

Relating to the EU-SILC UK Operation 2005-2008

Final Quality Report

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Preface

According to article 16 of the Regulation (EC) no. 1177/2003 of the European Parliament and of the Council of 16 June 2003 concerning Community statistics on income and living conditions (EU-SILC), Member States and the Commission (Eurostat) will produce the following reports:

Member States shall produce by the end of year N+2 (2010), final quality reports that cover both cross-sectional and longitudinal components in relation to the year of the survey N (2008).

Note on the UK EU-SILC Survey

In 2008 the Office for National Statistics (ONS) launched the Integrated Household Survey (IHS) for Great Britain. In the IHS a questionnaire is comprised of two sections: a suite of core IHS questions followed by individual survey modules. The General Household Survey (GHS) was chosen as a module of the IHS and in recognition the name was changed to the General Lifestyle Survey (GLF). This report provides quality information for EU-SILC which is collected as part of the General Lifestyle Survey questionnaire in 2008.

Note on UK Data and Final Quality Report for the 2005-8 Longitudinal Operation

Please note that the data associated with this Quality Report have been updated since the first release of this document, consequently some of the figures in this Report may be out-of-date. The UK will update this Quality Report to reflect these amendments at the earliest opportunity.

1. Common longitudinal European Union indicators

In 2008 the longitudinal UK EU-SILC data comprise a panel over four years 2005-2008 for the first time.

In order to estimate the percentage of panel-persons living at-risk-of-poverty, the at-risk-of-poverty threshold has to be recalculated for each year of the four years longitudinal rotation to remove bias due to a threshold, which was estimated for the cross-sectional population of each year from 2005 to 2008 instead of the longitudinal population.

Persistent at-risk-of-poverty occurs if a panel person is at-risk-of-poverty in the last wave of the four years panel (2008) and has been at-risk-of-poverty at least two times during the preceding waves. Table 1 shows possible combinations of being at-risk-of-poverty which are contained in the longitudinal indicator:

Table 1: Types of at-persistent-risk-of-poverty

2008	2007	2006	2005	Duration of at-risk-of-poverty (years)
At-risk	At-risk	At-risk	At-risk	4
At-risk	At-risk	At-risk	Not-at-risk	3
At-risk	At-risk	Not-at-risk	At-risk	3
At-risk	Not-at-risk	At-risk	At-risk	3

These data are unavailable for the UK at present.

2. Accuracy

Accuracy: denotes the closeness of computations or estimates to the exact or true population values.

2.1 Sampling design

2.1.1 Type of sampling

Data for EU-SILC UK 2008 are collected from two sources. First, data are collected by the Office for National Statistics (ONS), using the General Lifestyle Survey. Second, to ensure that EU-SILC is representative of the UK, a sample of approximately 300 households is selected by NISRA (Northern Ireland Statistics and Research Agency) using the Living Conditions Survey (LCS). This small additional sample represents the (approximately) 2% of the UK population that live in Northern Ireland. All of the data analysis and processing is undertaken by ONS.

EU-SILC UK aims to interview all adults aged 16 and over at every household at the sampled addresses. The sample is selected using a probability, stratified two-stage design.

2.1.2 Sampling units (one stage, two stages)

Households are sampled from the small users Postcode Address File (PAF). This is a list of all addresses maintained by the UK Post Office. The PAF files used on our sampling system are updated twice a year. The Postcode address file is ordered by postcode sector, which are similar in size to a UK electoral ward area. The postcode sectors are the Primary Sampling Units (PSU-1) for EU-SILC and the Secondary Sampling Units (PSU-2) are addresses within those sectors.

2.1.3 Stratification and sub-stratification criteria

Stratification involves the division of the population into sub-groups, or strata, from which independent samples are taken. This ensures that a representative sample is drawn with respect to the stratifiers. Stratification of a sample can lead to substantial improvements in the precision of the survey estimators provided that the strata are chosen such that members of the same strata are as similar as possible in respect of the characteristics of interest. The bigger the differences between strata, the greater the gain in the precision of the survey estimates.

Initially, postcode sectors are allocated to 30 major strata. These are based on the 10 Government Office Regions in England (sub-divided between the former Metropolitan and non-Metropolitan counties). In addition London is subdivided into quadrants (Northwest, Northeast, Southwest and Southeast) with each quadrant divided into inner and outer areas (Annex 1). Using a finer division of London generally improves the precision associated with the estimates. There are five subdivisions in Scotland, two in Wales and one in Northern Ireland.

Within each major stratum, postcode sectors were then stratified according to selected indicators taken from the 2001 Census. Sectors were initially ranked according to the proportion of households with no car, and then divided into three bands containing approximately the same number of households. Within each band, sectors were re-ranked according to the proportion of households with a household reference person in socio-economic groups 1 to 5 and 13 (Annex 2), and these bands were then sub-divided into three further bands of approximately equal size. Finally, within each of these bands, sectors were re-ranked according to the proportion of people who were pensioners.

Major strata were then divided into minor strata with equal numbers of addresses, the number of minor strata per major strata being proportionate to the size of the major stratum, so larger PSUs have more chance of being selected. In 2005 the frame was divided into 720 strata. In 2006, 588 of these were rolled forward to the next wave in the longitudinal design. There were 132 pseudo wave 4 strata which were replaced and an additional 96 strata added, giving 816 for 2006. In 2007, 648 of these were again rolled forward to the next wave in the longitudinal design. There were 168 pseudo wave 4 strata which were replaced and an additional 60 strata added, giving 876 for 2007. In 2008, 684 of these were rolled forward to the next wave in the longitudinal design. There were 192 pseudo wave 4 strata which were replaced and an additional 36 strata added, giving 912 for 2008.

2.1.4 Sample size and allocation criteria

Regulation 1177/2003 states that member states have to achieve a minimum effective sample size. For the UK and for the cross sectional component this is 7,500 households and 13,750 persons aged 16 and above. For the longitudinal component this is 5,750 households and 10,500 persons aged 16 and above.

The sample design for UK EU-SILC was based on the assumption that a design effect of 1.25 would be achieved under the design. In 2006, 13,857 addresses were selected for survey, yielding an achieved sample of 9,902 eligible households. Within these households 23,365 people were residents of which 18,563 were interviewed and aged at least 16 years.

In 2007, 13,478 addresses were selected for survey, yielding a sample of 9,275 eligible households. Within these households 21,942 people were residents of whom 17,484 were eligible for a personal interview (aged at least 16 years of age).

In 2008, 13,051 addresses were selected for survey, yielding a sample of 8,936 eligible households. Within these households 21,043 people were residents of whom 16,825 were eligible for a personal interview (aged at least 16 years of age). The estimated design effect for 2008 is 1.15, yielding an effective sample size of the EU-SILC operation 2008 as 7,770 households and 14,630 persons aged 16+ respectively

Standard errors for the UK EU-SILC indicators are not yet available, so it is not currently possible to provide an estimate of the design effect or the achieved effective sample size for the longitudinal component.

Table 2: Sample size, addresses and household interviews

	Longitudinal Sample 2005-2008																			
	2005		2006						2007						2008					
	n	%	Total households (db110>0)		Follow-up households (db110=1,2,11)		Split households (db110=8)		Total households (db110>0)		Follow-up households (db110=1,2,11)		Split households (db110=8)		Total households (db110>0)		Follow-up households (db110=1,2,11)		Split households (db110=8)	
Used addresses	3398	100.0	6731	100.0	3402	100.0	58	100.0	11557	100.0	5934	100.0	141	100.0	7626	100.0	7512	100.0	75	100.0
Addresses existent	3398	100.0	6731	100.0	3402	100.0	58	100.0	10703	92.6	5934	100.0	141	100.0	7626	100.0	7512	100.0	75	100.0
Add. non-existent	0	0.0	0	0.0	0	0.0	0	0.0	854	7.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Gross sample	3398	100.0	6731	100.0	3402	100.0	58	100.0	10713	100.0	5934	100.0	141	100.0	7626	100.0	7512	100.0	75	100.0
Add. successfully contacted	3398	100.0	6721	99.9	3401	100.0	49	84.5	10623	99.2	5930	99.9	72	51.1	7626	100.0	7512	100.0	75	100.0
Add. not contacted	0	0.0	10	0.1	1	0.0	9	15.5	90	0.8	4	0.1	69	48.9	0	0.0	0	0.0	0	0.0
Successfully contacted add.	3398	100.0	6721	100.0	3401	100.0	49	100.0	10623	100.0	5930	100.0	72	100.0	7626	100.0	7512	100.0	75	100.0
Hhld questionnaire completed	3398	100.0	5817	86.5	2503	73.6	43	87.8	7551	71.1	4291	72.4	54	75.0	5930	77.8	5855	77.9	75	100.0
DB130=11 Refusal	0	0.0	460	6.8	456	13.4	4	8.2	1896	17.8	671	11.3	11	15.3	934	12.2	934	12.4	0	0.0
DB130=21,22 Unable to respond	0	0.0	27	0.4	27	0.8	0	0.0	279	2.6	114	1.9	0	0.0	132	1.7	132	1.8	0	0.0
DB130=23 Other reasons	0	0.0	136	2.0	134	3.9	2	4.1	320	3.0	297	5.0	7	9.7	236	3.1	236	3.1	0	0.0
DB130=24 DB130 Missing	0	0.0	281	41.9	281	82.9	0	0.0	577	54.5	557	94.2	0	0.0	394	51.8	355	47.4	0	0.0
Hhld questionnaire completed	3398	100.0	5817	100.0	2503	100.0	43	100.0	7551	100.0	4291	100.0	54	100.0	5930	100.0	5855	100.0	75	100.0
Interview accepted	3398	100.0	5817	100.0	2503	100.0	43	100.0	7551	100.0	4291	100.0	54	100.0	5930	100.0	5855	100.0	75	100.0
DB135=1 Interview rejected	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
DB135=2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Table 3: Households and persons in the longitudinal component

	Longitudinal Sample 2005-2008				
	2005	2006	2007	2008	Total
Used Addresses	3,398	6,731	11,557	7,626	29,312
Addresses successfully contacted	3,398	6,721	10,623	7,626	28,368
Interview accepted for database	3,398	5,817	7,551	5,930	22,696
Persons	8,081	13,943	18,165	14,376	54,565
Personal interviews	6,376	10,890	14,223	11,165	42,654

2.1.5 Sample selection schemes

EU-SILC UK uses a two-stage sampling scheme:

1. Selection of a Primary Sampling Units (PSUs) utilising a probability proportional to size sampling scheme, and selecting one PSU per stratum with a systematic selection procedure based on a random starting point.
2. Systematic random sampling of 23 addresses within a PSU.

