Public Sector Employment

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Summary

ONS has been leading a cross-departmental project to improve the quality of public sector employment (PSE) statistics. This article summarises the work carried out so far, and sets out current best estimates of employment within the public sector.

The article presents estimates back to 1991, which improves those previously published.

The main points coming out of the article are that:

- The level of public sector employment has been revised up by around 100,000 – 200,000 per year over the period since 1991 (see table 2);
- this revision is reasonably consistent since 2000, so recent estimates of annual changes in public sector employment are largely unaltered – up by 146,000 in the latest available year (see table 5);
- there has been a picture of steady growth in public sector employment -since 1998, PSE is up 583,000 in total to the first quarter of 2004;
- over 80 per cent of the increase since 1998 has been in the health and education sectors, but most categories show an increase.

Key improvements implemented to date as a result of this project are:

- the introduction of a quarterly time series back to the first quarter of 1999 (see table 5 & 6);
- the introduction of estimates on a Full Time Equivalent basis (see table i and ii, Appendix C);
- improved coverage of the public sector following extensive quality assurance;
- comprehensive UK coverage;
- development of standardised definitions across government;
- introduction of a new quarterly survey to supplement existing data sources;
- a new two-fold presentation strategy for PSE statistics.

Key developments planned for the next twelve months are:

- the introduction of the first new survey results and regular quarterly publication. This will also lead to more timely data – quarterly data will be published with a 3-month lag compared to the old annual estimates which were published with a 1-year lag ;
- the implementation of new standardised definitions;
- to further investigate the development of seasonally adjusted series of PSE;
- a review of the coverage of local government with a particular focus on bodies opting out of local authority payroll administration e.g. schools;
- a review of the Inter-Departmental Business Register coverage of the public sector with a view to improving sampling and estimation methodology;
- to look at how PSE statistics should be incorporated into the employment and jobs statistical system;
- to examine the options for providing functional as well as industry breakdowns.

Introduction

For some years ONS has published an annual article setting out the latest available estimates for employment in the public sector. However, the situation has not been satisfactory in a number of respects. For example the figures have only been published with a considerable time lag, of about a year. Moreover they are derived from a multiplicity of sources, including administrative records and surveys of public sector organisations which have often had different definitions and reference dates. Geographical coverage is also mixed with some sources covering the whole of the UK whilst others relate only to England or England and Wales with Scotland and Northern Ireland producing their own statistics often on a different basis.

The consequence is that we have not been sure of the coherence of the estimates, neither within the public sector, nor with estimates for the private sector. Nor have the ONS estimates necessarily been fully consistent or reconcilable with figures produced by other government departments. In particular they have not been completely comprehensive. This is common internationally with most countries producing rather poor quality estimates of employment in the public sector which are compiled from a variety of sources[1].

There is an issue as to whether we are measuring employment or jobs. Past articles have focussed on public sector jobs. However, investigations by ONS have shown that most PSE sources were providing employee estimates (see Appendix A, Definition 4) and it has been agreed that the new headline estimates should focus on employee estimates. The definition of public sector is that used in the National Accounts.

There is also a choice for users between estimates that are compiled from data collected from public sector organisations (either by using administrative data directly or collected through surveys) or data collected from employees in households. In the UK, the ONS's preferred measure of total public sector employment is derived from the information taken from public sector organisations as this is line with National Accounts principles. An alternative source is the Labour Force Survey (LFS) but this relies on individual respondents correctly classifying their employer as either public or private sector when interviewed. For various reasons, this source systematically overstates the number of public sector employees. However, work is in hand to improve the accuracy of the sectoral classification of the LFS.

There is now a greater demand than ever for good quality estimates of employment in the public sector. A number of Government reviews have flagged up the need for improved public sector data, including employment; for example, the Atkinson Review of Measurement of Government Output[2] and the Allsopp Review of Statistics for Economic

Policymaking[3] both outlined the need for better data. More generally, users' desire for better data has been highlighted as part of ONS's Employment and Jobs Review[4] and, recent Government announcements have also increased the need for accurate and timely data to assess the workforce implications of the government's efficiency programme announced at the 2004 Spending Review (Pre-Budget Report 2004[5]).

For this reason ONS has been leading a programme of work to improve public sector employment statistics in the UK. This programme has concentrated on estimates derived from returns from public sector organisations with two main areas of focus. Firstly, through an interdepartmental steering and working group ONS has been developing a coherent presentation framework of Public Sector Employment (PSE) statistics and producing standard definitions for sources of PSE statistics across government. Secondly, ONS has made improvements to the coverage, accuracy, timeliness and frequency of the statistics that it publishes on the public sector employment as a whole. This includes developing a new survey called the Quarterly Public Sector Employees Survey (QPSES), which extends ONS's previous quarterly survey of local authority jobs to include government departments, executive agencies and Public Bodies in Great Britain (Northern Ireland runs its own surveys).

This programme of work is now beginning to bear fruit and this article updates progress on the improvements that have already been made to date, and outlines work that still needs to be done. The article also provides the latest estimates and analysis of changes in public sector employment from 1991 to 2004.

A coherent presentation framework for PSE statistics

PSE statistics are needed by a variety of users to understand the performance of the labour market and the economy. For example, data consistent with the National Accounts are needed to facilitate macroeconomic analysis of employment in the UK economy and for the assessment of the productivity of particular public services; and by individual government departments for their own management purposes.

ONS estimates may not meet all these user needs and while this is the case, ONS will seek to clearly describe the limitations of the statistics it publishes. The interdepartmental steering and working group have formed an agreed basis for the development of the statistics across government to better meet these needs and to present the statistics within a coherent framework.

In future, ONS plan to develop further the twofold presentation framework for PSE statistics which has been used in this article to present estimates for teachers, GPs and the police. This approach will present estimates in a way that we hope will better meet the wider user needs for statistics of employment in the public sector. On the one hand ONS will publish estimates of the total number of public sector employees which will be broken down by Standard Industrial Classification (SIC 2003) categories based on the QPSES and other supplementary sources where necessary. On the other hand, ONS also plan to bring together already published departmental estimates of the number of employees for further key occupations of interest. The benefit of this twofold approach is that where differences do exist between the sources, as well as the agreed harmonised basis, these can be clearly explained and presented in one place.

ONS plans to commence the quarterly publication of headline PSE estimates based on data from the new QPSES later in 2005. In addition, an annual analysis, using the twofold approach, will be published bringing together those figures and information from departmental sources relating to key occupational groups. Work will also be undertaken to see how best to integrate PSE statistics more coherently into the overall UK employment and jobs statistics system.

Developing standard definitions for PSE statistics

In order to improve the quality of public sector employment statistics, an interdepartmental effort led by the ONS is working to ensure standard definitions are used across all public sector employment statistics collected from different public sector organisations. The aim of this work-stream is to bring greater harmonisation between these sources of public sector employment which is essential for improving the coherence of such statistics. The work-stream is looking at, amongst other things, the definition of the public sector and the groupings within it, harmonisation of the reference dates of collection and how full-time equivalent numbers should be calculated. The main definitions emerging from the interdepartmental working and steering group are given below and Appendix A provides the rationale for each of these. Over the coming months further work will be undertaken to implement these definitions in different sources of public sector employment statistics.

Definitions

1. The conceptual basis for the definition of the public sector in the core quarterly PSE statistics should be in line with National Accounts definitions. It should count the number of employees with an employment contract who are being paid by the organisation. It should also include overseas workers in the Armed Forces, Diplomatic Service and the British Council but exclude locally engaged staff.
2. The self-employed, contract workers and agency temporary workers should be excluded from the core PSE estimates.
3. Estimates should include casual/fixed-term employees.
4. PSE sources should count the number of employees rather than the number of jobs/posts.
5. Estimates of full-time equivalents (FTEs) should be available in all sources of PSE statistics. The label FTE should be used rather than whole-time equivalents (WTE) for consistency. Contracted hours should be used as the basis for calculating FTEs.
6. Part-time employees should be defined as those who work less than standard contracted hours.
7. 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.

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

9. Employees on different types of leave should be treated in the following way in headcounts:
   - All those on paid maternity or paternity leave should be included.
   - All those on paid sick leave (being paid either in full or part) should be included.
   - All those on paid special leave should be included.
   - Those employees on short-term unpaid leave should 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 (e.g. someone on a career break).

10. Regarding the single reference date within the month, it is recommended that all administrative sources should refer to the last day of the month, whilst survey sources (e.g. QPSES (ONS), Quarterly Employment Survey (DETINI), Joint Staffing Watch Survey (SE/COSLA)) reference dates remain as they are.

11. Estimates should be quarterly and refer to the following months: June, September, December, March.

12. These quarterly point in time estimates should be used as the basis for annual averages to be used in accounting sources (for example Departmental reports and Public Sector Accounts).

Current data sources for PSE statistics

The public sector numbers published in this article are derived from the relevant departments, devolved governments and public corporations plus a comprehensive survey of all local authorities in England and Wales. This is consequently the most comprehensive source available. Table 1 shows the data sources used to calculate total public sector employment as of March 2004.

