

European Structure of Earnings Survey 2006 Quality Report

United Kingdom, Office for National Statistics

1. Relevance

The data for the UK Structure of Earnings Survey is taken from the Annual Survey of Hours and Earnings (ASHE). This is considered to be the official source of earnings data within the UK. Results of the ASHE are used throughout government for policy purposes such as setting the National Minimum Wage, looking at gender pay issues, pension's policy, transport policy, allocation of local government grants and estimating effects of tax changes. It is also used in the wider community for wage negotiations, research projects, recruitment and a wide variety of other purposes. Some government departments and academics have access to the microdata through data access agreements, other users request ad-hoc analysis provided by ONS at a standard charge. Some of the main users of ASHE data include HM Treasury, the Low Pay Commission, the Department of Enterprise Trade and Investment, the Department of Work and Pensions, and the Department of Health. Standing instructions on the control of government statistical surveys require that regular annual surveys to businesses and local authorities are reviewed at least once every five years. Feedback from some of the key users of the ASHE data has shown that the information meets their needs, though the overall consensus is that they would like a greater level of detail.

The 2007 results from which the Structure of Earnings Survey 2006 is taken from were published in full and were complete. The published tables are released in the public domain and are available via the internet along with articles of interest and methodological information. Some ministers and nominated individuals from government departments have pre-release access to the published results 36 hours prior to the press release.

2. Accuracy

The following tables display mean values and coefficients of variation (CV) for male, female, full-time and part-time breakdowns covering hourly, monthly and annual earnings along with hours worked in a month. These statistics are available for NACE sections, ISCO-88 major groups, age bands and ISCED levels. Where n/a appears, there are no records in the microdata for the category, therefore there is no mean value or CV.

NACE Rev1. Section								
	Male Full-time							
	Hourly Earnings		Monthly Earnings		Annual Earnings*		Monthly Hours	
	Mean	CV %	Mean	CV %	Mean	CV %	Mean	CV %
Section C	18.28	5.1	3,360	4.5	39,884	5.2	195.6	1.7
Section D	13.95	0.7	2,459	0.6	30,503	1.0	180.3	0.2
Section E	16.93	2.1	2,934	2.0	37,168	2.5	175.0	0.7
Section F	13.32	0.9	2,487	0.9	29,940	1.2	189.3	0.3
Section G	12.46	0.9	2,188	0.9	28,070	1.3	179.3	0.2
Section H	9.25	2.4	1,662	2.2	22,060	3.5	182.5	0.5
Section I	13.52	0.9	2,458	0.8	30,094	1.0	187.5	0.3
Section J	25.67	1.5	4,033	1.5	75,332	4.3	157.9	0.2
Section K	18.12	0.9	3,056	0.9	40,957	1.3	174.1	0.2
Section L	15.34	0.7	2,657	0.8	31,568	0.8	173.3	0.2
Section M	16.91	0.8	2,633	0.8	31,214	0.8	159.2	0.2
Section N	18.65	1.6	3,192	1.6	37,828	2.0	170.7	0.3
Section O	12.73	2.8	2,187	2.5	27,479	3.1	176.7	0.3
	Female Full-time							
	Hourly Earnings		Monthly Earnings		Annual Earnings*		Monthly Hours	
	Mean	CV %	Mean	CV %	Mean	CV %	Mean	CV %
Section C	18.46	12.5	2,975	11.9	33,432	10.7	165.0	1.7
Section D	11.13	1.1	1,845	1.1	22,043	1.3	167.9	0.2
Section E	12.54	4.0	2,057	3.9	26,886	5.2	164.8	0.5
Section F	11.57	2.3	1,911	2.4	23,578	3.1	165.5	0.4
Section G	9.80	1.1	1,629	1.1	19,215	1.1	167.1	0.2
Section H	7.89	1.7	1,362	1.8	16,791	2.7	173.2	0.5
Section I	12.36	1.6	2,060	1.6	25,556	1.9	167.8	0.3
Section J	15.42	1.4	2,404	1.4	33,123	2.6	156.5	0.1
Section K	13.89	0.9	2,245	0.9	28,420	1.7	163.0	0.1