2.1.6 Sample distribution over time

Household interviews for EU-SILC UK are spread evenly throughout the calendar year. Typically a small number of interviews will be completed in January of the following year, however in the 2006 survey, due to a shortage of interviewers, a larger number of interviews and re-issues remained unallocated, and so the field period was extended until April 2007.

Table 4: Sample distribution over time

	Year of Survey			
	2005	2006	2007	2008
January		425	501	445
February		510	589	452
March		525	620	486
April	318	456	684	532
May	435	494	645	496
June	359	501	678	496
July	331	449	587	491
August	398	531	700	502
September	396	469	640	508
October	364	437	656	512
November	412	534	696	528
December	321	403	455	429
January	38*	58 [#]	94 ^{&}	53 ^{\$}
February	26*	16 [#]	6 ^{&}	
March		4 [#]		
April		5 [#]		
Total	3398	5817	7551	5929

* data collected in 2006

[#] data collected in 2007

[&] data collected in 2008

^{\$} data collected in 2009

2.1.7 Renewal of sample: rotational groups

In the UK, 2005 was the first year for the EU-SILC survey. To accommodate EU-SILC, the GHS adopted a new sample design in line with Eurostat requirements, changing from a cross-sectional to a longitudinal format.

The sample design follows a four-year sample rotation in which households remain in the sample for four years (waves) with one quarter of the sample being replaced each year. Each quarter of the sample is known as a replication, and each replication is representative of the target population. Figure 1 illustrates how the design operates.

The system is fully established from 2008 (year 4 onwards). The sample from 2008 onwards, for any one year, consists of four replications which have been in the survey for 1, 2, 3 or 4 years.

Figure 1: Renewal of sample: Rotational groups

Sample replication	Year 1 (2005)	Year 2 (2006)	Year 3 (2007)	Year 4 (2008)	Year 5 (2009)	Year 6 (2010)
1	1st					
2	1st	2nd				
3	1st	2nd	3rd			
4	1st	2nd	3rd	4th		
5		1st	2nd	3rd	4th	
6			1st	2nd	3rd	4th
7				1st	2nd	3rd
8					1st	2nd
9						1st

Table 5: Addresses and completed interviews by rotational group

	2005		2006		2007		2008	
	Used addresses	Completed and accepted interviews	Used addresses	Completed and accepted interviews	Used addresses	Completed and accepted interviews	Used addresses	Completed and accepted interviews
R4	3398	3398	2543	2543	2026	2026	1740	1740
R1	-	-	3274	3274	2319	2319	1874	1874
R2	-	-	-	-	3206	3206	2316	2316
missing	-	-	914	-	4006	-	1696	-
Total	3398	3398	6731	5817	11557	7551	7626	5930

2.1.8 Weightings

This section describes the methods used to calculate weights for the UK EU-SILC 2008 survey. The methods are broadly consistent with those recommended by Eurostat.

2.1.8.1 Design factor

For the first wave, addresses are selected under the design outlined in the preceding sections of this report. The design weight for a household is calculated as the inverse of the inclusion probability for the sampled address.

2.1.8.2 Non-response adjustments (first wave)

Non-response to the surveys (GLF and LCS) used to produce EU-SILC can introduce bias. For the UK, an attempt is made to correct for this bias by weighting households based on their propensity to respond. For EU-SILC, non-response can occur at any given wave.

For the first wave for a given rotational group, information from the 2001 Census and GLF is used to weight for non-response. The Census is mandatory in the UK and so both responders and non-responders to the GLF can be matched to Census records. This was done using 2001 data and response classes were formed based on propensity to respond, given certain characteristics. For EU-SILC, households are given a different non-response weight depending on the response class to which they belong.

2.1.8.3 Adjustments to external data (first wave)

Adjustments, in general, are made to improve the accuracy of data, meaning the closeness of survey-based estimations or computations to the “true” values.

The EU-SILC sample is based on private households, which means that the population totals used in the weighting need to relate to people in private households. These totals are consistent with those used on the British Labour Force Survey (LFS). The LFS derives household population estimates by excluding residents of institutions from population projections based on mid-year estimates.

The population information and EU-SILC UK data were grouped into twelve age by sex categories within six regional categories to form weighting classes. The weighting consists of adjusting the existing weights (including factors for design and non-response) so that the final weights ensure that the weighted totals for the above demographic categories match the population totals.

Age-group by sex

0-4	Males and Females		
5-15	Males and Females		
16-24	Males	16-24	Females
25-44	Males	25-44	Females

45-64	Males	45-64	Females
65-74	Males	65-74	Females
75+	Males	75+	Females

Regions

Metropolitan
 Non-metropolitan
 London
 South East
 Wales
 Scotland
 Northern Ireland

2.1.8.4 Final longitudinal weight

The longitudinal weights (RB062, RB063 and RB064) are only given for the last year (i.e. 2008). For the first wave for a given rotational group, the longitudinal base weight (RB060) is calculated as the design weight adjusted for non-response and calibrated to the UK population totals.

2.1.8.5 Non-response adjustments (attrition in subsequent waves)

Attrition is a form of non-response found on longitudinal surveys between waves. The 2008 EU-SILC is the survey's fourth year in the UK; this meant that approximately three-quarters of sampled households had been surveyed in 2007. As these sampled households had previously participated in the survey, details of respondents and non-respondents were linked back to their corresponding information at the previous wave. Logistic regression was used to model the likelihood of response in the current wave against the characteristics of households at their interview in the previous wave. A variety of household variables such as household composition, tenure, region and car ownership were tested for inclusion. Characteristics determined as significant by the logistic regression model (at the five per cent significance level) were used to weight for this attrition. The variables reaching significance are listed in Table 6 below.

Table 6: Variables included in the logistic regression model of household attrition in 2008

Variable
Current wave
Accommodation type
Age of household reference person
Ethnicity of household reference person
Area Classification of Regional Neighbourhoods (ACORN)
Any qualifications (any resident)
Longstanding illness (any resident)

2.1.8.6 Adjustments to external data (longitudinal population)

Reliable external data relating to the longitudinal population were not available, so the longitudinal weights did not undergo a further stage of calibration.

2.1.8.7 Final longitudinal weight (subsequent waves)

For subsequent waves of a given rotational group, the base weight (RB060) is the previous year's weight adjusted for attrition. Furthermore, co-residents joining the sample households receive a zero weight and newborns receive their mother's weight. The weights are also scaled to the longitudinal population in scope at each wave from the start of the panel.

RB060 is produced from the base weights and are scaled so that the sum of the weights over those individuals in scope and sampled in both 2007 and 2008 equals the size of the longitudinal population for 2007-2008.

For the longitudinal weights (RB062, RB063, RB064), persons that have moved in from outside the sample, are newly born, have moved out or died are given a zero weight.

2.1.8.8 Final household cross-sectional weight

The final cross sectional weight (DB090) is calculated from the base weights.

2.1.9 Substitutions

In 2008, no substitutions were made.

2.2 Sampling errors

The following tables present the means, number of observations and standard errors for the key income variables for the cross-sectional component in 2008 and for each wave of the longitudinal component 2005-2008. The means are calculated across all households, including those who have not recorded any income against the component.

Table 7: Mean, Total Number of Observations and Standard Errors for Income Components (weighted) - 2008 Cross-Sectional

Income Component	Mean	Unweighted Number of Observations		Standard Error
		Before Imputation	After Imputation	
Total household income variables				
Total household gross income	38,537	5,424	8,936	681.3
Total disposable household income	28,857	5,726	8,936	424.6
Total disposable household income before social transfers other than old-age and survivor benefits	26,369	5,964	8,936	443.4
Total disposable household income before social transfers including old-age and survivors' benefits	21,500	6,482	8,936	435.0
Gross income components at household level				
Income from rental of a property or land	390	8,817	8,936	38.8
Family/child related allowances	745	8,646	8,936	17.6
Social exclusion not elsewhere classified	335	8,765	8,936	17.0
Housing allowances	457	8,911	8,936	18.1
Regular inter-household cash transfer received	111	8,910	8,936	12.4
Interest, dividends, etc.	1,016	7,655	8,936	60.1
Interest repayments on mortgage	1,894	8,909	8,936	45.8
Income received by people aged under 16	15	8,930	8,936	5.7
Regular taxes on wealth	1,015	8,859	8,936	9.0
Regular inter-household cash transfer paid	189	6,416	8,936	16.4
Tax on income and social contributions	8,475	8,817	8,936	260.9
Gross income components at personal level				
Employee cash or near cash income	13,188	14,824	16,825	260.7
Non-cash employee income	197	16,825	16,825	10.8
Employer's social insurance contribution	256	16,628	16,825	19.9
Contributions to individual private pension plans	243	16,433	16,825	34.4
Cash benefits or losses from self-employment	1,940	16,825	16,825	222.3
Value of goods produced for own consumption	0	16,582	16,825	0.0
Pension from individual private plans	203	16,806	16,825	27.9
Unemployment benefits	47	15,448	16,825	5.7
Old-age benefits	2,739	16,801	16,825	42.1
Survivor's benefits	24	16,726	16,825	4.0
Sickness benefits	140	16,683	16,825	8.2
Disability benefits	129	16,771	16,825	7.4
Education-related allowances	71	15,131	16,825	10.3
Gross monthly earnings for employees	1,739	14,824	16,825	22.5

Table 8: Mean, Total Number of Observations and Standard Errors for Income Components 2005 part of longitudinal (weighted)