Table 1	Sources of public sector data	
	Area	Main Source
Central government		
HM Forces	UK	MoD: DASA
National Health Service	England	Department of Health
(including NHS trusts)	Wales	National Assembly for Wales
	Scotland	Common Services Agency
	Northern Ireland	Department of Enterprise, Trade and Investment for Northern Ireland
Other central government	GB	Cabinet Office
		Home Office (National Probation Service)
		Home Office (Police Service Strength)
		ONS employment surveys
	Northern Ireland (including Police)	Department of Enterprise, Trade and Investment for Northern Ireland
Local government		
Local Authorities	England and Wales	ONS Local Authority Survey
		Local Government Management Board Joint Staffing Watch (to 1998)
	Scotland	Joint Staffing Watch: Scottish Executive and the Convention of Scottish Local Authorities
	Northern Ireland	Department of Enterprise, Trade and Investment for Northern Ireland
Police (including civilians)	England and Wales	Home Office
	Scotland	Joint Staffing Watch: Scottish Executive and the Convention of Scottish Local Authorities
Public Corporations		
	GB	Cabinet Office
		ONS employment surveys
		On-line accounts
	Northern Ireland	Department of Enterprise, Trade and Investment for Northern Ireland

Central government

Estimates for the home civil service are based on the results from the Civil Service Statistics publication available on the Cabinet Office's website (http://www.civil-service.gov.uk/management_information/statistical_information/statistics/index.asp). The statistics are available for 1 April and 1 October (from 2004 only available in April) and the quarterly path is estimated by ONS using standard procedures (based on the EXPAND procedure in the software SAS). Any civil service bodies classified as public corporations under National Accounts definitions are included in the public corporations series rather than central government.

Central government estimates in this article also cover the Civil Service in Northern Ireland and the Diplomatic Service.

With the exception of Northern Ireland, estimates of employment in the NHS build on annual workforce statistics produced by the Department of Health. Standard procedures are applied to arrive at quarterly estimates up to 2003Q3. Data after this point (2003Q4 and 2004Q1) are estimated figures and are therefore subject to revision.

The HM Forces data is produced by the Defence Analytical Services Agency (DASA), MOD and published in their TSP publications. Estimates in this article represents UK full strength Armed Forces including Full Time Reserve personnel, mobilised reservists, the Ghurkhas and the Home Service battalions of the Royal Irish Regiment.

The other key element of central government is the Non-Departmental Public Bodies (NDPBs) for which data has been sourced from the annual Public Bodies publications issued by the Cabinet Office. Again, standard procedures have been applied to arrive at a quarterly series. In future, quarterly data for NDPBs, public corporations and the Civil Service will be available from the Quarterly Public Sector Employees Survey.

A small number of additional public sector bodies which are not NDPBs and so not within the scope of the Cabinet Office publication are included in the central government estimates. Examples include the National Audit Office, Houses of Parliament staff, employees of the Royal Households and City Academies. Sources for these bodies include ONS employment surveys and published accounts.

British Transport Police have been allocated to central government in line with National Accounts principles and data from the Home Office Statistics for Police Service Strength.

Local government

For local authorities in England and Wales, data have been taken from the existing ONS quarterly local authority survey with the Joint Staffing Watch Survey providing data for Scotland. This survey is also the source for police data for Scotland whilst for England and Wales annual Home Office statistics for Police Service Strength. Police officers temporarily

absent and officers on secondment are included for the first time in line with the new harmonised definitions.

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.

Public corporations

As for NDPBs, the primary source for identifying public corporations has been the Cabinet Office annual Public Bodies publications. However, alternative data sources have been used for public corporations as numbers of employees are not published by Cabinet Office. These sources include monthly and annual ONS employment surveys, the ONS Business Register Survey and published accounts. A range of public corporations outside the scope of the Cabinet Office publication have again been identified, mainly with Local Government ownership and control. Examples include Arms Length Management Organisations for housing (ALMOs) and transport executives.

Northern Ireland

For Northern Ireland, the Northern Ireland Quarterly Employment Survey (QES) can provide a consistent public sector series of employee jobs back to June 1977. The QES collects data from all public sector units in Northern Ireland therefore obtaining full coverage.

The Labour Force Survey – an alternative source

An alternative source to administrative and survey data from public sector organisations is the Labour Force Survey (LFS). The LFS is a large household survey carried out continuously across the UK, sampling around 60,000 households. The LFS provides the UK's primary measure of the number of people in employment as a whole, however, it is not the ONS's preferred measure of the total number of employees in the Public Sector.

The LFS overestimates the number of people in the public sector because respondents can unknowingly report themselves working in the public sector when really they are in the private sector according to National Account definitions. An example is employees of public-funded bodies such as universities who incorrectly classify themselves as being in the public sector. Universities are, in fact, part of the private sector in the National

Accounts as they are not controlled by government. Employees working for agencies and or contractors can also classify themselves as working in the public sector in the LFS when in reality, because their employer is a private sector organisation they should be allocated to the private sector according to the National Accounts definitions.

The strength of the LFS when looking at public sector employment is that it can provide a wealth of contextual information about employees responding to the survey, for example their age, sex, qualifications, ethnicity, union membership and disability. It is also currently more timely than the administrative and survey information gathered from public sector organisations. Estimates are available up to September to November 2004 whereas estimates from public sector organisations are currently only available up to March 2004. Whilst the levels are higher from the LFS, in the long term, and the size and direction of changes over time are coherent, though, in the short term they can sometimes differ. Table 8 in the latest estimates section shows the differences in estimates from the two sources.

The classification problem of the LFS relating to PSE also applies to the LFS classification of the industries in which respondents work. The problem was identified in the National Statistics Quality Review of the LFS published in 2002 and is being addressed as part of a further Quality Review of Employment and Jobs statistics. A new data processing procedure is being developed which should enable the Inter Departmental Business Register (IDBR) to be used to improve the quality of LFS information about the workplaces of LFS respondents. This could potentially allow LFS analyses of public/private sector employment, and more generally of employment by industry, to be made using National Accounts definitions in addition to the present self-classification basis.

Enhancing the quality of ONS PSE statistics

Alongside the work of producing a coherent presentation framework and developing standard definitions, ONS have also been working to improve and update existing public sector employment statistics. This has involved a substantial quality assurance process of the figures that ONS previously published in May 2004[6]. Although this means that the estimates in this article are of a superior quality, changes in coverage and methodologies to disaggregate total PSE statistics by sector has meant that there are a number of revisions to estimates published in May 2004. The effect of these is shown in tables 2, 3 and 4 below.

Added to this the ONS has produced quarterly figures for the first time, and this article provides authoritative quarterly point in time estimates from the first quarter in 1999 to the first quarter of 2004 (March). It also provides estimates of the total Public Sector Employment estimates on a full-time equivalent basis. Also ONS have been developing the new Quarterly Public Sector Employee Survey which enhances the scope of ONS's previous quarterly Local Authority Survey, although the data from this new survey are not used in estimates published in this article.

As Table 2 shows, overall public sector employment has been revised up by around 100,000 to 200,000 per year back to 1991.

Table 2 Revisions to PSE estimates 1991 to 2003
Public sector employment by sector classification;
United Kingdom; headcount, not seasonally adjusted

Thousands

	Latest estimates			Previous estimates			Revisions		
	Total general government	Total public corporations	Total public sector	Total general government	Total public corporations	Total public sector	Total general government	Total public corporations	Total public sector
1991	5,378	600	5,978	5,249	599	5,848	129	1	130
1992	5,341	563	5,903	5,221	562	5,783	120	1	120
1993	5,062	531	5,593	4,947	530	5,477	115	1	116
1994	4,967	463	5,430	4,830	462	5,292	137	1	138
1995	4,914	454	5,368	4,759	452	5,211	155	2	157
1996	4,852	416	5,269	4,642	426	5,068	210	-10	201
1997	4,807	368	5,175	4,588	370	4,958	219	-2	217
1998	4,794	370	5,163	4,571	374	4,945	223	-4	218
1999	4,832	374	5,206	4,717	377	5,094	115	-3	112
2000	4,905	382	5,288	4,726	385	5,111	179	-3	177
2001	4,982	396	5,378	4,822	381	5,203	160	15	175
2002	5,088	396	5,484	4,908	384	5,292	180	12	192
2003	5,240	393	5,634	5,068	386	5,454	172	7	180

Source: Office for National Statistics

Table 3 provides a greater breakdown for revisions in recent years and shows that the largest revisions are to the central government sector where there was an upward revision of 150,000 in 2003 Q2 but smaller revisions in previous years. The main reason for this

upward revision is the inclusion of a large number of public bodies that were not being captured in previous estimates. These are now included in the latest estimates published in this article. The probation service have also now been correctly allocated to central government when before they were included in the local government sector.

There is also an upward revision to the local government sector in 2003 Q2 of 22,000. This is mainly due to improved coverage with the inclusion of Northern Ireland to produce a UK estimate.

This is not the complete picture for local government where there have been significant improvements to the methodology and it is these changes, rather than the central government revisions detailed above, which account for most of the revisions to the earlier estimates of total public sector employment, i.e. pre 1999. These methodological changes are explained more comprehensively below.

Public corporations contribute in a minor way to the overall revision with revisions resulting from slight under coverage and reclassifications between central government and public corporations following a full audit against the National Accounts classification guide.