Section L	12.51	0.8	2,048	0.8	23,923	0.9	164.3	0.2
Section M	15.14	0.6	2,250	0.5	26,154	0.6	151.5	0.2
Section N	13.12	0.7	2,145	0.7	25,112	0.8	163.8	0.2
Section O	9.60	0.8	1,592	0.7	18,932	0.9	168.3	0.3
All Full-time								
	Hourly Earnings		Monthly Earnings		Annual Earnings*		Monthly Hours	
	Mean	CV %	Mean	CV %	Mean	CV %	Mean	CV %
Section C	18.30	4.8	3,311	4.2	39,054	4.8	191.6	1.5
Section D	13.40	0.6	2,339	0.6	28,901	0.8	177.8	0.1
Section E	15.93	1.9	2,735	1.9	35,164	2.3	172.7	0.6
Section F	13.16	0.9	2,435	0.8	29,362	1.2	187.1	0.3
Section G	11.53	0.7	1,993	0.7	25,029	1.0	175.0	0.1
Section H	8.66	1.6	1,532	1.5	19,710	2.5	178.5	0.3
Section I	13.27	0.8	2,373	0.7	29,164	0.9	183.3	0.2
Section J	21.11	1.2	3,307	1.2	56,862	3.3	157.3	0.1
Section K	16.71	0.7	2,786	0.7	37,055	1.1	170.4	0.1
Section L	14.14	0.6	2,400	0.6	28,417	0.6	169.5	0.2
Section M	15.86	0.5	2,406	0.5	28,254	0.5	154.6	0.1
Section N	14.74	0.8	2,451	0.8	28,828	1.0	165.8	0.2
Section O	10.83	1.3	1,826	1.2	22,299	1.6	171.6	0.2
Male Part-time								
	Hourly Earnings		Monthly Earnings		Annual Earnings*		Monthly Hours	
	Mean	CV %	Mean	CV %	Mean	CV %	Mean	CV %
Section C	33.00	26.8	1,823	..	..	30.4	65.1	21.6
Section D	15.34	5.6	1,410	3.5	18,851	3.4	102.1	2.4
Section E	10.57	13.5	919	17.5	12,466	22.4	88.0	7.5
Section F	17.07	9.2	1,394	6.7	19,383	7.3	94.1	3.5
Section G	7.58	3.0	578	1.8	7,837	2.6	80.1	1.0
Section H	6.21	2.2	445	2.5	6,222	4.4	72.2	1.7

Section I	11.49	5.0	1,074	3.9	14,182	4.3	102.4	1.9
Section J	18.89	10.2	1,499	10.6	20,872	18.0	82.9	3.7
Section K	16.01	8.8	1,004	4.1	14,733	6.3	76.1	1.6
Section L	14.99	5.6	881	5.4	9,591	7.1	68.4	3.8
Section M	17.32	2.3	1,065	2.8	13,379	3.3	65.1	1.9
Section N	22.98	8.1	1,242	6.2	15,233	7.5	74.1	2.9
Section O	9.09	7.6	583	4.5	7,084	3.2	69.7	1.6
	Female Part-time							
	Hourly Earnings		Monthly Earnings		Annual Earnings*		Monthly Hours	
	Mean	CV %	Mean	CV %	Mean	CV %	Mean	CV %
Section C	12.77	21.7	957	29.7	10,374	32.1	84.0	19.8
Section D	9.53	2.6	837	2.5	10,278	2.8	89.9	1.3
Section E	11.36	6.4	1,158	8.1	12,600	6.8	99.5	3.1
Section F	10.11	3.6	813	4.4	10,117	5.0	81.5	2.4
Section G	6.95	2.1	565	1.5	7,096	1.0	81.6	0.5
Section H	5.90	1.3	429	1.7	5,638	2.8	72.8	1.3
Section I	8.96	1.9	799	2.4	9,911	2.5	89.2	1.5
Section J	12.08	2.5	1,105	3.0	13,979	3.3	90.6	0.9
Section K	12.46	2.4	997	2.0	12,589	2.5	82.8	0.9
Section L	12.01	5.4	1,018	3.1	11,753	2.0	90.1	1.1
Section M	12.02	1.1	868	1.1	10,440	1.2	74.6	0.7
Section N	12.25	1.5	1,012	1.1	12,316	1.2	86.7	0.6
Section O	7.74	0.9	598	0.9	7,379	1.0	77.6	0.6
	All Part-time							
	Hourly Earnings		Monthly Earnings		Annual Earnings*		Monthly Hours	
	Mean	CV %	Mean	CV %	Mean	CV %	Mean	CV %
Section C	22.91	24.0	1,391	22.9	15,028	28.3	74.5	14.6
Section D	11.81	3.2	1,063	2.3	13,601	2.4	94.7	1.3
Section E	11.20	6.0	1,111	7.5	12,575	7.1	97.2	2.9

