as they are not consuming organisational resource.

Added to these definitions it was agreed that sources used in PSE estimates should be available on a quarterly basis and refer to March, June, September and December each year. It was decided that administrative statistics should relate to the last day in the month whilst survey sources should remain as they are to maintain consistency with other surveys. Quarterly point in time estimates should also be used as the basis for annual averages to be used for accounting purposes.

Sources of Public Sector Employment estimates

	Geographic coverage	Source
Central government		
HM Forces	UK	MoD: DASA
National Health Service	England Wales Scotland Northern Ireland	NHS Health and Social Care Information Centre National Assembly for Wales Common Services Agency DETINI
Other central government	GB NI	Quarterly Public Sector Employees Survey (ONS) Home Office (National Probation Service and Police Service Strength) DETINI
Local government		
Local authorities	England and Wales Scotland Northern Ireland	Quarterly Public Sector Employees Survey (ONS) Joint Staffing Watch: Scottish Executive DETINI
Police (including civilians)	England and Wales Scotland Northern Ireland	Home Office Joint Staffing Watch: Scottish Executive DETINI
Public corporations		
	GB Northern Ireland	Quarterly Public Sector Employees Survey (ONS) DETINI

Quarterly Public Sector Employees Survey

The Quarterly Public Sector Employees Survey (QPSES) was introduced in the third quarter of 2004.

The survey addresses the gaps not covered by existing administrative sources listed in the table above. There are three parts to the survey:

- The Local Authority survey builds on an existing quarterly local authority survey (for England and Wales).
- The Civil Service survey covers GB government departments and their agencies. The GB civil service component of QPSES is operated by the ONS with the Cabinet Office retaining responsibility for the detailed analysis and publication of the resulting estimates of employment within each department. ONS's role will be to publish statistics at the aggregate level only.
- The Public Bodies survey covers mainly Non-Departmental Public Bodies (NDPBs) and Public Corporations.

Overall, switching to the QPSES as the main data source improves the frequency, timeliness and quality of the aggregate information published on these important elements of the public sector. It extends the measurement of employment in the civil service and public bodies providing quarterly measures instead of once or twice a year as previously. The survey definitions are also in line with those agreed by the interdepartmental working and steering group to improve consistency between the component parts of the survey.

Variables

The variables for which data are being collected are the number of permanent and temporary/casual employees in full and part-time jobs by the employees' sex. Information is required on both a headcount and full-time equivalent basis. These are requested in line with the agreed standard definitions.

For the local authority component, it has been necessary to extend the existing survey to require respondents to provide data on temporary/casual employees and information

on part-time employees in full-time equivalents.

This supplements existing headcount data on numbers of full and part-time employees by sex.

Additionally, for local authorities only, ONS is testing the inclusion of a question that asks for the number of employees working in the education sector, since this accounts for the largest part of local authority employment. Should this test prove successful, it may allow ONS to generate better estimates of employment of education within local authorities than the present system which allocates the local authority estimates using information from the Business Register Survey. (See section on industry breakdowns below).

Coverage

The surveys aim to achieve a complete census of the relevant sectors. The usual sampling and estimation techniques employed by ONS business surveys are therefore not applicable. There are approximately 850 respondents to the three surveys in total.

For the public bodies survey, a small number of additional public sector bodies which are not NDPBs or public corporations but are classified to Central Government are also included. Examples include the National Audit Office, Houses of Parliament staff and City Academies.

For local government, it should be noted that there is still a degree of development work to be carried out to ensure full coverage and upward revisions to this series are likely in the future. The key issue relates to LEA maintained schools which are opting out of local authority payroll administration. As ONS surveys ask for employees on the payroll, we know that some schools are missing from our coverage and we are investigating the best way to address this, being conscious of the need to minimise form filling burdens for schools. ONS will be liaising with the Department for Education and Skills and local authorities. As a guide, initial analysis of the pilot Quarterly Public Sector Employees Survey indicates around 30 local authorities and around 300 schools are currently affected, mainly foundation schools in England.

Data Collection and Validation

Questionnaires are sent out every quarter requesting the required information.

The reference date for the Local Authorities survey is the first Friday after the second Thursday of the last month of the calendar quarter.

The reference date for the Civil Service and Public Bodies surveys is the last day of the calendar quarter.

It was agreed by the cross-departmental Public Sector Employment steering group that the last day of the calendar quarter should be the default reference date but that for well established existing surveys (such as the Local Authorities survey) reference dates should not be changed. This decision was made to maintain consistency with other ONS business surveys.

Respondents have approximately 4 weeks to complete the survey. Returned questionnaires go through a series of automated validation tests to check for completeness and consistency and to identify any significant movements compared with the previous period reported (and the same period the previous year). The automated checks are followed up with respondents where errors are detected or further explanation is required. The target is to clear 95% of test failures prior to processing results.

Non-response

The ONS targets for response to each of the three surveys ahead of compiling results are 85% (number of respondents) and 90% (of total employment).

In addition, each survey has a list of critical respondents (usually those with the largest employment) where special efforts are made to achieve 100 per cent response and clearance of test failures.

All response rate targets were easily met for Q1 2005. However, for Q2 2005, the schedule will be tightened by two weeks to allow for publication of public sector employment estimates within three months. At that point we will have a better indication of how challenging the response rate targets are.

Estimates for non-response are made using standard imputation techniques employed by ONS business surveys.

Estimation

The estimates of employment from these three surveys are compiled by simply summing the returns for the survey together with the estimates for non-responders, with each organisations assigned to Central Government, Local Government or Public Corporations dependent on their National Accounts classification.

Currently, only the estimates of total headcount and total Full-Time Equivalents are published.

Future publication of breakdowns by full-time and part-time, male and female, permanent and temporary status is being addressed as part of the current development programme.

Industry breakdowns

Estimates from the survey broken down by Standard Industrial Classification (SIC2003 2-digit level) are calculated in the following way:

- Local Authorities - The total number of employees for a Local Authority is broken down based on the dominant SIC2003 for each of the local units of the Authority (e.g. office, school etc) held on the Inter-Departmental Business Register.
- Civil Service and Public Bodies - Employees are classified using the dominant SIC2003 for the organisation held on the Inter-Departmental Business Register.

Additional information

Public Sector Employment article published on 11 March 2005:

<http://www.statistics.gov.uk/CCI/article.asp?ID=1095&Pos=1&ColRank=1&Rank=374>.

Labour Market Trends summary article:

<http://www.statistics.gov.uk/cci/article.asp?id=1116>