Income Component	Mean	Unweighted Number of Observations		Standard Error
		Before Imputation	After Imputation	
Total household income variables				
Total household gross income	33,671	1,939	3,398	
Total disposable household income	24,926	2,072	3,398	
Total disposable household income before social transfers other than old-age and survivor benefits	22,673	2,230	3,398	
Total disposable household income before social transfers including old-age and survivors' benefits	18,427	2,431	3,398	
Gross income components at household level				
Income from rental of a property or land	294	3,362	3,398	
Family/child related allowances	707	3,232	3,398	
Social exclusion not elsewhere classified	405	3,288	3,398	
Housing allowances	437	3,340	3,398	
Regular inter-household cash transfer received	154	3,382	3,398	
Interest, dividends, etc.	811	2,819	3,398	
Interest repayments on mortgage	1,611	1,353	3,398	
Income received by people aged under 16	10	3,398	3,398	
Regular taxes on wealth	899	3,142	3,398	
Regular inter-household cash transfer paid	163	3,376	3,398	
Tax on income and social contributions	7,683	2,434	3,398	
Gross income components at personal level				
Employee cash or near cash income	11,546	5,609	6,376	
Non-cash employee income	234	6,328	6,376	
Contributions to individual private pension plans	96	6,345	6,376	
Cash benefits or losses from self-employment	1,797	6,258	6,376	
Value of goods produced for own consumption	0	6,376	6,376	
Pension from individual private plans	110	6,294	6,376	
Unemployment benefits	29	6,357	6,376	
Old-age benefits	2,388	5,844	6,376	
Survivor's benefits	31	6,360	6,376	
Sickness benefits	128	6,322	6,376	
Disability benefits	117	6,306	6,376	
Education-related allowances	27	6,363	6,376	

Table 9: Mean, Total Number of Observations (before and after imputation) and Standard Errors for Income Components 2006 part of longitudinal (weighted)

Income Component	Mean	Unweighted Number of Observations		Standard Error
		Before Imputation	After Imputation	
Total household income variables				
Total household gross income	33,769	3,486	5,817	
Total disposable household income	25,234	3,663	5,817	
Total disposable household income before social transfers other than old-age and survivor benefits	22,986	3,885	5,817	
Total disposable household income before social transfers including old-age and survivors' benefits	18,528	4,163	5,817	
Gross income components at household level				
Income from rental of a property or land	238	5,764	5,817	
Family/child related allowances	649	5,638	5,817	
Social exclusion not elsewhere classified	351	5,689	5,817	
Housing allowances	437	5,766	5,817	
Regular inter-household cash transfer received	98	5,808	5,817	
Interest, dividends, etc.	775	4,853	5,817	
Interest repayments on mortgage	1,668	2,259	5,817	
Income received by people aged under 16	10	5,817	5,817	
Regular taxes on wealth	909	5,470	5,817	
Regular inter-household cash transfer paid	162	5,803	5,817	
Tax on income and social contributions	7,465	4,180	5,817	
Gross income components at personal level				
Employee cash or near cash income	11,959	9,554	10,890	
Non-cash employee income	196	10,890	10,890	
Contributions to individual private pension plans	145	10,663	10,890	
Cash benefits or losses from self-employment	1,478	10,718	10,890	
Value of goods produced for own consumption	0	10,890	10,890	
Pension from individual private plans	158	10,776	10,890	
Unemployment benefits	43	10,866	10,890	
Old-age benefits	2,570	9,938	10,890	
Survivor's benefits	37	10,864	10,890	
Sickness benefits	152	10,793	10,890	
Disability benefits	98	10,810	10,890	
Education-related allowances	37	10,880	10,890	

Table 10: Mean, Total Number of Observations (before and after imputation) and Standard Errors for Income Components 2007 part of longitudinal (weighted)

Income Component	Mean	Unweighted Number of Observations		Standard Error
		Before Imputation	After Imputation	
Total household income variables				
Total household gross income	36,006	4,568	7,551	
Total disposable household income	27,097	4,590	7,551	
Total disposable household income before social transfers other than old-age and survivor benefits	24,710	4,955	7,551	
Total disposable household income before social transfers including old-age and survivors' benefits	19,798	5,425	7,551	
Gross income components at household level				
Income from rental of a property or land	331	7,486	7,551	
Family/child related allowances	717	7,192	7,551	
Social exclusion not elsewhere classified	370	7,378	7,551	
Housing allowances	436	7,408	7,551	
Regular inter-household cash transfer received	96	7,532	7,551	
Interest, dividends, etc.	1,170	6,450	7,551	
Interest repayments on mortgage	2,083	2,968	7,551	
Income received by people aged under 16	12	7,549	7,551	
Regular taxes on wealth	969	7,163	7,551	
Regular inter-household cash transfer paid	159	7,521	7,551	
Tax on income and social contributions	7,781	5,520	7,551	
Gross income components at personal level				
Employee cash or near cash income	12,167	12,725	14,223	
Non-cash employee income	204	14,165	14,223	
Contributions to individual private pension plans	166	14,186	14,223	
Cash benefits or losses from self-employment	1,607	13,981	14,223	
Value of goods produced for own consumption	0	14,223	14,223	
Pension from individual private plans	148	14,045	14,223	
Unemployment benefits	36	14,193	14,223	
Old-age benefits	2,612	13,057	14,223	
Survivor's benefits	38	14,207	14,223	
Sickness benefits	103	14,125	14,223	
Disability benefits	88	14,085	14,223	
Education-related allowances	38	14,197	14,223	

Table 11: Mean, Total Number of Observations (before and after imputation) and Standard Errors for Income Components 2008 part of longitudinal (weighted)

Income Component	Mean	Unweighted Number of Observations		Standard Error
		Before Imputation	After Imputation	
Total household income variables				
Total household gross income	37,671	68	5,930	
Total disposable household income	28,313	66	5,930	
Total disposable household income before social transfers other than old-age and survivor benefits	25,920	197	5,930	
Total disposable household income before social transfers including old-age and survivors' benefits	20,638	398	5,930	
Gross income components at household level				
Income from rental of a property or land	368	5,630	5,930	
Family/child related allowances	728	4,174	5,930	
Social exclusion not elsewhere classified	319	5,427	5,930	
Housing allowances	431	5,268	5,930	
Regular inter-household cash transfer received	85	5,765	5,930	
Interest, dividends, etc.	1,057	3,106	5,930	
Interest repayments on mortgage	1,885	3,731	5,930	
Income received by people aged under 16	16	5,859	5,930	
Regular taxes on wealth	1,032	642	5,930	
Regular inter-household cash transfer paid	184	5,604	5,930	
Tax on income and social contributions	8,142	992	5,930	
Gross income components at personal level				
Employee cash or near cash income	12,167	9,889	11,165	
Non-cash employee income	204	11,165	11,165	
Contributions to individual private pension plans	166	11,025	11,165	
Cash benefits or losses from self-employment	1,607	10,925	11,165	
Value of goods produced for own consumption	0	11,165	11,165	
Pension from individual private plans	148	11,012	11,165	
Unemployment benefits	36	11,151	11,165	
Old-age benefits	2,612	10,264	11,165	
Survivor's benefits	38	11,145	11,165	
Sickness benefits	103	11,105	11,165	
Disability benefits	88	11,073	11,165	
Education-related allowances	38	11,136	11,165	

Table 12: The mean, the number of observations (before and after imputations) and the standard error for the equivalised disposable income 2005 (weighted R3, R4)

Equivalised disposable income	Mean	Number of observations		Standard error	S.E./Mean %
		Before Imputation	After imputation		
<i>By household size</i>					
1 household member	13,194	269	937		
2 household members	16,087	942	2,480		
3 household members	17,105	750	1,602		
4 and more household members	15,082	1,495	3,062		
<i>By age groups</i>					
< 25	14,355	1,033	2,344		
25 - 34	17,028	405	999		
35 - 44	17,318	501	1,180		
45 - 54	18,153	501	1,095		
55 - 64	16,593	462	1,068		
65 +	11,916	554	1,395		
<i>By sex</i>					
Male	16,038	1,650	3,873		
Female	15,080	1,806	4,208		
Total					

Source: EU-SILC longitudinal sample 2005-8

Table 13: The mean, the number of observations (before and after imputations) and the standard error for the equivalised disposable income 2006 (weighted R3, R4 & R5)

Equivalised disposable income	Mean	Number of observations		Standard error	S.E./Mean %
		Before Imputation	After imputation		
<i>By household size</i>					
1 household member	13,817	458	1,592		
2 household members	17,223	1,378	4,160		
3 household members	16,406	1,139	2,621		
4 and more household members	14,407	2,346	5,181		
<i>By age groups</i>					
< 25	13,825	1,597	3,891		
25 - 34	17,492	550	1,542		
35 - 44	17,329	773	1,966		
45 - 54	18,075	782	1,846		
55 - 64	16,906	732	1,867		
65 +	12,210	887	2,442		
<i>By sex</i>					
Male	16,113	2,519	6,471		
Female	15,000	2,802	7,083		

Source: EU-SILC longitudinal sample 2005-8

Table 14: The mean, the number of observations (before and after imputations) and the standard error for the equivalised disposable income 2007 (weighted R3, R4 & R5)

Equivalised disposable income	Mean	Number of observations		Standard error	S.E./Mean %
		Before Imputation	After imputation		
<i>By household size</i>					
1 household member	14,631	679	2,028		
2 household members	18,253	1,836	5,328		
3 household members	17,452	1,464	3,321		
4 and more household members	16,110	2,897	6,740		
<i>By age groups</i>					
< 25	15,380	2,033	4,984		
25 - 34	19,177	575	1,750		
35 - 44	18,484	952	2,591		
45 - 54	18,436	1,022	2,399		
55 - 64	18,290	1,000	2,416		
65 +	13,457	1,294	3,277		
<i>By sex</i>					
Male	17,261	3,293	8,406		
Female	16,353	3,583	9,011		

Source: EU-SILC longitudinal sample 2005-8

Table 15: The mean, the number of observations (before and after imputations) and the standard error for the equivalised disposable income 2008 (weighted R3, R4 & R5)

Equivalised disposable income	Mean	Number of observations		Standard error	S.E./Mean %
		Before Imputation	After imputation		
<i>By household size</i>					
1 household member	15,150	340	1,535		
2 household members	19,042	1,214	4,164		
3 household members	18,537	815	2,429		
4 and more household members	16,339	2,027	5,180		
<i>By age groups</i>					
< 25	15,896	1,240	3,676		
25 - 34	19,235	274	1,171		
35 - 44	19,608	631	1,907		
45 - 54	19,605	710	1,844		
55 - 64	18,454	700	1,979		
65 +	14,050	841	2,731		
<i>By sex</i>					
Male	17,882	2,082	6,399		
Female	16,914	2,314	6,909		

Source: EU-SILC longitudinal sample 2005-8

Table 16: The mean, the number of observations (before and after imputations) and the standard error for the equivalised disposable income for the cross-sectional component of 2008 (weighted)

Equivalised disposable income	Mean	Number of observations		Standard error	S.E./Mean %
		Before Imputation	After imputation		
<i>By household size</i>					
1 household member	15,384	628	2,482		
2 household members	19,194	2,338	6,672		
3 household members	19,021	1,776	4,053		
4 and more household members	17,828	3,568	7,836		
<i>By age groups</i>					
< 25	16,608	2,552	6,044		
25 - 34	20,129	835	2,166		
35 - 44	20,060	1,155	2,999		
45 - 54	20,489	1,225	2,875		
55 - 64	19,100	1,147	2,979		
65 +	13,802	1,396	3,980		
<i>By sex</i>					
Male	18,700	4,060	10,202		
Female	17,598	4,250	10,841		

Source: EU-SILC cross-sectional sample 2008

2.3 Non-sampling errors

Survey results are subject to various sources of error. The total error in a survey estimate is the difference between the estimate derived from the sample data collected and the true value for the population.