Section F	13.57	5.7	1,102	4.5	14,470	5.1	87.8	2.1
Section G	7.12	1.7	569	1.2	7,268	1.0	81.2	0.5
Section H	6.01	1.1	435	1.4	5,837	2.4	72.6	1.1
Section I	10.14	3.0	927	2.6	11,838	2.8	95.4	1.3
Section J	12.75	2.7	1,143	2.9	14,550	3.6	89.8	0.9
Section K	13.66	3.8	999	1.9	13,195	2.6	80.5	0.8
Section L	12.55	4.5	993	2.8	11,378	2.0	86.1	1.2
Section M	12.86	1.0	899	1.0	10,874	1.2	73.1	0.6
Section N	13.30	1.9	1,034	1.2	12,570	1.3	85.4	0.6
Section O	7.96	1.6	595	1.0	7,337	1.0	76.3	0.6
* Annual earnings relates to only those employees employed for the full 52 weeks.								
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ISCO-88 Major Group								
Male Full-time								
	Hourly Earnings		Monthly Earnings		Annual Earnings*		Monthly Hours	
	Mean	CV %	Mean	CV %	Mean	CV %	Mean	CV %
Group 1	23.84	0.8	3,955	0.8	56,108	1.6	169.5	0.1
Group 2	20.95	0.6	3,401	0.6	41,722	0.8	163.7	0.2
Group 3	15.74	0.9	2,631	0.9	33,830	1.4	168.6	0.2
Group 4	10.62	0.6	1,768	0.6	21,512	0.7	167.2	0.2
Group 5	10.60	0.7	1,912	0.8	24,101	0.9	179.5	0.2
Group 6	8.47	1.5	1,480	1.6	17,854	1.7	174.8	0.6
Group 7	11.10	0.4	2,071	0.5	24,450	0.5	186.3	0.2
Group 8	9.80	0.5	1,910	0.5	22,653	0.5	195.9	0.3
Group 9	8.69	0.4	1,626	0.4	19,469	0.4	187.0	0.2
Female Full-time								
	Hourly Earnings		Monthly Earnings		Annual Earnings*		Monthly Hours	
	Mean	CV %	Mean	CV %	Mean	CV %	Mean	CV %