Table 3 **Public sector employment by sector classification; United Kingdom; headcount, not seasonally adjusted**

Thousands

	General government					
	Central government	Local government	Total general government	Total public corporations	Total public sector	*of which:* Civil Service
	CDID	CDID	CDID	CDID	CDID	CDID
1999Q2	77	38	115	-3	112	0
2000Q2	85	94	179	-3	177	0
2001Q2	119	41	160	15	175	0
2002Q2	127	52	180	12	192	0
2003Q2	150	22	172	7	180	0

Source: Office for National Statistics

NB: Civil Service data refers to Q1

By comparison, the revisions by industry shown in Table 4 are negative overall, driven by the large negative revisions to education. This contrasts with the large overall positive revisions seen in Table 3. This apparent contradiction arises because not all industries are shown in table 4 – the table only provides data for those sectors where comparisons can be made to previously published estimates. There are no revision estimates for public administration and other public sector as these groups were not published separately last year. However, while they were not published separately, they were included in the overall aggregate employment estimates, which have been subject to upward revisions this year.

Table 4 Revisions to latest data
Public sector employment by industry;
United Kingdom; headcount, not seasonally adjusted

Thousands

		Public administration and defence; compulsory social security				Health and Social Work		
	Construction	HM Forces	Police (including civilians)	Public admin	Education	National Health Service	Other Health and Social Work	Other public sector
1999Q2	60	10	21	n/a	-164	-10	44	n/a
2000Q2	57	10	21	n/a	-87	-12	43	n/a
2001Q2	48	10	20	n/a	-110	-1	38	n/a
2002Q2	43	10	21	n/a	-112	-8	41	n/a
2003Q2	38	17	22	n/a	-143	-3	40	n/a

Source: Office for National Statistics

Estimates of employment in the HM forces have been revised upwards. This is because previously ONS only included the total strength of the regular forces in estimates of public sector employment. However, the quality assurance work looking at the coverage of the statistics has led us to include Full-time Reserve Service personnel, Ghurkhas, the Home Service battalions of the Royal Irish Regiment and Mobilised Reservists. These personnel are considered UK residents and therefore should be included in public sector employment estimates according to the National Accounts definitions.

Revisions to Local Authority data

As part of the review of the public sector employment numbers, in the latest estimates there has been a change in the method of disaggregating local authority employment, as well as benchmarking of the series, and the inclusion of figures for Northern Ireland.

As a result of the work programme of public sector employment estimates, ONS has updated the methodology to allocate employment within a local authority according to standard business-survey practice. This means that the allocation of aggregate local authority employment to different industries within the local authority sector is now based purely on information obtained from ONS's Inter Departmental Business Register (IDBR). From the IDBR local units, for example, schools, county hall and leisure centres within a local authority are taken and classified according to the UK standard industrial classification (SIC 2003).

Previously, ONS did not allocate solely on a SIC basis when estimating the industry breakdown of public sector employment. For example, the industry code of education is SIC division 80. However, when allocating employees to “education” ONS used a wider

definition, looking at function. As a result, previous estimates of "education" employment included units outside of SIC division 80 which were thought to have a connection to education e.g. parts of 'Canteens and catering' (SIC55.5) and 'Administration of the State and the economic and social policy of the community' (SIC 75.1). However, there was no sound methodological basis for this functional allocation; as such ONS has now moved to allocating local authority employees based purely on their actual SIC code. This means that the resulting allocation is based on the industry of the employee (and specifically, their place of employment); it is not a split based on an employee's function within an organisation.

In practice, this move means a change in the classification of some employees. For example, employees in the education department within a local authority, previously allocated to education, are classified to public administration. The effect of this and the other changes is to reduce the estimate of employment in education by around 140,000.

While this is an improvement on the previous approach to classification and is consistent with ONS's structural surveys on employment, it is not the end of the process. The move to classify employment based purely on SIC will have improved the series, compared to previous estimates. However, there are a number of key education functions - for example, educational psychologists as well as administrative staff – that are being carried out by local government. As noted above if these people are employed within the local authority headquarters, they will now be classified as "public administration". In order to get estimates by function, these should be separated out and identified as "education" employees. However, at the moment, we simply do not have the data to do this. ONS intends to investigate this further, but in the meantime it should be noted that the analysis of employment by industry published in table 6 is not directly comparable with analyses of government output and expenditure by function in the National Accounts or local government expenditure by service in ODPM publications.

The second cause of revisions is the re-referencing of the quarterly employment levels to survey responses obtained for March 2004. The previous figures were based on an estimate of the level of employment in 1999 that increased in line with growth measured each quarter. However, because some local authorities have changed the scope of employment included in the survey (for example, when reviewing their payroll or IM systems) ONS must adjust for the discontinuity to maintain growth on a comparable basis. While this maintains a reliable measure of growth, it has the disadvantage of allowing the estimate of the level to drift away from the levels reported in the survey. The levels of employment published for local authorities in this article are based on the levels reported in the survey for quarter 1 of 2004. The historic path has been calculated by linking back the previous estimates of growth from this starting point. Where input data are available at less than quarterly frequency, ONS has produced an estimated quarterly path by using standard

interpolation procedures. A key element of the development programme over the next 12 months will be to establish methodology to manage this drift on an ongoing basis.

Finally, the new estimates for local authorities released in this article include figures for Northern Ireland, generating results for the UK rather than for Great Britain as published previously.

Development of full-time equivalent figures

This article focuses on the head count of employees in the public sector; however, ONS has also produced figures for the estimated number of employees on a full-time equivalents basis (FTE). This is a new development, and is based on converting part-time employees' hours into a full-time employee's equivalent and provides a better indicator of total labour input than a simple headcount. The FTE estimates are included in Appendix C of this article.

For some key series, FTE estimates are readily available, for example, Health and the Civil Service. For HM Forces FTE and headcount are effectively the same as there are no part time Forces personnel. For the remaining sources, an alternative source of hours of work data, the Annual Survey of Hours and Earnings, was used to generate the ratios required for producing these figures. Estimates are produced for the public sector separately, split into central government, local government and public corporations. Within each of the categories, average hours estimates are calculated for each economic sector described at the 2-digit SIC. The ratio is then applied to the headcount of part-time employees, and added to headcount of full-time employees to generate a FTE estimate. In the future this approach should only be necessary for historical data, since the QPSES will provide FTE estimates directly.

The Quarterly Public Sector Employees Survey (QPSES)

Working with the devolved administrations and government departments means that ONS is able to draw on a range of existing statistics to produce estimates of public sector employment, and the cross-government work to harmonise definitions will improve the future coherence and timeliness of these sources. However, in some areas it has been agreed that improved data collection by ONS is required.

In response, ONS is developing a new survey, the Quarterly Public Sector Employees Survey (QPSES) that aims to enhance the coverage of short period employment statistics for the public sector. The new QPSES survey builds on the existing quarterly local authority survey (for England and Wales) by extending its coverage to include GB government departments, their agencies and public sector bodies (mainly Non-departmental Public Bodies (NDPBs) and Public Corporations).

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.

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 will supplement the 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 IDBR.

The GB civil service component of QPSES is measured by ONS sending a questionnaire each quarter to all government departments and related executive agencies. This component of the survey is conducted in conjunction with the Cabinet Office, who will retain responsibility for the detailed analysis and publication of estimates of employment within each department. ONS's role will be to publish statistics at the aggregate level only.

The new survey will also link to more detailed annual collections, for example, MANDATE collected by the Cabinet Office (covering the civil service). These returns provide more detailed information on civil service employment. Overall, switching to the QPSES as the main data source will improve the frequency, timeliness and quality of the aggregate information published on these important elements of the public sector. It will extend the measurement of employment in the civil service and public bodies providing quarterly measures instead of once or twice a year as now and remove the need for estimation of quarterly data for these parts of the public sector in England and Wales.

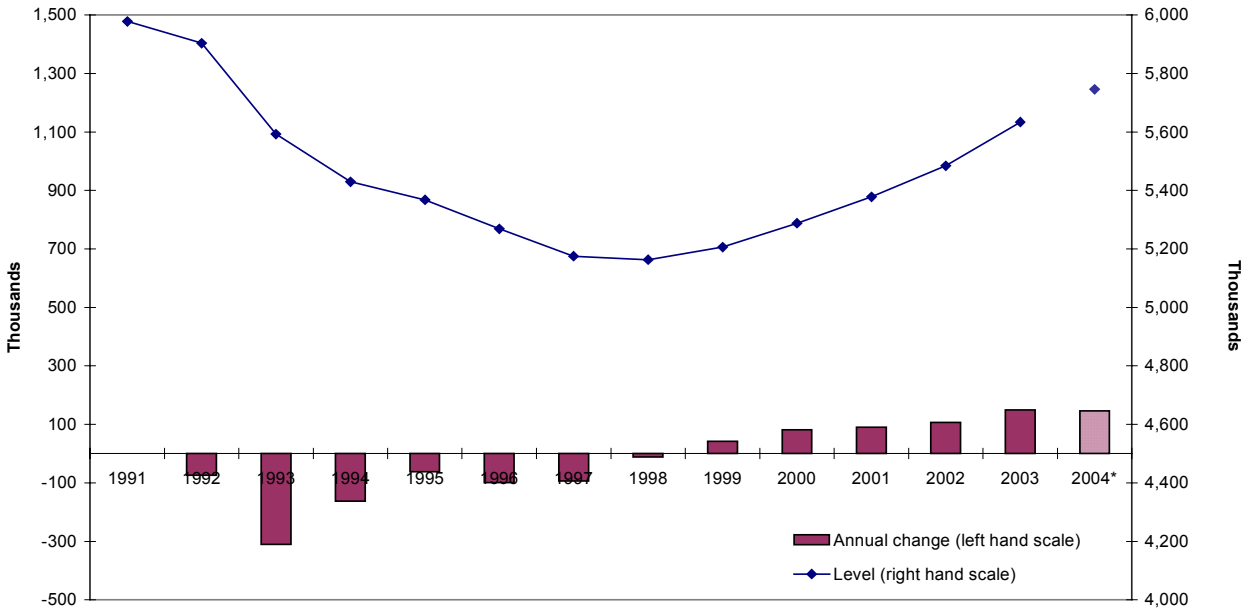
The survey of both the civil service and public bodies began collection in Q3 (September) of 2004, and since then the Q4 (December) collection has also taken place. However, further development and quality assurance of the data is required before the series can be published. It is envisaged at this stage that ONS will publish estimates based on the new QPSES later in 2005.