2.3.1 Sampling frame and coverage errors

The target population of EU-SILC UK is all private households and their current members at the time of data collection. Persons living in collective households and in institutions are excluded from the target population.

The sampling frame for the first wave is the Small Users file of the Postcode Address File (PAF). This is an up to date list of all addresses maintained by the UK Post Office. For the GLF (and therefore EU-SILC) all Scottish offshore islands and the Isles of Scilly are excluded from the frame because of excessive interview travel costs. The impact of such coverage error on UK EU-SILC is minimal.

2.3.2 Measurement and processing errors

2.3.2.1 Measurement errors

Substantial efforts have been made to avoid measurement errors, for example, through extensive interviewer training and thorough questionnaire testing. With regards interviewer training, face-to-face and telephone interviewers who work on EU-SILC UK are recruited only after careful selection procedures after which they take part in an initial training course. Before working on EU-SILC they attend a briefing and new recruits are always supervised either by being accompanied in the field by a Field Manager or monitored by a Telephone Interviewing Unit supervisor (TIUs). All interviewers who continue to work on EU-SILC are observed regularly in their work.

2.3.2.2 Processing errors

Data collection is carried out by face-to-face interviewers using Computer Assisted Personal Interviewing (CAPI) on laptop computers. Blaise software (developed by Statistics Netherlands) is used, which is an integrated system for survey processing. The use of Blaise enables a reduction in processing-errors as data can be “checked” as it is entered by interviewers. For example, income data are “checked” at the point of collection to make sure that Net values are not greater than Gross values for an individual. Data are also rotated forward from the previous wave for certain questions, including qualifications and family information. This allows the interviewer to query and correct any inconsistencies between waves.

Data are converted from Blaise to SPSS and are edited using this software. At this stage there is further checking for the consistency and plausibility of data. For example, comparisons are made with the income data recorded at the previous wave to check for consistency.

2.3.3 Non-response errors

There are two main types of non-response errors - unit non-response and item non-response.

In strictly controlled circumstances, interviewers are allowed to conduct a proxy interview with a close household member to reduce unit non-response errors. Proxy interviews are only used where it has proved impossible, despite repeated calls, to contact a particular member of a household in person. In these cases, some questions are omitted, for example those which are more subjective such as those relating to health.

Further effort is directed towards reducing item non-response by converting these proxy interviews to full interviews. Attempts are made to contact the household member, who was unavailable during the initial face-to-face interview, and ask them the questions that were omitted from the proxy interview. It was established through extensive research that the most efficient way of re-contacting these respondents was by employing Telephone Unit (TIU) interviewers who could contact a widely dispersed population more efficiently than would be possible by conducting face-to-face interviews.

A problem specific to the UK concerns missing income data for some respondents. In the 2005 and 2006 surveys and for the first 3 months of the 2007 survey, respondents were allowed to refuse to answer all income questions. As such, information for these respondents is missing (approximately 60 individuals in 2007). In addition, proxy respondents are not asked any income questions, apart from one question relating to ‘total personal disposable income’ (this has also been rectified, since November 2007 proxy respondents have been asked to provide full-income information).

As a consequence of this, for the survey years 2005, 2006 & 2007 there are a relatively large number of individuals for whom income information has been wholly imputed. In the cross-sectional 2005 dataset, income information was wholly imputed for 11% of individual respondents, and in 2006 the corresponding rate was 13%.

2.3.3.1 Achieved sample size

Table 17: Sample size and accepted interviews by year and rotational group

		2005	2006	2007	2008	Total
Accepted household interviews	R4	3,398	2,543	2,026	1,740	9,707
	R1	-	3,274	2,319	1,874	7,467
	R2	-	-	3,206	2,316	5,522
<i>Personal interview accepted</i>						
Number of persons aged 16 and above	R4	6,376	4,806	3,816	3,264	18,262
	R1	-	6,084	4,337	3,519	13,940
	R2	-	-	-	4,382	4,382
Sample persons	R4	6,376	4,629	3,588	2,996	17,589
	R1	-	6,084	4,246	3,356	13,686
	R2	-	-	-	4,264	4,264
Co-residents	R4	-	177	228	268	673
	R1	-	-	91	163	254
	R2	-	-	-	118	118

2.3.3.2 Unit non-response

Table 18: Indicators on unit non-response by rotational group (2005)

	R4	Total
Addresses successfully contacted	3,398	3,398
Valid addresses selected	3,398	3,398
Ra - address contact rate	100.0%	100.0%
Household interviews completed	3,398	3,398
Eligible households	3,398	3,398
Rh - proportion of completed interviews	100.0%	100.0%
NRh - household non-response rate	0.0%	0.0%
Person interviews completed	6,376	6,376
Number of eligible individuals	6,376	6,376
Rp - proportion of completed interviews	100.0%	100.0%
*NRp – overall individual non-response rates $= (1 - (Ra * Rh * Rp)) / 10000$	100.0%	100.0%

Table 19: Household response rates - Comparison of results codes between wave 2 2006 and wave 1 2005 (R4)

Sample outcome in wave 1 - 2005		Sample outcome in wave 2 - 2006											Total
		DB130=11		DB120=22	DB130=22	DB130=23	DB130=24	DB130=21	DB120=21	NC	DB110=10	DB120=23	
		DB135 = 1	DB135 = 2										
DB130=11	DB135 = 1	2,499	0	0	0	27	134	456	1	0	0	0	3,117
	DB135 = 2	0	0	0	0	0	0	0	0	0	0	0	0
	Total	2,499	0	0	0	27	134	456	1	0	0	0	3,117
New household in wave 2 -2006													
2006	DB110=8	43	0	0	0	0	2	4	9	NA	NA	0	58
	DB110=9	0	0	0	0	0	0	0	0	NA	NA	0	0
Total		5,041	0	0	0	54	270	916	11	0	0	0	6,292
		A	B	C	D	E	F	G	H	I	J	K	T

Wave response rate = **0.801**
 Refusal rate = **0.146**
 No-contacted and others = **0.045**
 Longitudinal follow-up rate = **0.853**
 Follow-up ratio = **0.868**
 Achieved sample size ratio = 0.850

Table 20: Household response rates - Comparison of results codes between wave 3 2007 and wave 2 2006 (R4)

Sample outcome in wave 2 - 2006		Sample outcome in wave 3 - 2007											Total
		DB130=11		DB120=22	DB130=22	DB130=23	DB130=24	DB130=21	DB120=21	NC	DB110=10	DB120=23	
		DB135 = 1	DB135 = 2										
DB130=11	DB135 = 1	1,995	0	0	0	38	6	334	1	13	1	0	2,388
	DB135 = 2	0	0	0	0	0	0	0	0	0	0	0	0
	Total	1,995	0	0	0	38	6	334	1	13	1	0	2,388
DB120 = 22	NH	0	0	0	0	0	0	0	0	0	0	0	0
DB130=22	NH	0	0	0	0	0	0	0	0	0	0	0	0
DB130=23	NH	0	0	0	0	27	0	0	0	0	0	0	27
DB130=24	NH	0	0	0	0	0	3	1	0	0	0	0	4
New household in wave 3 -2007													
2007	DB110=8	35	0	0	0	3	0	4	0	NA	NA	0	42
	DB110=9	0	0	0	0	0	0	0	0	NA	NA	0	0
	Total	4,025	0	0	0	106	15	673	2	NA	NA	0	4,849

Wave response rate = **0.830**
 Refusal rate = **0.139**
 No-contacted and others = **0.004**
 Longitudinal follow-up rate = **0.843**
 Follow-up ratio = **0.859**
 Achieved sample size ratio = 0.797

Table 21: Household response rates - Comparison of results codes between wave 4 2008 and wave 3 2007 (R4)

Sample outcome in wave 3 - 2007		Sample outcome in wave 4 - 2008											Total
		DB130=11		DB120=22	DB130=22	DB130=23	DB130=24	DB130=21	DB120=21	NC	DB110=10	DB120=23	
		DB135 = 1	DB135 = 2										
DB130=11	DB135 = 1	1,715	0	0	0	21	66	163	0	0	12	0	1,977
	DB135 = 2	0	0	0	0	0	0	0	0	0	0	0	0
	Total	1,715	0	0	0	21	66	163	0	0	12	0	1,977
DB120 = 22	NH	0	0	0	0	0	0	0	0	0	0	0	0
DB130=22	NH	0	0	0	0	0	0	0	0	0	0	0	0
DB130=23	NH	0	0	0	0	0	0	0	0	0	0	0	0
DB130=24	NH	0	0	0	0	0	0	0	0	0	0	0	0
New household in wave 4 -2008													
2008	DB110=8	0	0	0	0	0	0	0	0	NA	NA	0	0
	DB110=9	0	0	0	0	0	0	0	0	NA	NA	0	0
Total		3,430	0	0	0	42	132	326	0	NA	NA	0	3,954

Wave response rate = **0.867**
 Refusal rate = **0.082**
 No-contacted and others = **0.033**
 Longitudinal follow-up rate = **0.911**
 Follow-up ratio = **0.911**
 Achieved sample size ratio = 0.846

Table 22: Person Interview outcome in wave 2 (R4)