Group 1	17.35	0.9	2,824	0.9	35,394	1.4	165.1	0.2
Group 2	18.76	0.6	2,827	0.6	33,405	0.7	152.3	0.2
Group 3	13.35	0.5	2,168	0.5	26,142	0.7	163.1	0.1
Group 4	9.74	0.3	1,568	0.3	18,629	0.4	161.5	0.1
Group 5	8.02	0.5	1,330	0.5	15,458	0.6	166.6	0.2
Group 6	8.64	5.3	1,414	4.0	15,792	3.7	165.5	2.6
Group 7	9.36	2.6	1,602	2.7	18,475	3.0	170.9	0.7
Group 8	7.87	1.1	1,377	1.2	16,054	1.4	175.2	0.5
Group 9	7.24	0.6	1,239	0.7	14,765	0.8	171.3	0.3
	All Full-time							
	Hourly Earnings		Monthly Earnings		Annual Earnings*		Monthly Hours	
	Mean	CV %	Mean	CV %	Mean	CV %	Mean	CV %
Group 1	21.77	0.7	3,593	0.6	49,656	1.3	168.1	0.1
Group 2	20.04	0.4	3,162	0.4	38,350	0.6	158.9	0.1
Group 3	14.58	0.5	2,406	0.5	30,123	0.9	165.9	0.1
Group 4	9.98	0.3	1,624	0.3	19,419	0.4	163.1	0.1
Group 5	9.05	0.5	1,562	0.5	18,880	0.6	171.7	0.2
Group 6	8.48	1.4	1,476	1.5	17,739	1.6	174.3	0.6
Group 7	11.05	0.4	2,055	0.5	24,245	0.5	185.8	0.2
Group 8	9.56	0.4	1,843	0.5	21,826	0.5	193.3	0.2
Group 9	8.35	0.3	1,536	0.4	18,434	0.4	183.3	0.2
	Male Part-time							
	Hourly Earnings		Monthly Earnings		Annual Earnings*		Monthly Hours	
	Mean	CV %	Mean	CV %	Mean	CV %	Mean	CV %
Group 1	28.65	11.4	1,791	5.5	23,828	6.5	78.1	2.5
Group 2	26.53	3.7	1,536	3.1	18,205	3.7	65.3	2.0
Group 3	16.61	8.4	1,020	5.8	12,591	4.8	68.7	2.6
Group 4	8.58	2.6	635	2.3	7,877	3.1	77.1	1.7
Group 5	7.29	1.7	502	1.2	6,440	1.7	74.3	1.0

Group 6	7.20	6.8	545	9.0	8,642	7.3	77.2	7.2
Group 7	14.31	4.6	1,300	3.8	18,212	3.8	99.9	2.6
Group 8	9.29	2.8	882	3.3	11,352	4.0	96.6	2.2
Group 9	6.99	1.3	580	1.7	7,997	2.1	80.5	1.2
Female Part-time								
	Hourly Earnings		Monthly Earnings		Annual Earnings*		Monthly Hours	
	Mean	CV %	Mean	CV %	Mean	CV %	Mean	CV %
Group 1	16.14	3.2	1,441	2.7	17,701	3.2	93.3	1.1
Group 2	21.84	1.6	1,512	1.5	17,965	1.7	73.2	1.0
Group 3	13.64	1.8	1,119	1.4	13,584	1.1	84.4	0.8
Group 4	8.96	1.5	760	0.9	9,230	0.7	86.7	0.4
Group 5	6.98	0.5	557	0.6	6,994	0.7	79.3	0.4
Group 6	6.89	4.6	395	11.8	4,253	13.9	57.3	12.5
Group 7	9.91	6.3	847	6.9	9,039	7.8	90.1	4.2
Group 8	7.29	2.8	652	3.3	8,122	3.9	91.4	2.4
Group 9	6.48	0.7	464	0.9	5,640	1.0	72.1	0.7
All Part-time								
	Hourly Earnings		Monthly Earnings		Annual Earnings*		Monthly Hours	
	Mean	CV %	Mean	CV %	Mean	CV %	Mean	CV %
Group 1	19.76	5.2	1,542	2.6	19,517	3.2	88.9	1.1
Group 2	23.19	1.6	1,519	1.4	18,031	1.6	71.0	0.9
Group 3	14.13	2.2	1,103	1.5	13,437	1.2	81.8	0.8
Group 4	8.92	1.4	748	0.8	9,125	0.7	85.8	0.4
Group 5	7.04	0.5	547	0.5	6,915	0.6	78.4	0.4
Group 6	7.13	5.5	513	8.2	7,476	7.7	72.9	6.8
Group 7	13.46	4.1	1,212	3.5	16,347	3.8	98.0	2.3
Group 8	8.61	2.2	803	2.6	10,138	3.1	94.8	1.7
Group 9	6.63	0.6	499	0.8	6,262	1.0	74.6	0.6
* Annual earnings relates to only those employees employed for the full 52 weeks.								