Latest PSE estimates

Public sector employment by sector classification

Starting with the latest estimates, table 5 present's public sector employment headcount data broken down by sector classification for the UK, quarterly since 1999 and annually from 1991. Public sector employment fell every year between 1991 and 1998, reducing by 815,000 in total. Between quarter 1 of 2003 and quarter 1 of 2004, public sector employment increased by 146,000. This follows several years of increases; as a result, employment in the public sector in 2004Q1 is 583,000 (11 per cent) higher than in 1998, but still below the levels seen in 1991-92.

Figure 1: Public Sector Employment: Level and Annual Change



* The levels from 1991 to 2003 refer to Q2 each year and for 2004 the level is for Q1. The change for 2004 is from 2003Q1 to 2004Q1 whereas previous years figures are annual changes to Q2.

Between 2003 and 2004 central government employment increased more than local government with central government up by 89,000 on the year while local government employment increased by 67,000 (around 4 per cent and 2½ per cent respectively). This fits with the longer-term picture where central government has been expanding more quickly than local government; central government is up 18½ per cent since 1999 compared to a 5 per cent increase in local government.

Within the increase over 2003-04, Civil Service employment was up by around 13,000. Overall, civil service numbers have expanded broadly in line with wider government over the past year, and slightly faster over a longer time scale - increasing by 13 ½ per cent since 1999Q1.

Table 5 Public sector employment by sector classification; United Kingdom; headcount, not seasonally adjusted

Thousands

	General government					
	Central government	Local government	Total general government	Total public corporations	Total public sector	*of which:* Civil Service
	C9K9	C9KA	C9KB	C9KC	C9KD	C9KE
1991	2,306	3,072	5,378	600	5,978	589
1992	2,322	3,019	5,341	563	5,903	605
1993	2,274	2,788	5,062	531	5,593	598
1994	2,213	2,754	4,967	463	5,430	575
1995	2,156	2,758	4,914	454	5,368	552
1996	2,119	2,734	4,852	416	5,269	534
1997	2,079	2,728	4,807	368	5,175	513
1998	2,084	2,710	4,794	370	5,163	502
1999	2,091	2,741	4,832	374	5,206	501
2000	2,129	2,776	4,905	382	5,288	513
2001	2,205	2,777	4,982	396	5,378	519
2002	2,293	2,794	5,088	396	5,484	534
2003	2,403	2,837	5,240	393	5,634	556
1999Q1	2,085	2,740	4,825	373	5,198	498
1999Q2	2,091	2,741	4,832	374	5,206	501
1999Q3	2,104	2,713	4,818	374	5,192	504
1999Q4	2,110	2,765	4,875	385	5,261	507
2000Q1	2,120	2,780	4,899	376	5,275	510
2000Q2	2,129	2,776	4,905	382	5,288	513
2000Q3	2,144	2,747	4,891	381	5,273	516
2000Q4	2,154	2,783	4,938	390	5,328	518
2001Q1	2,185	2,779	4,963	394	5,357	519
2001Q2	2,205	2,777	4,982	396	5,378	519
2001Q3	2,224	2,748	4,973	386	5,359	519
2001Q4	2,245	2,786	5,031	391	5,422	523
2002Q1	2,271	2,803	5,074	395	5,468	529
2002Q2	2,293	2,794	5,088	396	5,484	534
2002Q3	2,322	2,765	5,087	389	5,476	539
2002Q4	2,347	2,813	5,160	394	5,555	546
2003Q1	2,381	2,823	5,204	396	5,600	553
2003Q2	2,403	2,837	5,240	393	5,634	556
2003Q3	2,423	2,816	5,239	394	5,633	558
2003Q4	2,445	2,877	5,322	390	5,712	560
2004Q1	2,470	2,890	5,360	386	5,746	566

Source: Office for National Statistics

1) National Probation Service for England and Wales was re-classified from local government to central government from April 2001

2) Further Education and Sixth form colleges (local government sector) were transferred from the public sector to the private sector from April 1993.

3) Civil Service numbers exclude non-home civil service seconded to the Northern Ireland Office.

Public sector employment by industry

Table 6 presents public sector employment data broken down by industry (for example, police, education NHS and social services) for the UK, since 1991. These are head count estimates and, as noted elsewhere in this article, are based on the Standard Industry Classifications (SIC 2003), and not on Classification of the Functions of Government (COFOG).

Table 6 Public sector employment by industry; United Kingdom; headcount, not seasonally adjusted

Thousands

		Public administration and defence; compulsory social security				Health and Social Work		
	Construction	HM Forces	Police (including civilians)	Public administration	Education	National Health Service	Other Health and Social Work	Other public sector
	C9LA	C9LB	C9LC	C9LD	C9LF	C9LG	C9LH	C9LJ
1991	189	311	224	1,266	1,309	1,220	459	1,001
1992	172	304	226	1,273	1,286	1,225	456	961
1993	160	285	228	1,236	1,124	1,204	441	916
1994	153	262	228	1,203	1,099	1,189	450	846
1995	146	241	227	1,172	1,121	1,193	453	815
1996	135	230	230	1,160	1,121	1,197	449	746
1997	128	220	230	1,136	1,126	1,190	449	696
1998	122	219	229	1,122	1,136	1,202	437	697
1999	119	218	227	1,135	1,158	1,212	432	704
2000	116	217	225	1,141	1,214	1,239	429	707
2001	105	214	229	1,148	1,241	1,285	415	742
2002	90	214	238	1,174	1,250	1,348	408	762
2003	83	223	248	1,215	1,307	1,416	391	751
1999Q1	119	218	228	1,129	1,158	1,207	435	705
1999Q2	119	218	227	1,135	1,158	1,212	432	704
1999Q3	118	217	226	1,134	1,143	1,225	430	699
1999Q4	117	218	226	1,146	1,173	1,225	441	715
2000Q1	117	218	225	1,150	1,185	1,231	443	706
2000Q2	116	217	225	1,141	1,214	1,239	429	707
2000Q3	105	215	226	1,134	1,211	1,254	411	717
2000Q4	105	216	227	1,142	1,237	1,259	416	726
2001Q1	105	216	228	1,147	1,245	1,271	416	730
2001Q2	105	214	229	1,148	1,241	1,285	415	742
2001Q3	93	213	231	1,146	1,225	1,306	408	738
2001Q4	90	215	234	1,161	1,249	1,315	404	754
2002Q1	91	215	236	1,169	1,255	1,332	409	761
2002Q2	90	214	238	1,174	1,250	1,348	408	762
2002Q3	85	214	240	1,172	1,262	1,370	389	743
2002Q4	83	216	242	1,199	1,295	1,382	384	753
2003Q1	84	222	246	1,206	1,302	1,402	387	752
2003Q2	83	223	248	1,215	1,307	1,416	391	751
2003Q3	82	221	252	1,215	1,297	1,437	387	742
2003Q4	83	222	255	1,221	1,342	1,450	404	736
2004Q1	83	220	260	1,228	1,346	1,470	406	733

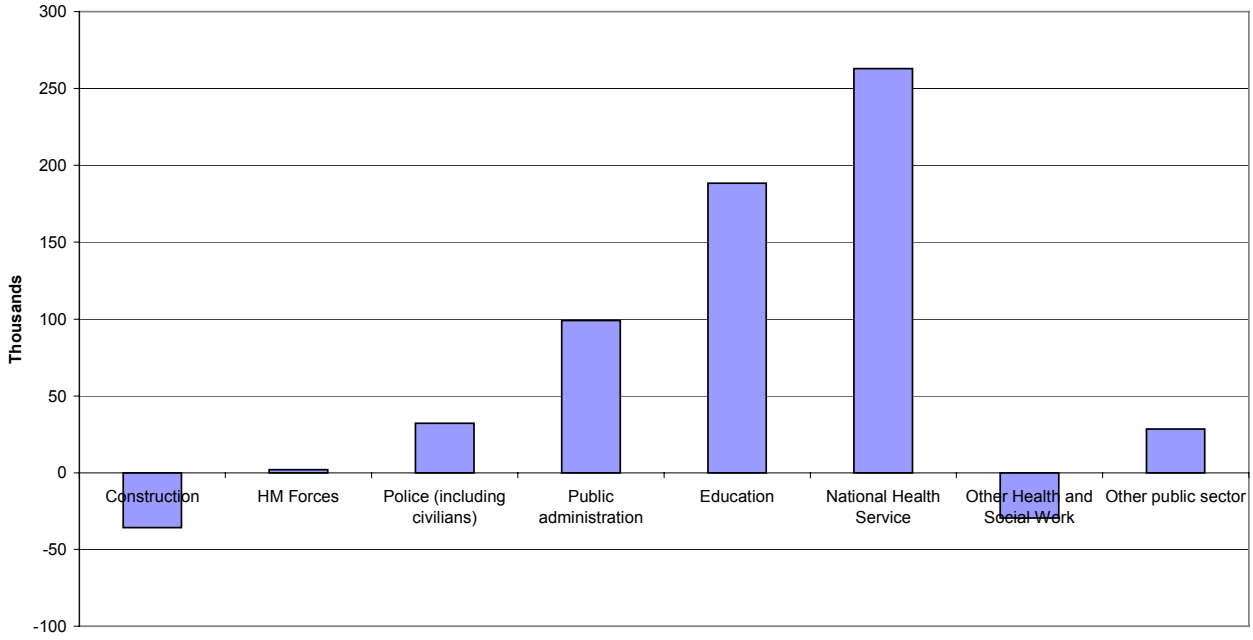
Source: Office for National Statistics

1) HM Forces series excludes mobilised reservists prior to 1996 as statistics are not available and excludes locally engaged staff.