2006

		RB250=11,12,13	RB250=21	RB250=22	RB250=23	RB250=31	RB250=32	RB250=33	HHinc1 DB110=3-6	HHinc2 DB110=7	Pn RB110=6 or RB120=2,3	P1 RB110=4 or -1	Total
Sample persons from previous wave													
Row													
1	RB110=1-2	4,567	0	0	0	0	0	0					4,661
2	RB110=6												10
3	RB110=-1												0
4	RB120=2												0
5	RB120=3												1
6	RB120=4												117
7	DB135=2,-1 or DB110=7 or DB120=21-23,-1 or DB130=21-24,-1												117
8	DB110=3-6												0
New sample persons													
9	Reached age 16	58	0	0	0	0	0	0	0	0	0	0	58
10	Sample additions	0	0	0	0	0	0	0					0
Non-sample persons 16+													
11	From Wave 1 -2005	0	0	0	0	0	0	0	0	0	0	0	0
	Not from Wave 1- 2005	0	0	0	0	0	0	0	0	0	0	0	0
Sample persons from sample not forwarded from last wave (excluding died or not eligible according to tracing rules)													
13	From 2005												0
Sum of rows:													
	1,3,6,7,9,10	4,625	0	0	0	0	0	0	0	0	0	0	4,625
	1,3,6,7,9,10,13	4,625	0	0	0	0	0	0	0	0	0	0	4,625
	1,3,6,7,9,10,11	4,625	0	0	0	0	0	0	0	0	0	0	4,625

Wave response rate of sample persons =	0.934	Achieved sample size ratio for sample persons =	0.974
Wave response rate of co-residents =	1.000	Achieved sample size ratio for sample persons and co-residents =	0.974
Longitudinal follow-up rate =	0.934	Achieved sample size ratio for co-residents selected the first wave =	-
Rate (RB250=21) =	0.000	Response rate for non-sample persons =	-
Rate (RB250=22) =	0.000		
Rate (RB250=23) =	0.000		
Rate (RB250=31) =	0.000		
Rate (RB250=32) =	0.000		
Rate (RB250=33) =	0.000		

Table 23: Person Interview outcome in wave 3 (R4)

		2007											
		RB250=11,12,13	RB250=21	RB250=22	RB250=23	RB250=31	RB250=32	RB250=33	HHinc1	HHinc2	Pn	P1	Total
Sample persons from previous wave													
Row													
1	RB110=1-2	3,558	0	0	0	0	0	0					3,558
2	RB110=6												19
3	RB110=-1												0
4	RB120=2												4
5	RB120=3												2
6	RB120=4												32
7	DB135=2,-1 or DB110=7 or DB120=21-23,-1 or DB130=21-24,-1												0
8	DB110=3-6												0
New sample persons													
9	Reached age 16	30	0	0	0	0	0	0	0	0	0	0	30
10	Sample additions	0	0	0	0	0	0	0					0

Non-sample persons 16+

11	From Wave 1 -2005	177	0	0	0	0	0	0	0	0	0	0	177
	Not from Wave 1- 2005	196	0	0	0	0	0	0	0	0	0	0	196

Sample persons from sample not forwarded from last wave (excluding died or not eligible according to tracing rules)

13	From 2006												0
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Sum of rows:

1,3,6,7,9,10	3,588	0	0	0	0	0	0	0	0	0	0	0	3,620
1,3,6,7,9,10,13	3,588	0	0	0	0	0	0	0	0	0	0	0	3,620
1,3,6,7,9,10,11	3,765	0	0	0	0	0	0	0	0	0	0	0	3,797

Wave response rate of sample persons =	0.991	Achieved sample size ratio for sample persons =	0.980
Wave response rate of co-residents =	1.000	Achieved sample size ratio for sample persons and co-residents =	0.982
Longitudinal follow-up rate =	0.991	Achieved sample size ratio for co-residents selected the first wave =	1.593
Rate (RB250=21) =	0.000	Response rate for non-sample persons =	1.000
Rate (RB250=22) =	0.000		
Rate (RB250=23) =	0.000		
Rate (RB250=31) =	0.000		
Rate (RB250=32) =	0.000		
Rate (RB250=33) =	0.000		

Table 24: Person Interview outcome in wave 4 (R4)

		2007											
		RB250=11,12,13	RB250=21	RB250=22	RB250=23	RB250=31	RB250=32	RB250=33	HHinc1	HHinc2	Pn	P1	Total
Sample persons from previous wave													
Row													
1	RB110=1-2	2,996	0	0	0	0	0	0					2,996
2	RB110=6												10
3	RB110=-1												0

4	RB120=2												11
5	RB120=3												4
6	RB120=4												42
7	DB135=2,-1 or DB110=7 or DB120=21-23,-1 or DB130=21-24,-1												0
8	DB110=3-6												0

New sample persons

9	Reached age 16	0	0	0	0	0	0	0	0	0	0	0	0
10	Sample additions	0	0	0	0	0	0	0	0	0	0	0	0

Non-sample persons 16+

11	From Wave 1 -2005	228	0	0	0	0	0	0	0	0	0	0	228
	Not from Wave 1- 2005	63	0	0	0	0	0	0	0	0	0	0	63

Sample persons from sample not forwarded from last wave (excluding died or not eligible according to tracing rules)

13	From 2006												0
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Sum of rows:

1,3,6,7,9,10	2,996	0	0	0	0	0	0	0	0	0	0	0	3,038
1,3,6,7,9,10,13	2,996	0	0	0	0	0	0	0	0	0	0	0	3,038
1,3,6,7,9,10,11	3,224	0	0	0	0	0	0	0	0	0	0	0	3,266

Wave response rate of sample persons = 0.986
Wave response rate of co-residents = n/a
Longitudinal follow-up rate = 0.986
Rate (RB250=21) = 0.000
Rate (RB250=22) = 0.000
Rate (RB250=23) = 0.000
Rate (RB250=31) = 0.000
Rate (RB250=32) = 0.000
Rate (RB250=33) = 0.000

Achieved sample size ratio for sample persons = 0.972
Achieved sample size ratio for sample persons and co-residents = 0.978
Achieved sample size ratio for co-residents selected the first wave = 0.276

1.000

2.3.3.3 Distribution of households

Table 25: Distribution of households by DB110

		Total	1	2	3	4	5	7	8	9	10	11
2005		3,398	0	0	0	0	0	0	0	3,398	0	0
	%	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0
2006		6,731	3,072	49	0	0	0	0	58	3,271	0	281
	%	100.0	45.6	0.7	0.0	0.0	0.0	0.0	0.9	48.6	0.0	4.2
2007		11,557	5,239	138	1	13	5	0	141	5,462	1	557
	%	100.0	45.3	1.2	0.0	0.1	0.0	0.0	1.2	47.3	0.0	4.8
2008		7,626	6,988	169	4	13	22	0	75	0	0	355
	%	100.0	91.6	2.2	0.1	0.2	0.3	0.0	1.0	0.0	0.0	4.7

Table 26: Distribution of households by DB120

		Total	11	21	22	23
2005		3,398	0	0	0	0
	%	100.0	0.0	0.0	0.0	0.0
2006		3,378	3,368	10	0	0
	%	100.0	99.7	0.3	0.0	0.0
2007		5,702	4,807	31	10	854
	%	100.0	84.3	0.5	0.2	15.0
2008		244	244	0	0	0
	%	100.0	0.0	0.0	0.0	0.0

Table 27: Distribution of households by DB130

		Total	11	21	22	23
2005		3,398	0	0	0	0
	%	100.0	0.0	0.0	0.0	0.0
2006		6,440	5,817	460	27	136
	%	100.0	86.4	6.8	0.4	2.0
2007		10,046	7,551	1,896	279	320
	%	100.0	65.3	16.4	2.4	2.8
2008		7,232	5,930	934	132	236
	%	100.0	77.8	12.2	1.7	3.1

Table 28: Distribution of households by DB135

		Total	1	2
2005		3,398	3,398	0
	%	100.0	100.0	0.0
2006		5,817	5,817	0
	%	100.0	100.0	0.0
2007		7,551	7,551	0
	%	100.0	100.0	0.0
2008		5,930	5,930	0
	%	100.0	100.0	0.0

2.3.3.4 Distribution of persons

Table 29: Distribution of persons by membership status RB110

		Total	Current household members				Not current household members	
			1	2	3	4	5	6
2005		8,081	8,081	0	0	0	0	0
	%	100.0	100.0	0.0	0.0	0.0	0.0	0.0
2006		13,943	13,430	50	205	59	189	10
	%	100.0	96.3	0.4	1.5	0.4	1.4	0.1
2007		18,165	17,461	63	229	111	271	30
	%	100.0	96.1	0.3	1.3	0.6	1.5	0.2
2008		14,376	13,396	88	307	139	397	49
	%	100.0	93.2	0.6	2.1	1.0	2.8	0.3

2.3.3.5 Item non-response

All income variables provided for EU-SILC 2008 (UK) have been fully imputed.

Table 30: Item non-response at household and personal level 2005

		Longitudinal sample 2005-2008: 2005 part							
		Households having received an amount		Full information		Partial information		Missing information	
		Total	%	Total	%	Total	%	Total	%
Total income component									
HY010	Total gross household income	3,387	99.7	1,928	56.9	1,337	39.5	122	3.6
HY020	Total disposable household income	3,391	99.8	2,065	60.9	1,294	38.2	32	0.9
HY022	Total disposable household income before social transfers other than old-age and survivors benefits	3,300	97.1	2,132	64.6	1,110	33.6	58	1.8
HY023	Total disposable household income before social transfers including old-age and survivors benefits	3,179	93.6	2,212	69.6	857	27	110	3.5
Gross income components at household level									
HY040	Income from rental of property or land	165	4.9	129	78.2	2	1.2	34	20.6
HY050	Family related allowance	1,105	32.5	939	85.0	77	7.0	89	8.1
HY060	Social exclusion not elsewhere classified	429	12.6	319	74.4	28	6.5	82	19.1
HY070	Housing allowance	438	12.9	380	86.8	3	0.7	55	12.6
HY080	Regular inter	131	3.9	115	87.8	1	0.8	15	11.5

	household cash transfer received								
HY090	Interest, dividends etc	1,607	47.3	1,028	64	120	7.5	459	28.6
HY100	Interest repayments on mortgage	1,302	38.3	1,302	100.0	0	0.0	0	0.0
HY110	Income received by people aged under 16	40	1.2	40	100.0	0	0.0	0	0.0
HY120	Regular taxes on wealth	3,053	89.8	2,797	91.6	0	0.0	256	8.4
HY130	Regular inter household cash transfer paid	149	4.4	127	85.2	0	0.0	22	14.8
HY140	Tax on income and social contributions	2,837	83.5	1,873	66	654	23.1	310	10.9
Gross income components at personal level									
PY010	Employee cash or near cash income	3,324	52.1	2,557	76.9	209	6.3	558	16.8
PY020	Non-Cash employee income	324	5.1	276	85.2	37	11.4	11	3.4
PY035	Contribution to individual private pension plans	437	6.9	437	100.0	0	0.0	0	0.0
PY050	Cash benefits or losses from self-employment	499	7.8	381	76.4	3	0.6	115	23.0
PY070	Value of goods produced by own-consumption	-	-	-	-	-	-	-	-
PY080	Pension from individual private plans	189	3.0	107	56.6	0	0.0	82	43.4
PY090	Unemployment benefits	73	1.1	54	74.0	0	0.0	19	26.0
PY100	Old-age benefits	1,840	28.9	1,308	71.1	379	20.6	153	8.3
PY110	Survivor benefits	39	0.6	23	59.0	10	25.6	6	15.4
PY120	Sickness benefits	216	3.4	162	75.0	1	0.5	53	24.5
PY130	Disability benefits	225	3.5	155	68.9	20	8.9	50	22.2
PY140	Education-related allowances	51	0.8	38	74.5	0	0.0	13	25.5