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Age Band								
	Male Full-time							
	Hourly Earnings		Monthly Earnings		Annual Earnings*		Monthly Hours	
	Mean	CV %	Mean	CV %	Mean	CV %	Mean	CV %
16-17 year olds	..	..	..	..	..	..	..	..
18-21 year olds	6.25	2.0	1,113	2.0	12,604	3.6	177.7	0.4
22-29 year olds	10.10	0.5	1,761	0.5	21,035	1.2	176.4	0.2
30-39 year olds	15.45	0.5	2,645	0.5	33,762	1.0	175.8	0.1
40-49 year olds	17.78	0.7	3,056	0.6	40,044	1.4	177.4	0.1
50-59 year olds	17.01	0.8	2,900	0.7	36,245	1.1	175.9	0.2
60+ years	14.12	1.1	2,447	1.0	29,846	1.4	178.1	0.2
	Female Full-time							
	Hourly Earnings		Monthly Earnings		Annual Earnings*		Monthly Hours	
	Mean	CV %	Mean	CV %	Mean	CV %	Mean	CV %
16-17 year olds	..	..	..	..	..	..	..	..
18-21 year olds	6.20	1.4	1,030	1.5	10,901	2.8	166.5	0.4
22-29 year olds	9.86	0.5	1,610	0.5	18,582	0.7	165.4	0.2
30-39 year olds	13.88	0.6	2,226	0.6	26,244	0.7	162.5	0.1
40-49 year olds	13.62	0.6	2,178	0.6	26,386	1.0	162.0	0.1
50-59 year olds	13.24	0.7	2,091	0.6	24,765	0.8	160.4	0.1
60+ years	11.97	1.3	1,902	1.2	22,715	1.3	161.8	0.3
	All Full-time							
	Hourly Earnings		Monthly Earnings		Annual Earnings*		Monthly Hours	
	Mean	CV %	Mean	CV %	Mean	CV %	Mean	CV %
16-17 year olds	8.40	0.7	2,012	0.7	..	..	222.6	0.5
18-21 year olds	6.23	1.3	1,080	1.3	8,738	1.9	173.3	0.3
22-29 year olds	9.99	0.3	1,690	0.3	16,946	0.7	171.2	0.1

30-39 year olds	14.85	0.4	2,484	0.4	30,875	0.7	170.7	0.1
40-49 year olds	16.23	0.5	2,728	0.5	34,971	1.0	171.7	0.1
50-59 year olds	15.50	0.6	2,576	0.6	31,642	0.8	169.7	0.1
60+ years	13.48	0.9	2,286	0.8	27,721	1.1	173.3	0.2
Male Part-time								
	Hourly Earnings		Monthly Earnings		Annual Earnings*		Monthly Hours	
	Mean	CV %	Mean	CV %	Mean	CV %	Mean	CV %
16-17 year olds	4.50	6.5	264	36.7	..	..	51.3	27.3
18-21 year olds	6.23	1.9	387	1.6	4,727	2.9	65.4	1.4
22-29 year olds	9.34	5.0	676	2.9	8,249	2.5	79.6	1.2
30-39 year olds	13.20	2.8	1,046	2.5	13,968	2.9	88.3	1.4
40-49 year olds	17.08	4.5	1,126	3.4	14,312	4.0	79.6	1.7
50-59 year olds	17.79	7.2	1,169	3.2	15,814	4.1	80.9	1.6
60+ years	13.68	3.4	928	2.9	11,582	3.3	75.3	1.4
Female Part-time								
	Hourly Earnings		Monthly Earnings		Annual Earnings*		Monthly Hours	
	Mean	CV %	Mean	CV %	Mean	CV %	Mean	CV %
16-17 year olds	4.49	3.7	181	12.1	..	..	41.2	11.6
18-21 year olds	5.96	1.0	369	1.6	4,255	2.4	62.6	1.3
22-29 year olds	8.39	3.8	620	2.2	7,497	1.7	78.5	0.8
30-39 year olds	10.72	1.1	873	1.2	10,604	1.1	82.4	0.5
40-49 year olds	10.47	1.0	872	0.9	10,607	1.0	84.8	0.5
50-59 year olds	10.38	1.2	846	1.1	10,276	1.2	85.0	0.5
60+ years	9.61	1.6	665	1.3	8,092	1.4	74.0	0.8
All Part-time								
	Hourly Earnings		Monthly Earnings		Annual Earnings*		Monthly Hours	
	Mean	CV %	Mean	CV %	Mean	CV %	Mean	CV %
16-17 year olds	4.50	3.4	212	19.7	1,934	4.2	45.0	14.4
18-21 year olds	6.07	1.0	376	1.2	4,460	1.9	63.7	1.0