2) Data for the NHS for 2003Q4 and 2004Q1 are estimated figures.

Looking at the industry breakdown, the largest annual increases in the latest year have come in the National Health Service and education (68,000 and 44,000 respectively). This increase in employment in health and education was also relatively large in percentage terms. NHS and education numbers are up 5 per cent and 3½ per cent respectively. This is part of a longer-term trend. As Figure 2 shows, since 1999 employment levels in education and the NHS have increased by around 188,000 and 263,000 respectively (16 and 22 per cent), accounting for over 80 per cent of the increase in public sector employment.

Figure 2: Public Sector Employment Growth 1999-2004: Head Count



Note: Increase for NHS is based on estimated figures for 2003Q4 and 2004Q1.

Away from education and health, there has also been a marked increase in police service employment (including civilians) with an increase of 14,000 on the year and 32,000 since 1999. As a result, police numbers (including civilians & support officers) are up 14 per cent since 1999. Employment in public administration is also up around 99,000 or 9 per cent since 1999.

Public and private sector employment – across the whole economy

Table 7 presents the numbers of people employed by main sector (i.e. public and private sector) for the UK. The split is produced by taking the UK whole economy employment level from the Labour Force Survey and deducting the public sector employment estimates from Table 5 to produce a private sector series. In the 2004 article on Public Sector Jobs, an LFS jobs estimate was used; in this article, given the change to focussing on public sector

employment, the appropriate LFS measure now used is the seasonally unadjusted employment level.

Table 7 **Numbers of people employed by main sector; United Kingdom; 1992 to 2004[a] not seasonally adjusted**

Thousands

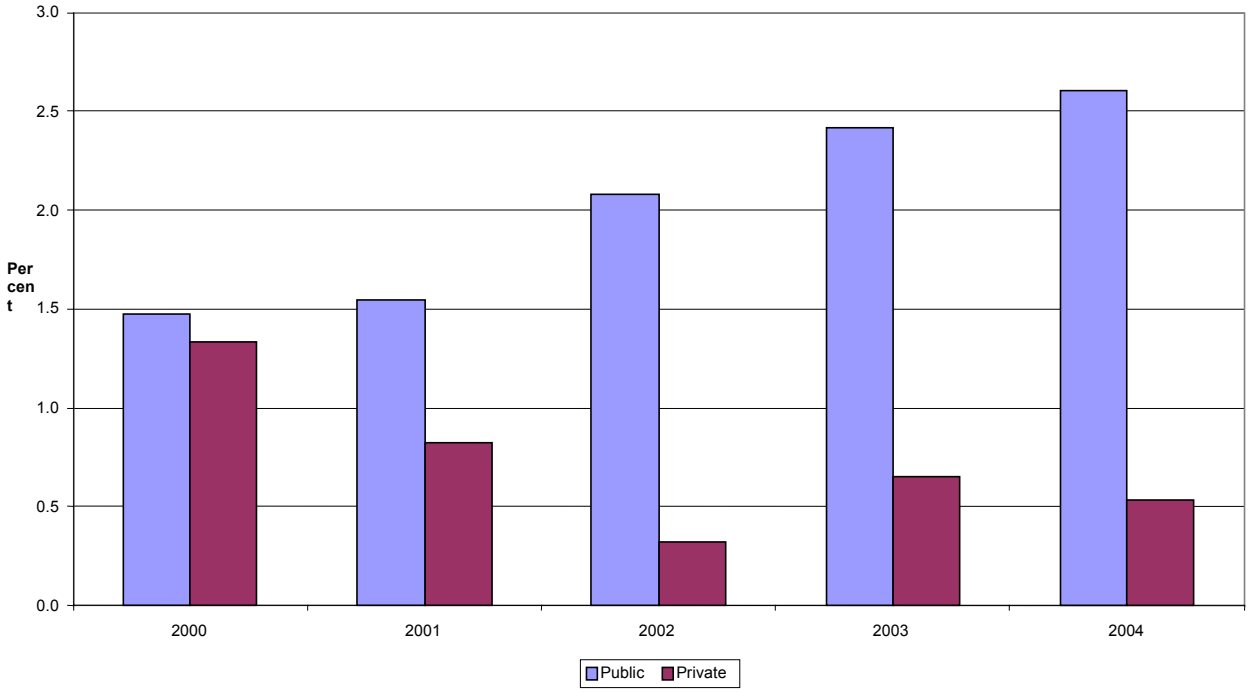
	Total		Public Sector		Private Sector	
	Labour Force Survey Employment[b]	Increase over year	Level[c]	Increase over year	Level[d]	Increase over year
1992Q2	25,559		5,903		19,656	
1993Q2	25,309	-251	5,593	-311	19,716	60
1994Q2	25,534	225	5,430	-163	20,104	388
1995Q2	25,811	277	5,368	-62	20,443	339
1996Q2	26,026	215	5,269	-99	20,757	314
1997Q2	26,510	485	5,175	-94	21,335	579
1998Q2	26,792	282	5,163	-11	21,628	293
1999Q2	27,121	329	5,206	43	21,915	287
2000Q2	27,532	411	5,288	82	22,244	329
2001Q2	27,698	166	5,378	91	22,320	75
2002Q2	27,882	184	5,484	106	22,398	78
2003Q2	28,196	314	5,634	149	22,562	165
2004Q1	28,292	265	5,746	146	22,546	119

Source: Labour Force Survey and estimates from public sector organisations, Office for National Statistics

a LFS data refer to May-July for 1992-2003, 2004 data refer to February-April
b All aged 16 and over.
c Estimates derived from public sector organisations.
d Estimated as the difference between LFS total employment and the data from public sector organisations.

Looking at the public/private sector employment split, there has been stronger employment growth in the public sector in recent years, but employment has increased in both sectors. Between 2003-2004, private sector employment increased by 119,000 (0.5 per cent) compared to the 146,000 (2.6 per cent) increase in the public sector. Between the second quarter of 1998 and the first quarter of 2004, private sector employment has increased by 918,000 while the public sector has grown by 583,000; however, in percentage terms this is growth of 4 and 11 per cent respectively underlining the relative strength of the public sector. Figure 3 shows the annual percentage growth rates and clearly illustrates the stronger public sector growth seen in recent years. As a result the public sector has expanded to represents 20 per cent of total employment in 2004, compared to 19 per cent in 1998.

Figure 3: Annual Employment Increase: Head Count



Estimates from the Labour Force Survey

An alternative to using the estimates outlined previously in this section is to use data from the Labour Force Survey. Table 8 below compares the number of employees in the public sector from the Labour Force Survey with estimates from public sector organisations themselves. As mentioned before (pages 10 & 11) the LFS overestimates the number of public sector employees for various reasons and is therefore not the preferred measure of public sector employment. Table 8 shows that the LFS provides a level that is around 1 million employees higher than the estimates taken from public sector organisations. In the long run, the size and direction of changes over time are similar, however, in the short term they can differ. According to sources from public sector organisations there was an increase of 146,000 jobs on the year to March 2004. The LFS estimates that there was an increase of 307,000 employees in the public sector in the year to March-May 2004. In the year to September to November 2004, the LFS shows an increase of 259,000 employees. It should be recognised that the LFS is a sample survey and suffers from sampling variability which could explain some of the differences in change over the short term between the two sources.

Table 8

Number of people employed in public sector - Estimates from Public Sector Organisations compared to Labour Force Survey; 1995 - 2004 ; United Kingdom; not seasonally adjusted

Thousands

	Data from Public Sector organisations			Data from the Labour Force Survey[1 2 3]	
	Public sector employment	Increase over year		Public sector employment	Increase over year
1995Q2	**5,368**		**Jun-Aug 1995**	**6,126**	
1996Q2	**5,269**	**-99**	**Jun-Aug 1996**	**6,232**	**106**
1997Q2	**5,175**	**-94**	**Jun-Aug 1997**	**6,046**	**-186**
1998Q2	**5,163**	**-11**	**Jun-Aug 1998**	**6,037**	**-9**
1999Q2	**5,206**	**43**	**Jun-Aug 1999**	**6,166**	**129**
2000Q2	**5,288**	**82**	**Jun-Aug 2000**	**6,282**	**116**
2001Q2	**5,378**	**91**	**Jun-Aug 2001**	**6,372**	**90**
2002Q2	**5,484**	**106**	**Jun-Aug 2002**	**6,500**	**128**
2003Q2	**5,634**	**149**	**Jun-Aug 2003**	**6,616**	**116**
2004Q1	**5,746**	**146**	**Mar-May 2004**	**6,880**	**307**
			Sep-Nov 2004	**6,907**	**259**

Source: Labour Force Survey and estimates from public sector organisations, Office for National Statistics

1 Includes people with workplace outside UK and those who did not state their industry.

2 LFS public private split is self-allocated by respondents.

3 LFS levels of public sector employment are derived from table 22 in the web-based 'LFS Historical Quarterly Supplement'. It includes respondents who gave no answer to this question who have been allocated on a pro-rata basis between public and private sector. These estimates have been derived from latest interim revised estimates and will therefore differ to estimates taken directly from LFS microdata.