Table 31: Item non-response at household and personal level 2006

		Longitudinal sample 2005-2008: 2006 part							
		Households having received an amount		Full information		Partial information		Missing information	
		Total	%	Total	%	Total	%	Total	%
Total income component									
HY010	Total gross household income	5,794	99.6	3,463	59.8	2,148	37.1	183	3.2
HY020	Total disposable household income	5,808	99.8	3,654	62.9	2,100	36.2	54	0.9
HY022	Total disposable household income before social transfers other than old-age and survivors benefits	5,638	96.9	3,706	65.7	1,832	32.5	100	1.8
HY023	Total disposable	5,434	93.4	3,780	69.6	1,460	26.9	194	3.6

	household income before social transfers including old-age and survivors benefits								
Gross income components at household level									
HY040	Income from rental of property or land	238	4.1	185	77.7	10	4.2	43	18.1
HY050	Family related allowance	1,715	29.5	1,536	89.6	140	8.2	39	2.3
HY060	Social exclusion not elsewhere classified	624	10.7	496	79.5	56	9.0	72	11.5
HY070	Housing allowance	707	12.2	656	92.8	0	0.0	51	7.2
HY080	Regular inter household cash transfer received	160	2.8	151	94.4	0	0.0	9	5.6
HY090	Interest, dividends etc	2,819	48.5	1,855	65.8	212	7.5	752	26.7
HY100	Interest repayments on mortgage	2,201	37.8	2,201	100.0	0	0.0	0	0.0
HY110	Income received by people aged under 16	59	1.0	59	100.0	0	0.0	0	0.0
HY120	Regular taxes on wealth	5,160	88.7	4,813	93.3	1	0.0	346	6.7
HY130	Regular inter household cash transfer paid	226	3.9	212	93.8	0	0.0	14	6.2
HY140	Tax on income and social contributions	4,879	83.9	3,242	66.4	1,183	24.2	454	9.3
Gross income components at personal level									
PY010	Employee cash or near cash income	5,605	51.5	4,269	76.2	301	5.4	1,035	18.5
PY020	Non-Cash employee income	467	4.3	467	100.0	0	0.0	0	0.0
PY035	Contribution to individual private pension plans	987	9.1	987	100.0	0	0.0	0	0.0
PY050	Cash benefits or losses from self-employment	799	7.3	627	78.5	3	0.4	169	21.2
PY070	Value of goods produced by own-consumption	-	-	-	-	-	-	-	-
PY080	Pension from individual private plans	352	3.2	238	67.6	0	0.0	114	32.4
PY090	Unemployment benefits	142	1.3	118	83.1	0	0.0	24	16.9
PY100	Old-age benefits	3,242	29.8	2,290	70.6	710	21.9	242	7.5
PY110	Survivor benefits	65	0.6	39	60.0	5	7.7	21	32.3
PY120	Sickness benefits	368	3.4	273	74.2	0	0.0	95	25.8
PY130	Disability benefits	347	3.2	267	76.9	17	4.9	63	18.2
PY140	Education-related allowances	100	0.9	90	90.0	0	0.0	10	10.0

Table 32: Item non-response at household and personal level 2007

		Longitudinal sample 2005-2008: 2007 part							
		Households having received an amount		Full information		Partial information		Missing information	
		Total	%	Total	%	Total	%	Total	%
Total income component									
HY010	Total gross household income	7,517	99.5	4,555	60.6	2,805	37.3	157	2.1
HY020	Total disposable household income	7,509	99.4	4,589	61.1	2,863	38.1	57	0.8
HY022	Total disposable household income before social transfers other than old-age and survivors benefits	7,360	97.5	4,804	65.3	4,239	33.1	117	1.6
HY023	Total disposable household income before social transfers including old-age and survivors benefits	7,216	95.6	5,109	70.8	1,834	25.4	273	3.8
Gross income components at household level									
HY040	Income from rental of property or land	355	4.7	290	81.7	6	1.7	59	16.6
HY050	Family related allowance	2,347	31.1	1,988	84.7	251	10.7	108	4.6
HY060	Social exclusion not elsewhere classified	730	9.7	557	76.3	93	12.7	80	11.0
HY070	Housing allowance	939	12.4	796	84.8	0	0.0	143	15.2
HY080	Regular inter household cash transfer received	223	3.0	204	91.5	0	0.0	19	8.5
HY090	Interest, dividends etc	3,882	51.4	2,781	71.6	273	7.0	828	21.3
HY100	Interest repayments on mortgage	2,895	38.3	2,895	100.0	0	0.0	0	0.0
HY110	Income received by people aged under 16	82	1.1	80	97.6	0	0.0	2	2.4
HY120	Regular taxes on wealth	7,001	92.7	6,613	94.5	0	0.0	388	5.5
HY130	Regular inter household cash transfer paid	348	4.6	318	91.4	1	0.3	29	8.3
HY140	Tax on income and social contributions	6,442	85.3	4,411	68.5	1,516	23.5	515	8.0
Gross income components at personal level									
PY010	Employee cash or near cash income	7,365	51.8	5,867	79.7	432	5.9	1,066	14.5
PY020	Non-Cash employee income	568	4.0	510	89.8	45	7.9	13	2.3
PY035	Contribution to individual private pension plans	1,487	10.5	1,450	97.5	0	0.0	37	2.5
PY050	Cash benefits or losses from self-employment	1,047	7.4	805	76.9	2	0.2	240	22.9
PY070	Value of goods	-	-	-	-	-	-	-	-

	produced by own-consumption								
PY080	Pension from individual private plans	531	3.7	253	66.5	0	0.0	178	33.5
PY090	Unemployment benefits	164	1.2	134	81.7	0	0.0	30	18.3
PY100	Old-age benefits	4,545	32.0	3,379	74.3	951	20.9	215	4.7
PY110	Survivor benefits	93	0.7	77	82.8	6	6.5	10	10.8
PY120	Sickness benefits	441	3.1	343	77.8	0	0.0	98	22.2
PY130	Disability benefits	490	3.4	352	71.8	33	6.7	105	21.4
PY140	Education-related allowances	140	1.0	114	81.4	0	0.0	26	18.6

Table 33: Item non-response at household and personal level 2008

		Longitudinal sample 2005-2008: 2008 part							
		Households having received an amount		Full information		Partial information		Missing information	
		Total	%	Total	%	Total	%	Total	%
Total income component									
HY010	Total gross household income	5924	99.9	3651	61.6	2203	37.2	70	1.2
HY020	Total disposable household income	5,928	100.0	3,919	66.1	1,988	33.5	21	0.4
HY022	Total disposable household income before social transfers other than old-age and survivors benefits	5,837	98.4	3,941	67.5	1,802	30.9	94	1.6
HY023	Total disposable household income before social transfers including old-age and survivors benefits	5,680	95.8	4,093	72.1	1,378	24.3	209	3.7
Gross income components at household level									
HY040	Income from rental of property or land	287	4.8	210	73.2	26	9.1	51	17.8
HY050	Family related allowance	1,792	30.2	1,622	90.5	131	7.3	39	2.2
HY060	Social exclusion not elsewhere classified	513	8.7	406	79.1	59	11.5	48	9.4
HY070	Housing allowance	676	11.4	662	97.9	0	0.0	14	2.1
HY080	Regular inter household cash transfer received	167	2.8	155	92.8	1	0.6	11	6.6
HY090	Interest, dividends etc	2,855	48.1	2,059	72.1	200	7.0	596	20.9
HY100	Interest repayments on mortgage	2,245	37.9	46	2.0	2,199	98.0	0	0.0
HY110	Income received by people aged under 16	0	0.0	0	0.0	0	0.0	0	0.0
HY120	Regular taxes on wealth	5,516	93.0	5,164	93.6	0	0.0	352	6.4
HY130	Regular inter household cash	326	5.5	0	0.0	326	100	0	0.0

	transfer paid								
HY140	Tax on income and social contributions	4,989	84.1	3,240	64.9	1,427	28.6	322	6.5
Gross income components at personal level									
PY010	Employee cash or near cash income	1,276	11.4	0	0.0	382	29.9	894	70.1
PY020	Non-Cash employee income	428	3.8	428	100	0	0.0	0	0.0
PY035	Contribution to individual private pension plans	1,230	11.0	1,090	88.6	10	0.8	130	10.6
PY050	Cash benefits or losses from self-employment	240	2.1	0	0.0	32	13.3	208	86.7
PY070	Value of goods produced by own-consumption	-	-	-	-	-	-	-	-
PY080	Pension from individual private plans	550	4.9	397	72.2	0	0.0	153	27.8
PY090	Unemployment benefits	14	0.1	0	0.0	0	0.0	14	100.0
PY100	Old-age benefits	901	8.1	0	0.0	813	90.2	88	9.8
PY110	Survivor benefits	60	0.5	40	66.7	3	5.0	17	28.3
PY120	Sickness benefits	60	0.5	0	0.0	0	0.0	60	100.0
PY130	Disability benefits	92	0.8	0	0.0	16	17.4	76	82.6
PY140	Education-related allowances	29	0.3	0	0.0	0	0.0	29	100.0

2.4 Mode of data collection

Table 34: Distribution of household members by data status – all household members (16+)

		RB250								
		Total	11	12	14	21	23	31	32	33
2005	Number	6,376	6,376	0	0	0	0	0	0	0
	%	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2006	Number	10,890	10,890	0	0	0	0	0	0	0
	%	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2007	Number	14,223	14,223	0	0	0	0	0	0	0
	%	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2008	Number	11,165	11,165	0	0	0	0	0	0	0
	%	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 35: Distribution of household members by data status – sample persons 16+