22-29 year olds	8.71	3.0	639	1.7	7,746	1.4	78.9	0.7
30-39 year olds	11.14	1.1	902	1.1	11,103	1.1	83.4	0.5
40-49 year olds	11.28	1.2	903	0.9	11,022	1.0	84.2	0.4
50-59 year olds	11.48	1.9	894	1.1	11,019	1.3	84.4	0.5
60+ years	10.82	1.6	743	1.4	9,093	1.5	74.4	0.7
* Annual earnings relates to only those employees employed for the full 52 weeks.								
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ISCED level								
	Male Full-time							
	Hourly Earnings		Monthly Earnings		Annual Earnings*		Monthly Hours	
	Mean	CV %	Mean	CV %	Mean	CV %	Mean	CV %
ISCED 0 and 1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ISCED 2	9.66	0.9	1,779	0.8	21,949	1.5	186.5	0.3
ISCED 3 and 4	12.66	0.4	2,231	0.4	28,423	0.7	180.2	0.1
ISCED 5B	20.45	0.6	3,398	0.6	44,446	1.3	168.9	0.1
ISCED 5A	17.87	1.0	3,025	1.0	39,594	1.9	173.4	0.2
ISCED 6	23.08	2.6	3,789	2.6	49,711	6.2	165.5	0.5
	Female Full-time							
	Hourly Earnings		Monthly Earnings		Annual Earnings*		Monthly Hours	
	Mean	CV %	Mean	CV %	Mean	CV %	Mean	CV %
ISCED 0 and 1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ISCED 2	8.47	1.0	1,400	0.9	16,571	1.2	166.6	0.3
ISCED 3 and 4	10.52	0.4	1,711	0.4	20,634	0.5	164.4	0.1
ISCED 5B	16.68	0.5	2,612	0.5	31,065	0.6	158.6	0.1
ISCED 5A	13.95	0.9	2,240	0.9	27,622	1.9	162.3	0.2
ISCED 6	19.83	2.0	2,999	2.1	35,571	2.8	151.9	0.6
	All Full-time							
	Hourly Earnings		Monthly Earnings		Annual Earnings*		Monthly Hours	

ISCED 2	6.97	0.9	542	1.0	6,879	1.3	77.4	0.7
ISCED 3 and 4	8.70	1.0	678	0.6	8,684	0.6	79.9	0.3
ISCED 5B	17.80	1.5	1,283	1.2	15,613	1.3	79.7	0.6
ISCED 5A	12.26	1.8	973	1.6	12,071	1.7	83.3	0.8
ISCED 6	24.01	6.0	1,572	5.3	18,164	5.9	69.3	3.7
* Annual earnings relates to only those employees employed for the full 52 weeks.								
.. Disclosive								

2.1 Sampling Errors

2.1.1 Probability sampling

The Annual Survey of Hours and Earnings is not selected via the two stage sampling method suggested in the SES Arrangements for Implementation. Instead it is based on a 1% sample of employees from the UK PAYE (Pay As You Earn) tax register held by HM Revenue & Customs (HMRC). All employees with National Insurance numbers ending in a particular pair of digits are selected and questionnaires are sent to their employers. This method allows a 1% sample of the frame population to be selected, across businesses in all industries and all sizes. The 2007 sample was reduced by approximately 20%, with more employees being cut from industries displaying the least variability in earnings. As National Insurance numbers are allocated randomly to individuals, the basis of ASHE sampling is probability sampling. However, the same pair of digits for national insurance numbers is chosen each year to allow continuity in the data and the ability to compare earnings year on year.