Complementary PSE Statistics

Due to differences in definition, coverage and timing, not all estimates that are produced by public sector organisations are used by ONS to produce the headline estimates of the size of the public sector. One main area where this is the case is in education, where school workforce data produced by the Department for Education and Skills (DfES) and estimates from the Employers' Organisation for Local Government are not used in ONS PSE estimates. Also in other instances ONS do use the sources but make adjustments to them in order to bring them into line with National Accounts definitions – for example GPs are excluded from health estimates. Nevertheless these other estimates are of interest to some users and we need to be able to reconcile them as far as possible with the PSE figures. This section therefore compares some of the complementary sources of component parts of the public sector and outlines the reasons and extent of the differences between ONS and other departmental estimates.

Estimates of employment in education

The estimates presented in table 6 and table ii (Appendix C) include ONS estimates of the number of public sector employees (headcount and FTE) in education (SIC division 80). For various reasons these estimates differ from the school workforce estimates published by the DfES. Differences between DfES school workforce estimates and ONS education estimates are mainly a result of the data having different coverage (both in terms of definition and geography) and collecting information from different sources.

DfES estimates focus on the number of teachers and support staff in the maintained school sector in England only. There are two main DfES sources of school workforce numbers, the Annual Survey of Teachers in Service and Teacher Vacancies (Form 618G) and the Annual School Census. The former is the DfES' definitive source for the number of teachers whilst the latter also provides estimates of the number of support staff. Both surveys are carried out annually and data refer to January.

The annual 618G survey collects information from local education authorities on all teachers in employment in the maintained school sector, including centrally employed teachers and teachers providing education other than in school. Teachers normally in employment are counted, as are teachers brought in to provide additional resource e.g. to cover for sickness absence. The survey provides head counts for both full-time and part-time teachers as well as estimates of full-time equivalents (FTEs).

The Annual School Census is a school level census and covers teachers (headcounts and FTEs) and support staff (FTEs) in the census week for staff 'normally employed in schools'. This includes those carrying out the role of, for example: teaching assistants; special needs support staff; minority ethnic pupil support staff; librarians; technicians; medical staff;

administrative staff. Premises related staff (such as caretakers), canteen staff, lunchtime supervisors, lunchtime welfare assistants and those providing unpaid voluntary work are excluded.

By comparison, ONS estimates are derived by allocating local authority employees to education (SIC division 80) using the IDBR and the quarterly local authority survey in England and Wales. As a result, the coverage of the ONS estimates is wider in definition than estimates of the school workforce produced by DfES. The methodology employed (i.e. using the IDBR to apportion Local Authority employment into the different industries, of which education (SIC 80) is one) means that the ONS estimates of education will include employees reported by local authorities who are working for them in local authority funded primary, secondary and adult education establishments. The ONS estimates therefore should include premises related staff (such as caretakers), canteen staff, lunchtime supervisors, lunchtime welfare assistants, whilst these are explicitly excluded from the DfES estimates. The ONS series will also include employees in adult education which is also not covered by the school workforce statistics.

In addition, the ONS figures in tables 6 and ii of this article refer to the UK and so have a wider geographical coverage than DfES estimates of school workforce numbers that cover England only.

In order to make a fairer comparison between ONS and DfES estimates, ONS estimates for education (SIC division 80) have been provided on an England only basis. Full-time equivalents have also been used as this is in line with the headline DfES estimates of the number of teachers from the 618G and support staff numbers from the Annual School Census. Occasional teachers have been excluded as although some of these supply teachers may be employed directly by the local education authority others will be employed by a private sector agency, and therefore not be included in the ONS estimates. These only make up a small proportion of the total number of teachers. In January 2004 there were around 14,000 FTE occasional teachers. DfES estimates for the January of each year have been compared to Q4 (December) of the previous year as this is the closest data point between the two surveys.

Table 9 shows that the difference between ONS education and DfES school workforce estimates for 2003 Q4/January 2004 was 82,000 full-time equivalents. In terms of growth for the latest year data are available – 2002/03 to 2003/04 – the ONS FTE estimates for education (SIC division 80) increased by 29,000 (3.9 per cent) whilst DfES estimates of FTEs in the school workforce increased by 22,000 (3.2 per cent).

Table 9 Comparison of DfES school workforce and ONS public sector education estimates; England only; Full-time equivalents, not seasonally adjusted

Thousands

	ONS	DfES			Difference
	Education	All regular teachers [1]	Total Support staff [2]	Total (teacher + support staff)	ONS - DfES total
99Q4/Jan00	645	405	165	569	75
00Q4/Jan01	681	410	189	599	82
01Q4/Jan02	691	420	217	637	54
02Q4/Jan03	724	424	225	649	75
03Q4/Jan04	753	428	243	671	82

Source: Estimates from public sector organisations, ONS & annual 618G survey and annual school census, DfES

1 DfES annual 618G survey, excludes occasional teachers

2 Annual Schools' Census (ASC).

The Employers' Organisation (EO) for Local Government also produce estimates of employment in education from their Local Government Employment Survey. This survey is carried out on an annual basis in June of each year and total figures for local authority employment are benchmarked to ONS Q2 results from the Local Authority Survey. The Local Government Employment Survey asks local authorities for estimates broken down by function. It asks for teachers and non-teachers in education. For teaching staff it asks for lecturers to be included and therefore covers local authority funded adult education (as do ONS estimates). For non-teaching staff it asks for local authorities to include all employee jobs, including school transport workers, youth and community workers, nursery assistants and administrative, secretarial and clerical employees in the education service, cleaners, canteen employees, non-teaching employees working on careers guidance and library employees working in libraries either located in or serving education establishments.

Given that the Local Government Employment Survey asks for all employee jobs in education within and serving education establishments the EO data should pick up employees who are working in local authority headquarters in education administration and other types of occupations that the ONS are now allocating to public administration. This means in effect that the estimates from the EO for education have a wider coverage than the current ONS estimates and are on a functional estimate. Table 10 below compares ONS estimates of the number of people employed in education (SIC 80, headcount) for England with EO employee jobs data. Data from the EO survey are also available for England and Wales but the comparison here has been made for England only to keep it on the same basis as DfES data compared before.

Table 10 Comparison of Employer Organisation for Local Government education estimates and ONS public sector education estimates; England only; Head count; not seasonally adjusted

Thousands

	ONS	Employer Organisation			Difference
	Education (SIC division 80)	Teachers	Other employee jobs	Total (teacher + other employee jobs)	ONS - EO total
2000Q2	991	486	643	1,128	-138
2001Q2	1,013	498	665	1,163	-150
2002Q2	1,012	508	688	1,196	-185
2003Q2	1,060	514	708	1,222	-162
2004Q2	1,091	516	727	1,243	-151

Source: Estimates from public sector organisations, ONS & Local Government Employment Survey, EO

Estimates of employment in Health

ONS estimates for the NHS also differ from the headline figures published by the Department for Health[7]. Again, the main reason for this is coverage. First, DoH publish figures relating to England, whereas the figures in tables 6 and table ii (in Appendix C) are UK-based. Secondly, ONS in accordance with National Accounts practice classifies GPs as part of the private sector, whereas the headline DoH data includes them as NHS employees. Finally, ONS also include "hospital practitioners and clinical assistants" who work in hospitals on a salaried payscale but generally also work as GPs leading DoH to exclude them from their totals to avoid double counting. When one allows for these factors, ONS and NHS data can be shown to be identical (see Table 11).

Table 11 Comparison of DoH and ONS public sector health estimates; England only; head count, not seasonally adjusted

Thousands

	ONS	DoH			
	Health	NHS & GP workforce	GPs & practice staff	Hospital practioners and clinical assistants	Total
		A	B	C	A-B+C
1999	968	1,098	137	6	968
2000	991	1,119	134	6	991
2001	1,036	1,167	136	5	1,036
2002	1,090	1,225	140	5	1,090
2003	1,145	1,284	144	4	1,145

Source: Estimates from public sector organisations, ONS & NHS Workforce Statistics, DoH

Estimates of employment in the police service

Similarly, ONS publish police service estimates which differ from headline Home Office figures due to coverage. The Home Office releases figures which cover England and Wales. By comparison, the ONS figures in tables 6 and ii relate to the UK. The Home Office figures are also on an FTE basis. To illustrate this, Table 12 provides a comparison between the Home Office data for March 2004 from the release "Police Service Strength"[8] and the ONS data in table ii. It shows that the ONS figure is made up of 217,000 employees in England and Wales and around 34,000 employees in Scotland and Northern Ireland – this latter figure is taken from the Joint Staffing Watch in Scotland and the Quarterly Survey in Northern Ireland. The figure for England and Wales comes from the Home Office release; however, one should note that it does not solely include police officers. Traffic wardens, Community Support Officers, and administrative staff are all included as well.