		RB250								
		Total	11	12	14	21	23	31	32	33
2005	Number	6,376	6,376	0	0	0	0	0	0	0
	%	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2006	Number	10,713	10,713	0	0	0	0	0	0	0

	%	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2007	Number	13,904	13,904	0	0	0	0	0	0	0
	%	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2008	Number	10,616	10,616	0	0	0	0	0	0	0
	%	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 36: Distribution of household members by data status – co-residents (16+)

		RB250								
		Total	11	12	14	21	23	31	32	33
2005	Number	0	0	0	0	0	0	0	0	0
	%	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2006	Number	177	177	0	0	0	0	0	0	0
	%	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2007	Number	319	319	0	0	0	0	0	0	0
	%	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2008	Number	549	549	0	0	0	0	0	0	0
	%	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 37: Distribution of household members by type of interview – all household members (16+)

		RB260					
		Total	1	2	3	4	5
2005	Number	6,375	0	5,682	0	0	693
	%	100.0	0.0	89.1	0.0	0.0	10.9
2006	Number	10,646	0	9,531	0	0	1,115
	%	100.0	0.0	89.5	0.0	0.0	10.5
2007	Number	13,859	0	12,510	0	0	1,349
	%	100.0	0.0	90.3	0.0	0.0	9.7
2008	Number	10,977	0	9,909	0	0	1,068
	%	100.0	0.0	90.3	0.0	0.0	9.7

Table 38: Distribution of household members by type of interview – sample persons (16+)

		RB260					
		Total	1	2	3	4	5
2005	Number	6,375	0	5,682	0	0	693
	%	100.0	0.0	89.1	0.0	0.0	10.9
2006	Number	10,470	0	9,405	0	0	1,065
	%	100.0	0.0	89.8	0.0	0.0	10.2
2007	Number	13,578	0	12,297	0	0	1,281
	%	100.0	0.0	90.6	0.0	0.0	9.4
2008	Number	10,499	0	9,570	0	0	929
	%	100.0	0.0	91.2	0.0	0.0	8.8

Table 39: Distribution of household members by type of interview – co-residents (16+)

		RB260					
		Total	1	2	3	4	5
2005	Number	0	0	0	0	0	0
	%	100.0	0.0	0.0	0.0	0.0	0.0
2006	Number	176	0	126	0	0	50
	%	100.0	0.0	71.6	0.0	0.0	28.4
2007	Number	281	0	213	0	0	68
	%	100.0	0.0	75.8	0.0	0.0	24.2
2008	Number	478	0	339	0	0	139
	%	100.0	0.0	70.9	0.0	0.0	29.1

2.5 Imputation procedure

The strategy used to impute UK EU-SILC was consistent with the options proposed in the following Eurostat task-force documents associated with donor-based imputation methodology:

EU-SILC 74/02
EU-SILC 136/04
EU-SILC 154/05

The UK EUSILC Imputation Strategy was developed with the primary aims of imputing for all item level missingness, resolving inconsistencies, and preserving both cross-sectional and longitudinal relationships in the responses for the households and persons affected. The strategy was also designed to preserve the maximum amount of observed data.

Meeting the aims of the strategy was not trivial as the cross-sectional and longitudinal correlations were both nested and complex. In any one year, the UK EUSILC dataset contained over 400 routing and income variables: routing variables indicated whether or not the respondent received an amount, whilst the amount itself was specified by one or more consecutive variables. Missing values were present in both the routing and the amounts collected.

- Further complications included:
- legal constraints which make some combinations of the routing variables invalid;
- highly correlated relationships amongst subsets of the variables, for example: earnings before and after taxation followed by an associated time period for which the payment relates;
- panel aspects of the survey that introduced further correlations between years in addition to those within year.

To meet the aims of the imputation strategy the ONS implemented an iterative, two-stage imputation process: Stage 1 focused on the imputation of missing routing; Stage 2 focused on the imputation of missing amounts and time periods.

The imputation process was supported by statistical tools and used standard statistical techniques for panel data, including:

- SAS (Statistical Analysis System) – to facilitate deductive imputation. This was applied to correct for missing values by implementing propositional relationships in the data based on logical rules and legal constraints. For example, using gross values with auxiliary variables to derive missing net values.
- SPSS AnswerTree - to identify key predictors to partition the data into homogeneous classes for subsequent imputation.
- CANCEIS (CANadian Census Edit and Imputation System) - for stochastic imputation. CANCEIS implements a highly efficient nearest neighbour imputation method that preserves the shape of the distribution whilst also estimates and maintains observed relationships and distributional parameters. Stochastic imputation ensures less distortion in the estimates of variance. Asymmetric trimming was also applied as a refinement to exclude outlying values which might have otherwise caused excessive influence. The quality of the final data was validated in two ways: by calculating expected values; and comparing pre and post-imputation distributions.

2.6 Imputed rent

A UK EU-SILC imputed rent variable was supplied for the first time in 2007. Estimates of imputed rent were generated through the use of hedonic regression modelling, incorporating Mill's correction (based on the Heckman method). The explanatory variables used in the regression were region, type of dwelling (flat, semidetached/terraced house, detached house), size (number of rooms), value of dwelling (Council Tax band, except Northern Ireland), thermal comfort (ability to keep home adequately warm) and seniority (Year of contract).

2.7 Company cars

In the UK, company cars are taxed based on their CO₂ emissions. Therefore, UK EU-SILC assigns the benefit of having access to a company car as being equal to the level of tax. However, it is difficult to estimate the level of tax, and therefore the following method is used.

EU-SILC UK asks several questions about company cars. First, the survey establishes whether the household has any company cars. Second, it establishes what the manufacturer's list price for the vehicle was when it was new. If the respondent is unable to provide an answer, they are asked which price band they think the company car sits in. If the respondent gives a band price the answer is translated into a mid-point price. For example, a Mazda saloon with a band price between £10,001 and £13,000 would be given a 'list' price of £11,500. If the list price is unknown, the make, model and engine size are established for each vehicle.

The estimation of the value of using a company car for private purposes (excluding payment of fuel) is done using the following elements:

1. Type of fuel used
2. Data from VCA (Vehicle Certification Agency, UK).
3. Price of the car.

Once the price of the car is known (using one of the methods described above) a factor based on fuel type and emissions of the engine is applied to that list price. However, this is problematic, as EU-SILC UK has no way of identifying what the cylinder capacity (cc) of the car in question is and therefore no real idea about what the car emissions would be. Although data on the make and model of each car is collected, the quality of answers given by respondents is extremely variable, for instance, answers such as 'a red ford' offer little value to a calculation.

Nevertheless cylinder capacity and emissions information is obtained by using data from the VCA. The VCA provide data on approximately 770 car types registered in the UK.

The 770 car types are banded together into three cylinder capacity engine group sizes in an attempt to get an average emission for each band.

Table 40: Average CO₂ emission by Cylinder Capacity

Cylinder Capacity	Average CO ₂ emission
Up to 1400	135
1401 to 2000	184
2001 to 4000	241

Once this process is completed an assumption is made that the cylinder capacity of a car is linked to the price of the car.

The data for 2007/08 is shown in Table 41.

Table 41: Band price of a motor vehicle based on CC and average CO₂ emissions

Cylinder Capacity	Average CO ₂ emissions	Car price (£)
Up to 1400cc	135	0 – 11,999
1401 to 2000cc	184	12,000 – 24,999
2001 to 4000cc	241	25,000 – 99,999

Cars that fall into a price band are given the appropriate cylinder capacity and the data in Table 42 are used to apply an appropriate tax rate (the tax rate used by Her Majesties Revenue and Customs to value the benefit for tax purposes).

Table 42: Tax rate based on CO₂ emission rates (per cent)

2007/2008	CO ₂ tax emission rate (percentage rate)
135	15
184	25
241	35

These percentage rates are the factor that is applied to the car price to produce a monetary benefit for each company car in a household.

$$\text{Car benefit} = (\text{car price}) * \text{CO}_2 \text{ tax emission rate}$$

3. Comparability

This section reports on the differences between Eurostat definitions and the definitions the UK applied in EU-SILC 2008. It also reports on the impact of these differences with regards to comparability.

3.1 Basic concepts and definitions

Reference population

No difference to the common definition.

Private household

A household is defined as:

“a single person or a group of people who have the address as their only or main residence and who either share one meal a day or share the living accommodation” (General Household Survey 2005, 2006, 2007 & 2008).

A group of people is not counted as a household solely on the basis of a shared kitchen or bathroom.

The household membership

A person is in general regarded as living at an address if he or she (or the informant) considers the address to be his or her main residence. There are however, certain rules which take precedent over this criterion.

From 2008 students who are living in halls of residence are also included as residents of the household sampled even if they are not *in situ* at the time of the interview. Other children of any age away from the home in a temporary job and children under 16 at boarding school are always included in the parental household.

Children aged 16 or over who live away from home for the purposes of either work or study and come home only for holidays are not included at the parental address under any circumstances.

Anyone who has been away from the address continuously for 6 months or longer is excluded.

Anyone who has been living continuously at the address for 6 months or longer is included even if she has his or her main residence elsewhere.

Addresses used only as second homes are never counted as a main residence.

Income reference period

EU-SILC UK, like all other official income surveys in UK, uses continuous interviewing with interviews spread evenly throughout the year. The survey measures current income. So for example, for income from earnings and benefits, respondents will provide figures which relate most commonly to the last week, two weeks, or month. With earnings in particular, respondents are asked for usual earnings. These figures, which represent current (and usual) incomes are then annualised (weekly estimates multiplied by 52, monthly by 12 etc). Income from self-employment can be reported for a variety of periods, but it is always up-rated (using the UK's average earnings index) to the interview date. For income from investment and employee non-cash income respondents

are most likely provide their most recent annual or half-yearly income that they received from this source. This income would be annualised, although there is no up-rating.

This approach is adopted in the UK because it is much easier for respondents to provide estimates of current income, than income for a specific reference period, say the most recent financial year. In the UK only a relatively small proportion of the adult population fill in tax returns, and the rest of the population probably never actually calculate what their annual income is. For this reason, it would be very difficult to collect an estimate of annual income corresponding to a fixed reference year.