2.2 Non-sampling errors

2.2.1 Coverage errors

The use of the sampling procedure described above results in areas of under coverage. Those not appearing on the PAYE register are the self-employed, and employees working in small businesses paid under the tax threshold or cash-in-hand. Previous under coverage resulting from those that either changed jobs or joined the workforce between the period of sample selection and the survey reference date is now dealt with by sending a second cycle of forms for employees identified as having moved jobs. This procedure has been in place since 2004. The Annual Survey of Hours and Earnings also selects people outside of the scope of the Structure of Earnings Survey regulations, i.e. agricultural industries, but these have been removed from the dataset.

2.2.2 Measurement errors

The ASHE questionnaire underwent a major redesign in 2004, at which point the questions were fully tested and approved. The design of the questionnaire continues to be looked at each year with the input of other departments such as Data Validation and Methodology. Examples of past changes include re-ordering of questions, re-wording of questions or guidance and changes in routing. Small changes year on year are intuitive for the most part and arise from common problems experienced in the previous year; no specific testing is conducted to measure the impact or effectiveness of such changes.

2.2.3 Processing errors

The Annual Survey of Hours and Earnings employs a range of validation checks referred to as selective editing to identify potential errors in the collected data. This system ranks all potential errors based on the level of impact that the data item would have on aggregate statistics for key variables if that data item was found to be in error. Errors with the highest selective editing scores, i.e. with the highest potential impact on aggregate statistics, are validated. In these cases, companies are contacted via telephone to check the data they have returned before values are marked as acceptable. A selective editing approach to data processing does not seek to achieve accuracy throughout the dataset at microdata level, because it does not flag data that is clearly in error, but would have little impact on aggregate statistics. Instead it allows resources to be focused on the cases that really matter.

2.2.4 Non-response errors

The table below displays response rates for the Annual Survey of Hours and Earnings 2007. The unit considered for response purposes is the individual employee, therefore response rates are expressed in terms of employee records. Note that data from respondents in Northern Ireland are collected via the Department of Enterprise, Trade and Investment, Northern Ireland (DETINI) on behalf of ONS, hence the table displays response rates for GB, NI and total UK.

	Great Britain		Northern Ireland		Total UK	
	Questionnaires	Rate %	Questionnaires	Rate %	Questionnaires	Rate %
Despatched	225,550	100.0	6,678	100.0	232,228	100.0
Received	188,613	83.6	6,476	97.0	195,089	84.0
Valid for ASHE	137,090	60.8	5,233	78.4	142,323	61.3
Valid for SES	128,607	57.0	4,736	70.9	133,343	57.4

Item non-response is dealt with differently for variables relating to hours and pay than other variables. For five main variables (annual gross pay, basic pay, basic hours, overtime pay and overtime hours) imputation is done in full for the Annual Survey of Hours and Earnings from which SES is derived. Donor imputation is performed by the BANFF imputation tool written in SAS. Imputation classes are defined with relation to occupation, region, sex, adult rate marker and age band to define donor sets. Donors are then selected from another record within the appropriate donor set with similar responses for other pay and hours variables. The table below shows item non-response for the five main variables prior to imputation in ASHE 2007, based on 142,323 records.

Variable	Basic pay	Overtime pay	Basic hours	Overtime hours	Annual Gross Pay
% non-response	3.7	14.7	4.3	20.9	5.1

Other variables, e.g. classification variables, are not imputed for within the Annual Survey of Hours and Earnings. For the purpose of the Structure of Earnings Survey, these variables have been imputed using a variety of methods. Ratio imputation from previous year's data was used where appropriate. Imputation using a secondary source was used where such sources were available. Where these methods have not been useful or appropriate, variables have been imputed using either a donor or probabilistic model created specifically for the Structure of Earnings Survey.