Table 12 Comparison of Home Office and ONS police estimates; England & Wales only; FTE; not seasonally adjusted

Thousands

	ONS			Home Office					
	UK	NI & Scotland	England & Wales	Police officers (inc NCS)	Police civilians	Traffic Wardens	Community Support Officers	British Transport Police	Total
2000Q1	218	34	184	125	53	3	n/a	3	184
2001Q1	221	34	187	127	55	3	n/a	3	187
2002Q1	228	33	195	131	59	2	n/a	3	195
2003Q1	237	33	204	135	63	2	1	3	204
2004Q1	251	34	217	141	69	2	3	3	217

Source: Estimates from public sector organisations, ONS & Police Service Strength, England and Wales, HO

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http://www.homeoffice.gov.uk/rds/pdfs04/hosb1304.pdf.

Appendix A - Rationale for standard definitions

Following work by both an interdepartmental working and steering group, a set of standard definitions across different sources of PSE have been agreed that will help bring greater consistency across different sources of public sector statistics.

Definitions 1 to 3.

The PSE statistics working and steering group came to the conclusion that the National Accounting definition of the Public Sector should form the basis of the quarterly PSE estimates. It was agreed that this would make up the core definition, as this is essential for macroeconomic analysis of employment in the UK economy. However, it was acknowledged that in some instances different definitions are needed to meet differing user requirements. For example when calculating the productivity of public sector services a slightly wider definition of the public sector related employment may be needed. For instance when measuring the productivity of the health service in the UK, GPs and their staff conceptually should be included, but under the System of National Accounts are excluded because they are self-employed and therefore classified to the private sector. |For this reason the working and steering group decided that the twofold presentation of PSE statistics was needed to fulfil user need for a wider basis for public sector (see pg x) for more detail

It was agreed that the core PSE estimates should count all employees who have an employment contract and are being paid for by a public sector organisation. This definition includes only those employees who are consuming organisational resource.

Before this decision was reached four main definitions were considered:

a. the number of people working on public sector work (including contractors, agency staff)

b. the number of people working on public sector work being funded by the public purse (for example G.P.s, self-employed consultants)

c. the number of people with an employment contract within the public sector (including those on unpaid leave e.g. sick leave or career break)

d. the number of people with an employment contract and being paid by a public sector organisation.

Options a. and b. were considered not only to be conceptually inconsistent with National Accounting principles but also difficult to measure in practice. Agency staff are not only employees of the agency but public sector organisations are less likely to have accurate estimates of the number working for them as they are paid by invoice and therefore absent from HR payroll records. The same is true for self-employed consultants working for the public sector. For this reason definitions c. and d. were considered more attractive. Option

c. is a wider definition of the public sector than d. as it includes employees who are currently not contributing to the organisations objectives as they are on some form of leave. In many cases though, these people are either partly or not paid at all, but an expectation still exists that they will return to work.

There were also questions as to how to treat overseas workers in the PSE statistics. Again National Accounting principles were used to define which employees should be included and which should be excluded. All government staff (including Armed Forces, Diplomats and Foreign Office), whether working in the UK or abroad, are considered as part of the government sector rather than in the rest of the world in the National Accounts. This is because UK employees abroad are seen as working in an enclave, which is equivalent to being in the UK and makes these employee UK residents. This includes military personnel, civil servants (including diplomats) and those on scientific bases such as in Antarctica. Locally engaged staff (those people recruited directly by UK organisations based abroad) are not counted as UK residents so are classified to the rest of the world and therefore it was concluded that these employees should be excluded from estimates of PSE.

Again to be in line with the National Accounts principles agency workers and the self-employed were considered to be outside the scope of the core PSE statistics. However, it has been noted that there may be a need for estimates of these types of employees for some purposes (e.g. Public Sector and Government Accounts).

Given that it was agreed to count all employees who have an employment contract and who were being paid it followed that casual employees or employees with a fixed-term contract should be included.

Definition 4.

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. It was decided that the PSE estimates should count employees rather than jobs because after discussions with working and steering group members it became apparent that most PSE sources focus on employees rather than jobs (with the exception of the previous ONS quarterly local authority survey, the Employers Organisation's Local Government Employment Survey, the Joint Staffing Watch Survey in Scotland and the Quarterly Employment Survey in Northern Ireland).

Also from the cognitive testing carried out by ONS for the new QPSES it was discovered that the majority of local authorities contacted were providing employee estimates from their payroll even though the ONS had previously asked for the number of jobs in the quarterly local authority survey. The QPSES measures the number of employees in local authorities, civil service and in non-departmental public bodies.

Although the Definition states that we are aiming to collect the number employees working in the public sector it should be noted that in practice, an employee who has two or more jobs for different public sector organisations will be counted more than once. Although this will affect headcount estimates the impact will be less on the FTE estimates as extra jobs are less likely to be full-time. Though this means that there will be a slight overstatement of the number of employees, the numbers involved are small.

Definition 5.

Full-time equivalent (FTE) estimates provide a better indicator of total labour input than a simple headcount estimate. For this reason it has been recommended that estimates of FTE should be available in all sources of PSE. Most PSE sources already produce estimates of FTE apart from the Quarterly Employment Survey in Northern Ireland and the previous ONS local authority survey (though NI do intend to provide FTE estimates in the future). The QPSES collects numbers of FTE and where sources do not provide FTE estimates these can be estimated using information on hours from other sources (as has been done for data published in this article).

In the majority of cases contracted hours are used for the basis to calculate FTE in PSE sources. For example if someone who is contracted to work 25 hours per week then the FTE is 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 should be those that the employee is contracted to work for each week, so breaks should be excluded in the calculations.

The working and steering group decided that both paid and unpaid overtime should not be included in FTE calculations. Although in theory someone on a full-time contract who does regular overtime can be thought of as doing more work than one FTE the extent of individual's overtime hours (both paid and unpaid) are not generally collected in administrative sources across the public sector. Given the difficulties of getting this information and the burdens and costs involved, the working group felt that contracted hours should form the basis of the FTE calculation and that a full-time person working more than their contracted hours should be capped at 1.0 FTE.

When calculating estimates of FTE it is important to know how to treat the hours of those who are on leave. As FTE is a measure of effort put into the organisation it could be argued that zero hours is used in the FTE calculation for those employees on paid leave (maternity, sick, special, parental). However, the fact that it would lead to a discontinuity between the headcount meant that the working and steering group felt this was not desirable. The contracted hours of those people on leave should therefore be those that they were working before they left.

In different publications and sources of employees data the phrase 'full-time equivalents' and 'whole-time equivalents' seem to be used interchangeably. The working group agreed

that the 'full-time equivalents' label is more commonly understood by the majority of users and suppliers of data and this label should be used in all PSE statistics.

Definition 6.

The majority of PSE sources use 'less than standard contracted hours' as the basis of defining an employee as part-time. Currently ONS business surveys generally use 30 hours or less as their definition of part-time, as does the Quarterly Employment Survey in Northern Ireland and the Joint Staffing Watch Survey in Scotland. However, it was acknowledged at the working and steering group that this '30 hour' definition is rather out of date in the UK's highly diverse labour market and not particularly helpful for macro-economic analysis where estimates of 'usual hours' worked are seen as more useful. It was therefore recommended that PSE sources should use less than standardised hours as the basis for the definition of part-time.

Definition 7.

The working and steering group gave thought to how to treat those employees who may only work for part of the year, either in one or more continuous periods. These types of employees could either be casual employees who will only be paid for the period they work or else could be paid a retainer for the periods not worked. Alternatively they could be employees who are on an annualised hours contract with a salary for the year but paid monthly regardless whether they work in particular months.

It was decided that all these employees should be counted if they are being paid at the point the count is taken –which is in line with Definition 1. If they are not working at this point but are still being paid (even a retainer) then they should still be counted. If however, they are not paid and have not worked then they will be excluded at the point in time when the count is taken.

In some instances it is difficult to decide whether these types of employees should be classed as full or part-time and some discretion needs to be given as to how to treat specific groups. For example retained fire-fighters are considered part-time (with full-time equivalent estimates being derived using 24-hour periods of cover as the definition of full-time). However, for those people who are casual/fixed term employees it is recommended as a general rule that they should be considered as full or part-time depending on the hours that they work at the reference point. For those people who are paid a salary all year round, but may not work on a particular month when a collection is made a judgement on whether they are full or part-time should be made on the basis of their annualised hours.

Definition 8.

It is important to know how to treat those people on secondment or loan to avoid the prospect of omissions or double counting. To be in line with Definition 1 it has been

proposed that an organisation should only include those employees on loan or secondment if it pays for the majority or all of their wages.

Definition 9.

There is currently a lot of variation between PSE sources with regard to how employees on leave are treated. This definition follows the principles in Definition 1 that only employees who are consuming organisational resource should be counted within the estimates, for example those who are on sick-leave but are not being paid should not be counted. However, it makes sense to include those employees who have happened to take a few days unpaid leave (for example for bereavement, or parental leave) on the reference date should be included.

Definition 10.

