CHANGES TO ASHE IN 2007

Methodological changes

There have been two key methodological changes that have taken place during the collection and processing of the 2007 Annual Survey of Hours and Earning (ASHE). The changes are described in more detail below.

Introduction of automatic occupation coding
The automatic coding tool, Automatic Coding by Text Recognition (ACTR) has been introduced for assigning Standard Occupational Classification (SOC) codes to ASHE records. This replaces the current system whereby SOC codes are carried forward for employees who were in the same job as the previous year, or manually allocated by a team of coders if the employee was either not included in ASHE for the previous year or has subsequently changed jobs. Although ACTR has been shown to significantly improve the quality of occupation coding and is more efficient than manually coding records, it also brings a moderate discontinuity in the ASHE results. Nevertheless, the benefits of its adoption are significant. Briefly, these are;

- An improvement in the quality and consistency of ASHE results.
- Out-of-date codes will be updated annually.
- ACTR provides ASHE and ONS with a standard tool for coding occupation.

Special Arrangements treated as a separate stratum
A number of businesses have a Special Arrangement (SA) in place with the ONS to provide their data electronically. These employers have internal systems set up to extract and return information on all relevant employees at the survey reference date. Consequently the likelihood of response for an employee of one of these businesses is higher than for employees in businesses that return paper questionnaires.

For use in calculating the estimates of earnings that appear in the ASHE results, a number of weights are applied to each record in the ASHE dataset. One of these weights gives an adjustment for non-response and is determined by which category or stratum a particular record falls into. Previously, there were three strata;

1. Paper questionnaires sent out in the initial despatch in April and SAs.
2. Employees identified as changing jobs between initial sample selection and the survey reference date.
3. Employees who started jobs between the initial sample selection and the survey reference date.

SAs have a response rate significantly higher than the returns from the paper questionnaires sent out in the original despatch. This meant that SA records were receiving a higher weight than they ideally ought to. Treating SAs as a separate stratum allows us to allocate more appropriate weights to them.

Impact of the changes

Introduction of automatic occupation coding
The effect of using ACTR was to code more jobs into higher paying occupations. The jobs that tended to be recoded into these higher paying occupations generally had lower levels of pay than the jobs already coded to those occupations. Conversely they tended to have higher levels of pay than the other jobs in the occupations that they were recoded out of. The impact of this was to lower the average earnings of both the occupation group that they had moved from and that they had moved to. It also resulted in the existing higher paid jobs in the higher paying occupations having lower weight in the overall estimates of UK earnings. Across the whole of the UK this resulted in a decrease in median gross weekly pay of £3 (0.67%).

SAs treated as a separate stratum
SA employees have lower average earnings and higher levels of response than employees falling into other strata. Putting these records into a separate stratum from the paper questionnaires changes the comparative relative response rates of these strata, resulting in changes to the weights. The impact of the changes to the weights is very small on overall estimates of average earnings.

Other changes

ASHE sample cut
In March 2007, ONS released information on its statistical work priorities over the period 2007-2008. ONS announced that the sample size of the ASHE was to be reduced by 20%.

The sample size has been reduced, with ASHE results for 2007 based on approximately 142,000 returns, down from 175,000 in 2006. Reductions were targeted on those industries that exhibit the least variation in their earnings patterns. The reduction in the sample has taken the ASHE sample size back to where it was in the 1980s, but the survey design and the process for weighting the results to population totals has been improved since then and we have introduced routine reporting of appropriate measures of statistical quality.

Impact of the cut

The sample cut has a very small impact on the quality of highly aggregated figures. The table below shows estimates, estimated standard errors and corresponding coefficients of variation for mean gross weekly pay (£) for the full 2005 survey and for a version of the 2005 survey with the 20% reduction applied. Estimates have been produced for male jobs, female jobs and all jobs.

Table 1

	Full sample			Reduced sample		
	Mean gross weekly pay	Standard error	CV	Mean gross weekly pay	Standard error	CV
All	£423.18	£0.88	0.21	£423.52	£0.95	0.22
Male	£525.48	£1.59	0.30	£525.62	£1.71	0.33
Female	£319.94	£.074	0.23	£320.43	£0.82	0.26

ASHE results published in 2007

In 2007, the following 3 sets of results will be published;

- 2006 revised (methodology consistent with 2005)
- 2006 revised (methodology consistent with 2007)
- 2007 provisional

The first set – 2006 revised (methodology consistent with 2005) – is published for comparison with results back to 2004. The second set of tables – 2006 revised (methodology consistent with 2007) – includes the changes for ACTR and treats SAs as a separate stratum. This is our best estimate of 2006 and should therefore be used to carry out comparisons between 2006 and 2007.

2007 ASHE release schedule

A copy of the 2007 ASHE release schedule can be seen below;

7th November 2007	
Table Number	Table Name
1	All employees
2	Occupation
4	Industry
6	Age
7	Place of work by local authority
8	Place of residence by local authority
9	Place of work by parliamentary constituency
13	Public private sector
14	Occupation – 4 digit SOC[†]
21st December 2007	
3	Government office region by occupation
5	Government office region by industry
10	Place of residence by parliamentary constituency
11	Place of work by travel to work area
12	Place of residence by travel to work area
16	Industry – 4 digit SIC[‡]
18th January 2008	
15	Government office region by occupation (4 digit SOC[†])
17	Place of work by training enterprise council
18	Place of residence by training enterprise council
20	Age by occupation
21	Age by industry

[†] SOC – Standard Occupational Classification 2000
[‡] SIC – Standard Industrial Classification 2003

Further information

Introduction of automatic occupation coding in ASHE
http://www.statistics.gov.uk/cci/article.asp?id=1843

ONS statistical work priorities
http://www.statistics.gov.uk /pdfdir/wrk0307.pdf