So the estimates of income do not correspond strictly to an income reference year. However we can regard each household's estimate of annualised current income, as corresponding to a 12 month period centred on the interview date. So for a household interviewed in early January 2008, we can regard their income as being measured for the period July 2007 to June 2008, and similarly for a household interviewed in December 2008, the income estimate can be regarded as referring to the period July 2008 to June 2009. Since interviews are spread evenly throughout the year, for any one survey year, the interview reference periods collectively, are centred on the calendar year. And therefore it is reasonable to regard aggregate statistics produced from the full annual datasets, as measuring annual income in the current survey year. So the EU-SILC UK 2008 survey, measures current annual income in 2008.

In the UK, household income statistics, and especially aggregate statistics such as those that are produced from EU-SILC, are generally used and interpreted on the assumption that this distinction between annualised current income, and what might be called a 'true' annual income, is small¹.

The period for taxes on income and social insurance contributions

As above.

The reference period for taxes on wealth

The reference period for taxes on wealth is based on data provided for the financial years April 2007 –March 2008 and April 2008–March 2009. All interviewing for EU-SILC UK took place between January 2008 and 31 February 2009.

The lag between income reference period and current variables

Since the survey measures current income, there is no lag between the income variables and the other variables.

The total duration of the data collection of the sample

EU-SILC UK makes use of continuous interviewing with data collection being evenly spread over complete calendar years. In practice a small number of interviews are not completed until early the following year. In 2008, 99.0% of interviews took place between 1st January 2008 and 31st December 2009, with the remaining interviews completed between 1st January 2009 and 31st January 2009.

Basic information on activity status during the income reference period

Basic information on activity status is collected using a rolling (moving) 12-month period. Therefore, respondents are asked to provide their current activity status and their activity status for the 12-month period preceding this interview.

¹ A Comparison of Current and Annual Measures of Income in the British Household Panel Survey; Journal of Official Statistics, Vol. 22, No. 4, 2006, pp. 733–758

3.2 Components of income

3.2.1 Differences between the national definitions and standard EU-SILC definitions, and an assessment, if available, of the consequences of the differences mentioned

This section describes the major differences between the national definitions and standard EU-SILC definitions. The 'national definition' of household income is taken to be the Before Housing Costs (BHC) measure of income used in the Department for Work and Pensions (DWP) publication Household's Below Average Income (HBAI), the source for national poverty statistics.

Total disposable household gross income (HY010)

Total disposable household income (HY020)

Total disposable household income before social transfers other than old-age and survivor's benefits (HY022)

Total disposable household income before social transfers including old-age and survivor's benefits

Differences between the national definition and the EU-SILC definition of income have been described below, for each of the components of EU-SILC income..

Imputed rent (HY030G/N)

Imputed rent is not included in the national definition of household income. This variable was not provided as part of the 2006 EU-SILC data delivery as it is only mandatory from 2007 onwards.

Income from rental of a property or land (HY040G/N)

No major differences between the national and EU-SILC definition.

Family/children related allowances (HY050G/N)

The national definition of income includes the cash value of free school meals provided to children from disadvantaged homes. This is not included in the EU-SILC definition of income.

Social exclusion not elsewhere classified (HY060G/N)

No major differences between the national and EU-SILC definitions.

Housing allowances (HY070G/N)

No major differences between the national and EU-SILC definitions.

Regular inter-household cash transfer received (HY080G/N)

No major differences between the national and EU-SILC definitions.

Interest, dividends, profit from capital investments in unincorporated business (HY090G/N)

No major differences between national and EU-SILC definitions.

Interest repayments on mortgage (HY100G/N)

Interest repayments on mortgages are not included as deductions within either the national or EU-SILC definitions of income, because neither includes imputed rent.

Income received people aged under 16 (HY110G)

The national definition of income includes income received by people aged under 16, as does the EU-SILC definition of income.

Regular taxes on wealth (HY120G)

No difference between the national and EU-SILC definitions.

Regular inter-household cash transfer paid (HY130G/N)

No major differences between the national and EU-SILC definitions.

Tax on income and social contributions (HY140G)

In the national definition of income, contributions to private pensions are deducted from income. In the EU-SILC definition of income, contributions to private pensions are not deducted, rather they are considered as a use of disposable income.

Repayments/receipts for tax adjustments (HY145N)

This component of income is included in the national definition of income. In EU-SILC, this component is not measured directly. For most components of income, gross and net incomes are collected separately, with taxes computed as the difference between gross and net incomes. Repayments/receipts for tax adjustments are assumed to be captured as part of this difference between gross and net incomes, and hence recorded under HY140G.

Cash or near-cash employee income (PY010G/N)

No major differences between the national and EU-SILC definitions.

Non-cash employee income (PY020G/N)

The national definition does not include non-cash employee income, whereas EU-SILC includes an estimate for company cars (although not any fuel provided by the employer).

Cash profits or losses from self-employment (including royalties) (PY050G/N)

No conceptual differences between the national and EU-SILC definitions.

Value of goods produced for own consumption (PY070G/N)

This component of income is assumed to be zero in the UK in both the national definition, and in UK EU-SILC.

Unemployment benefits (PY090G/N)

No major differences between the national and EU-SILC definitions.

Old-age benefits (PY100G/N)

All benefits included as old-age benefits are also included in the national definition of income. However in the national definition, income from private pensions is included whereas in EU-SILC, income from private pensions is only be included in the definition of income from 2007 onwards. In addition, the national definition also includes the value free television licences provided to those over the age of 75.

Survivors' benefits (PY110G/N)

No major differences between the national and EU-SILC definitions.

Sickness benefits (PY120G/N)

No major differences between the national and EU-SILC definitions.

Disability benefits (PY130G/N)

No major differences between the national and EU-SILC definitions.

Education-related allowances (PY140G/N)

In the national definition of income, student loans are included as income, and student loan repayments are deducted from income. However in EU-SILC, student loans are not treated as income, and loan repayments are not deducted from income.

Gross monthly earnings for employees (PY200G/N)

No major differences between the national and EU-SILC definitions.

3.2.2 The source or procedure for the collection of income variables

All income variables are collected at the point of interview. Respondents are not asked to provide any documentation to support their answers. Increasingly, interviewers are being encouraged to ask respondents whether it is possible to consult their payslip (if they are working). However this is not mandatory.

No information is collected from registers.

3.2.3 The form in which income variables at component level have been obtained

For most income components which are subject to taxation and/or social security contributions, respondents are asked to provide net and gross amounts. The only exception to this is income from interest, dividends, and capital investments, which is collected either gross or net, and for which tax paid is then estimated.

Total income for an individual/household refers to income at the time of the interview. If the last pay packet/cheque was unusual, for example it included holiday pay in advance or a tax refund, the respondent is asked for usual pay. No account is taken of whether a job is temporary or permanent.

3.2.4 The method used for obtaining income target variables in the required form

Gross and net income variables were asked separately, if applicable.

See section 2.6 for more detail.

3.3 Tracing rules

For UK EU-SILC 2006, persons aged 14 and above who could not be contacted in 2005 were not always re-contacted in 2006. Furthermore, information on *former residents* was not collected. A similar process was followed between 2006 and 2007, and 2007 and 2008.

4. Coherence

Coherence refers to the comparison of target variables with external sources. The target variables in EU-SILC UK are a set of compulsory variables, defined by Eurostat.

4.1 Comparison of income target variables and the number of persons who receive income from each 'income component', with external sources

Results from two other survey sources have been used to validate EU-SILC results – the family resources survey, and the expenditure and food survey.

Family Resources Survey

The Family Resources Survey (FRS) collects information on the incomes and circumstances of private households in the United Kingdom (or Great Britain before 2002-03).

The survey is sponsored by the Department for Work and Pensions.

The FRS is used primarily to validate the indicators of poverty and social exclusion. Before the introduction of EU-SILC, the Laeken and Pensions indicators were produced using data from the FRS. Comparisons between EU-SILC and FRS-based indicators continue so that any apparent differences between national poverty estimates and EU-SILC estimates can be explained. This work will be ongoing, and in the first four years of EU-SILC, has served as a useful way of validating the new EU-SILC data, and highlighting any possible problems that there might be with the EU-SILC data.

Expenditure Food Survey

The Living Costs and Food Survey (the UK's HBS), formerly known as the Expenditure and Food Survey, is a comprehensive overview of all aspects of household expenditure and income for the year 2008 derived from a survey of around 7,000 households in the UK. Before 2008 the survey was named the Expenditure and Food Survey. It contains analyses of household expenditure on goods and services by household income, composition, size, type and location. The results are widely seen as providing one of the most accurate pictures available of what households in the UK spend their money on today.

EU-SILC income variables have been compared with the detailed income information collected through the Living Costs and Food Survey particularly that which is published in the ONS report 'The Effects of Taxes and Benefits on Household Income'.

Annex 1: Government Office Region regional stratifier

The Government Office Region regional stratifier:

1. North East Metropolitan
2. North East Non-Metropolitan
3. North West Metropolitan
4. North West Non-Metropolitan
5. Merseyside
6. Yorkshire and Humberside Metropolitan
7. Yorkshire and Humberside Non-Metropolitan
8. East Midlands
9. West Midlands Metropolitan
10. West Midlands Non-Metropolitan
11. Eastern Outer Metropolitan
12. Eastern Other
13. Inner London North-East
14. Inner London North-West
15. Inner London South-East
16. Inner London South-West
17. Outer London North-East
18. Outer London North-West
19. Outer London South-East
20. Outer London South-West
21. South East Outer Metropolitan
22. South East Other
23. South West
24. Wales 1 – Glamorgan, Gwent
25. Wales 2 – Clwydd, Gwynedd, Dyfed, Powys
26. Highlands, Grampian, Tayside
27. Fife, Central, Lothian
28. Glasgow Metropolitan
29. Strathclyde (excluding Glasgow)
30. Borders, Dumfries, Galloway

Annex 2 Socio-economic groups (Operational categories and sub-categories of NS-SEC)

Group	Operational categories and sub-categories
1	Employers in large organisations
2	Higher managerial occupations
3	Higher professional occupations
4	Lower professional and higher technical occupations
5	Lower managerial occupations
6	Higher supervisory occupations
7	Intermediate occupations
8	Employers in small organisations
9	Own account workers
10	Lower supervisory occupations
11	Lower technical occupations
12	Semi-routine occupations
13	Routine occupations
14	Never worked and long-term unemployed
15	Full-time students
16	Occupations not stated or inadequately described
17	Not classifiable for other reasons

The category names used for NS-SEC (National Statistics – Socio-Economic Classification) do not refer to ‘skill’. This is quite deliberate since the classification is not based on skill levels.