In order to standardise reference dates within the month it was concluded that all administrative sources from public sector organisations records should be collected on the last day of the month. This fits best with accounting measures both inside and outside the public sector and will bring consistency between sources. It was decided that the survey reference dates, which generally towards the beginning or the middle of the month should remain unchanged to avoid unrepresentative results being obtained for education in particular whose staff numbers could be significantly lower in the school holidays. By sticking to the beginning/middle of the month the collection will take place within the school term, thus avoiding this problem and providing more representative estimates of the workforce.

Definition 11.

Where ever possible it is desirable to have quarterly estimates for PSE statistics. The working and steering groups have recommended that March, June, September and December are used as the reference dates. These months were chosen for a number of reasons:

- It aligns well with the financial year.
- It is in line with the current ONS Local Authority Survey and QPSES and the Scottish Joint Staffing Watch Survey (SE/COSLA).
- In line with the DoH data that are currently collected annually in September each year.
- In line with the UK Workforce Jobs Series produced by the ONS.
- In line with the Quarterly Employment Survey in Northern Ireland (DETINI).

It should be noted that this is not in line with annual DfES sources that count the school workforce that currently collect information in January each year.

Definition 12.

Annual averages of Public Sector Employment are used within a range of sources. For example in public sector organisation's annual reports. Also there is a requirement for departments to produce annual averages from their resource accounts for inclusion in the Whole Government Accounts. Given that headline estimates of public sector employment will be collected on a quarterly basis it makes sense to use the quarterly estimates to produce annual averages to minimise the difference between the two sets of estimates.

Appendix B - Definition of the public sector

The domestic economy features units, which are described as being either public or private sector units. The public sector comprises central government, local government and public corporations as defined for the UK National Accounts.

Central government includes all administrative departments of government and other central agencies and non-departmental public bodies. City academies, the first three of which were opened in 2002, are also classified to central government.

Local government includes all government units with a local remit. The sub-sector includes all areas of administrative authorities including parish councils, though these units are not covered by the estimates for local authorities used in this article. It includes magistrates courts, the probation service (until 2001) and police forces and their civilian staff. All functions of local authorities are classified to the sub-sector, although trading activities that produce market output (for example, housing and municipally owned markets) are regarded as quasi-corporations and appear under public corporations. Local education authorities are part of local government, as are voluntary aided schools, county schools and, from September 1999, grant-maintained schools (which were reclassified from central government). Polytechnics and higher education colleges were transferred from local authority control in April 1989, as were further education and sixth-form colleges from April 1993. Like universities, these institutions are part of the private sector and classified as non-profit institutions serving households. For further information about the data sources see table 1 and the 'Revisions to Local Authority data' section in the main article.

Public corporations are companies or quasi-corporations (organisations which behave like 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.

Lists of central and local government units and public corporations are shown in the *UK National Accounts Sector Classification Guide* on the National Statistics website.

Appendix C – Full Time Equivalent Estimates

As well as the normal head count estimates, ONS have also produced figures for the estimated number of employees in full-time equivalents (FTE). This is a new development, and is based on converting part-time employees' hours into a full-time employee's equivalent and provides a better indicator of total labour input than a simple headcount.

For most sources, Full Time Equivalent (FTEs) estimates are readily available from the source data. That is, for the Civil Service, HM Forces (where there are no part time employees), Police (including civilians), the NHS, Local Authorities in Scotland and all statistics for Northern Ireland. However, for Local Authorities in England and Wales, for which data has been sourced are from the ONS Local Authorities Survey. FTE estimates are not directly available as currently no question is asked about the number of FTEs. An alternative source of hours of work data, the Annual Survey of Hours and Earnings (ASHE), has therefore been used to generate the ratios required for producing these estimates.

At present, FTEs for Local Authorities are estimated in the following way. The Local Authority survey collects employee numbers broken down by full-time, part-time, male and female. Local unit employment from the Inter-Departmental Business Register is then used to further break down the estimates by industry. Headcount to FTE ratios for part-time employees by industry are calculated based on information from ASHE. Average hours estimates for full and part-time employees are calculated for each 2-digit standard industrial classification and the ratios are applied to the part-time headcount. The part-time FTE estimates are then added to the full-time head counts to give a total FTE series.

This methodology provides good FTE estimates for Local Authorities as a whole. However, there are limitations when producing FTE estimates by industry based on this approach as it assumes that the full-time/part-time ratios in each of the industries follows the same pattern as the total local authority estimates as a whole. As the breakdown at Local Authority level is largely driven by education (having the greatest number of employees), the part time element is likely to be overstated for the other industries (construction, public administration, social services, other public sector). From comparisons from other sources we know that this will only make a small difference to the larger industries (education, public administration, social services and other public sector). However, the methodology does not provide robust estimates of FTE for the construction industry because this industry has a very different make up (predominantly full-time male employees) compared to the other public sector industries estimated from the local authority survey. For this reason the FTE series for the construction series has not been published. ONS plan to address this issue as part of the development programme in the coming year.

Table i provides public sector employment by sector classification estimates on an FTE basis. . Table ii provides FTE estimates for public sector employment by industry. In both cases FTE figures are only available from 1999 onwards and for that period, the picture is similar to that seen in the head count estimates. Overall, public sector employment on an FTE basis is up around 10 per cent since 1999 - marginally lower than the increase in the head count. And, as with the head count, this increase has been focussed in education and health.

Table i **Public sector employment by sector classification; United Kingdom; full-time equivalents, not seasonally adjusted**

Thousands

	General government					
	Central government	Local government	Total general government	Total public corporations	Total public sector	*of which:* Civil Service
	C9KL	C9KM	C9KN	C9KO	C9KP	C9KQ
1999	1,816	1,967	3,783	357	4,140	478
2000	1,846	1,976	3,821	365	4,186	489
2001	1,905	1,974	3,879	377	4,256	494
2002	1,976	1,996	3,972	378	4,350	507
2003	2,063	2,029	4,093	371	4,464	525
1999Q1	1,812	1,968	3,780	356	4,136	476
1999Q2	1,816	1,967	3,783	357	4,140	478
1999Q3	1,824	1,954	3,778	357	4,136	481
1999Q4	1,831	1,977	3,808	368	4,176	484
2000Q1	1,838	1,978	3,816	359	4,175	487
2000Q2	1,846	1,976	3,821	365	4,186	489
2000Q3	1,855	1,964	3,818	363	4,182	492
2000Q4	1,865	1,979	3,843	372	4,215	494
2001Q1	1,888	1,973	3,862	375	4,237	495
2001Q2	1,905	1,974	3,879	377	4,256	494
2001Q3	1,919	1,965	3,884	367	4,251	494
2001Q4	1,937	1,982	3,919	373	4,292	497
2002Q1	1,957	1,997	3,954	376	4,330	503
2002Q2	1,976	1,996	3,972	378	4,350	507
2002Q3	1,997	1,982	3,980	371	4,350	511
2002Q4	2,021	2,010	4,030	374	4,404	517
2003Q1	2,044	2,019	4,063	374	4,437	522
2003Q2	2,063	2,029	4,093	371	4,464	525
2003Q3	2,085	2,026	4,111	372	4,483	528
2003Q4	2,102	2,059	4,161	369	4,529	530
2004Q1	2,124	2,071	4,195	364	4,559	534

Source: Office for National Statistics

1) National Probation Service for England and Wales was re-classified from local government to central government from April 2001

2) Further Education and Sixth form colleges (local government sector) were transferred from the public sector to the private sector from April 1993.

3) Civil Service numbers exclude non-home civil service seconded to the Northern Ireland Office.

Table ii Public sector employment by industry;
United Kingdom; full-time equivalents, not seasonally adjusted

		Public administration and defence; compulsory social security				Health and Social Work		Thousands
	Construction	HM Forces	Police	Public administration	Education	National Health Service	Social services	Other public sector
	C9LK	C9LL	C9LM	C9LN	C9LP	C9LQ	C9LR	C9LT
1999		218	220	961	781	982	312	581
2000		217	218	966	811	1,001	309	583
2001		214	222	967	832	1,037	302	610
2002		214	230	987	845	1,088	301	624
2003		223	240	1,015	891	1,138	287	613
1999Q1		218	221	957	781	978	314	582
1999Q2		218	220	961	781	982	312	581
1999Q3		217	219	962	775	990	311	578
1999Q4		218	219	969	789	992	318	589
2000Q1		218	218	971	790	996	319	581
2000Q2		217	218	966	811	1,001	309	583
2000Q3		215	219	963	816	1,010	297	589
2000Q4		216	219	966	827	1,017	300	596
2001Q1		216	221	967	834	1,026	302	599
2001Q2		214	222	967	832	1,037	302	610
2001Q3		213	224	967	828	1,051	298	607
2001Q4		215	226	977	839	1,061	294	617
2002Q1		215	228	982	846	1,074	301	622
2002Q2		214	230	987	845	1,088	301	624
2002Q3		214	232	986	859	1,103	287	611
2002Q4		216	234	1,004	876	1,116	284	617
2003Q1		222	237	1,008	887	1,127	284	614
2003Q2		223	240	1,015	891	1,138	287	613
2003Q3		221	243	1,020	889	1,158	286	609
2003Q4		222	247	1,023	911	1,169	299	603
2004Q1		220	251	1,032	917	1,186	299	598

Source: Office for National Statistics

1) Estimates for full-time equivalents construction have not been published as they are of insufficient quality.

2) HM Forces series excludes mobilised reservists prior to 1996 as statistics are not available and excludes locally engaged staff.

3) Data for the NHS for 2003Q4 and 2004Q1 are estimated figures.