The highest level of educational attainment (variable 2.5) is not collected within the Annual Survey of Hours and Earnings. The values for this variable have been imputed using donors with similar characteristics from the Labour Force Survey.

2.2.5 Model assumption errors

Investigations have shown that not all respondents are equally likely to reply to the survey. For example, respondents in higher earning occupations are less likely to respond than those for lower earning occupations. Therefore, a weighting system is used which takes account of the factors that have been shown to relate most to the likelihood of response and relative earning levels. This weighting system uses 108 weighting classes based on occupation (9 classes), age (3 classes), gender (2 classes) and geographic location (2 classes). Responses within these classes are weighted to population totals taken from the Labour Force Survey, which in turn is benchmarked against the Census.

3. Timeliness and punctuality

The reference month used for the Annual Survey of Hours and Earnings that the SES 2006 is based on is April 2007. The Annual Survey of Hours and Earnings and its predecessor, the New Earnings Survey, have been conducted in April of each year since 1975. The April 2007 survey was chosen rather than April 2006 because data collected for the tax year ending in April 2007 would result in annual data with 9 months of relevant coverage. The table below displays a basic timetable of 2007 events.

Timetable for 2007 Annual Survey of Hours and Earnings	
Main despatch of questionnaires	16-20 April 2007
Survey Reference Date (for the pay period including)	18 April 2007
Despatch of reminders	15 June 2007
End of collection and validation phase	31 August 2007
First Release of 2007 results	7 November 2007

4. Accessibility and clarity

Full results of the Annual Survey of Hours and Earnings are published on the Office for National Statistics (ONS) website (<http://www.statistics.gov.uk/ashe>) in a series of standard excel tables. This link also provides access to a range of methodological articles relating to the survey. A small number of tables that are too large to publish on the web are available from ONS following the first release. All statistics have accompanying coefficient of variation levels. It is also possible under certain circumstances, for researchers to obtain access to the microdata with a data access agreement in place. Any analysis can be carried out at the Virtual Microdata Laboratories (VML) at ONS's London and Newport sites. The ASHE results published are not wholly consistent with the SES data, since the requirements of the regulation differ from the normal survey practices.

5. Comparability

5.1 Comparability over time

The most significant changes since the Structure of Earnings Survey 2002 are the introduction of the new ASHE questionnaire, a reduction of 20% in the ASHE sample and the introduction of an automatic coding tool for occupations. The ASHE questionnaire was developed to replace the New Earnings Survey (NES) in 2004, which dates back to 1975. This new questionnaire also

introduced processes for weighting and imputation, and improved the coverage of employees. Statistics are not considered directly comparable from NES to ASHE but a back series of ASHE data is available to 1997. The introduction of an automatic coding tool for occupations took place in 2006 which led to two versions of the data being published, one comparable with 2005 methodology and one comparable with 2007 methodology.

6. Coherence

6.1 Coherence between provisional and final statistics.

The current year of ASHE statistics is provisional and becomes revised when the following year is published, as this is when information from any late returns is added to the current year. Therefore, the ASHE 2007 microdata from which the SES 2006 is taken was provisional at the time of transmission. The number of late returns is small. Therefore, there is rarely a large difference in provisional and revised statistics.

7. Cost and burden

As data for the Structure of Earnings Survey are taken from an existing annual survey run by ONS, there is no additional response burden. However, fulfilling the SES 2006 requirements using ASHE data was mainly undertaken by two employees, with help from colleagues in methodological departments when needed. The table below displays the estimated cost associated with the time spent completing this work, as proportions of full economic cost to government.

Staff Grade	FEC Pay Rate £	Time	Staff Cost £
HEO*	57,000	1 month	4,750
EO**	46,000	3 months	11,500
Extra methodological cost			1,000
Total			17,250

*Higher Executive Officer, **Executive Officer