

EU-SILC UK 2005

Quality Report

Office for National Statistics

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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 the year $n+1$ (2005+1) an intermediate quality report relating to the common cross-sectional EU indicators based on the cross-sectional component of 2005.

Erratum

During the processing of the 2005 EU-SILC module on social mobility, variables PM070 and PM090 were inadvertently swapped.

The variables should be swapped so that:

PM070 = PM090

PM090 = PM070

The associated flag variables are also in error and should be corrected using the following SPSS code:

Example for PM070:

IF ((PM060<>1 and PM060<>2 and PM060<>3) or SYSMIS(PM060)) PM070_F_new=-2.

IF ((PM060=1 or PM060=2 or PM060=3) and PM070>0) PM070_F_new=1.

IF ((PM060=1 or PM060=2 or PM060=3) and SYSMIS(PM070)) PM070_F_new=-1.

ONS apologises for any inconvenience caused.

1. Common cross-sectional European Union indicators

2005 was the initial year of the EU-SILC UK. As such, in accordance with Eurostat regulation, only cross-sectional indicators have been provided within this report.

Table 1.1 Laeken-Indicators EU-SILC 2005 - Provisional

Indicator	Value	Achieved sample size	Total item non response
At-risk-of-poverty rate after social transfers – total	19	22499	
At-risk-of-poverty rate after social transfers – men total	18	10811	
At-risk-of-poverty rate after social transfers – women total	19	11688	
At-risk-of-poverty rate after social transfers – 0–15 years	23	4731	
At-risk-of-poverty rate after social transfers – 16-24 years	20	1950	
At-risk-of-poverty rate after social transfers – 25-49 years	13	7628	
At-risk-of-poverty rate after social transfers – 50-64 years	16	4242	
At-risk-of-poverty rate after social transfers – 65+ years	27	3948	
At-risk-of-poverty rate after social transfers – 16+ years	18	17768	
At-risk-of-poverty rate after social transfers – 16-64 years	15	13820	
At-risk-of-poverty rate after social transfers – 0-64 years	17	18551	
At-risk-of-poverty rate after social transfers – men 16-24 years	20	922	
At-risk-of-poverty rate after social transfers – men 25-49 years	12	3662	
At-risk-of-poverty rate after social transfers – men 50-64 years	16	2036	
At-risk-of-poverty rate after social transfers – men 65+ years	24	1812	
At-risk-of-poverty rate after social transfers – men 16+ years	17	8432	
At-risk-of-poverty rate after social transfers – men 16-64 years	15	6620	
At-risk-of-poverty rate after social transfers – men 0-64 years	17	8999	
At-risk-of-poverty rate after social transfers – women 16-24 years	20	1028	
At-risk-of-poverty rate after social transfers – women 25-49 years	14	3966	
At-risk-of-poverty rate after social transfers – women 50-64 years	16	2206	
At-risk-of-poverty rate after social transfers – women 65+ years	29	2136	
At-risk-of-poverty rate after social transfers – women 16+ years	19	9336	
At-risk-of-poverty rate after social transfers – women 16-64 years	20	7200	
At-risk-of-poverty rate after social transfers – women 0-64 years	17	9552	
At-risk-of-poverty rate after social transfers – employed	8	9254	
At-risk-of-poverty rate after social transfers – unemployed	53	269	
At-risk-of-poverty rate after social transfers – retired	29	3988	
At-risk-of-poverty rate after social transfers – other inactive	26	892	
At-risk-of-poverty rate after social transfers – men, employed	9	4784	
At-risk-of-poverty rate after social transfers – men, unemployed	54	148	
At-risk-of-poverty rate after social transfers – men, retired	27	1734	
At-risk-of-poverty rate after social transfers – men, other inactive	29	402	
At-risk-of-poverty rate after social transfers – women, employed	8	4470	
At-risk-of-poverty rate after social transfers – women, unemployed	51	121	
At-risk-of-poverty rate after social transfers – women, retired	30	2254	
At-risk-of-poverty rate after social transfers – women, other inactive	24	490	
At-risk-of-poverty rate after social transfers – single, <65 years	22	1629	

At-risk-of-poverty rate after social transfers – single, 65+ years	33	1376	
At-risk-of-poverty rate after social transfers – single, male	24	1311	
At-risk-of-poverty rate after social transfers – single, female	29	1694	
At-risk-of-poverty rate after social transfers – single, total	27	3005	
At-risk-of-poverty rate after social transfers – 2 adults, no children, both <65	11	3826	
At-risk-of-poverty rate after social transfers – 2 adults, no children, at least one 65+	24	2730	
At-risk-of-poverty rate after social transfers – other households without children	10	1530	
At-risk-of-poverty rate after social transfers – single parent, at least one child	38	1697	
At-risk-of-poverty rate after social transfers – 2 adults, 1 child	11	2139	
At-risk-of-poverty rate after social transfers – 2 adults, 2 children	13	3412	
At-risk-of-poverty rate after social transfers – 2 adults, 3+ children	29	1745	
At-risk-of-poverty rate after social transfers – other households with children	13	1335	
At-risk-of-poverty rate after social transfers – households without children	18	11091	
At-risk-of-poverty rate after social transfers – households with children	19	10328	
At-risk-of-poverty rate after social transfers – owner or rent-free	14	16570	
At-risk-of-poverty rate after social transfers – tenant	31	5922	
At-risk-of-poverty rate after social transfers – households without children, $w = 0^1$	38	932	
At-risk-of-poverty rate after social transfers – households without children, $0 < w < 1$	18	1357	
At-risk-of-poverty rate after social transfers – households without children, $w = 1$	5	5181	
At-risk-of-poverty rate after social transfers – households with children, $w = 0$	68	321	
At-risk-of-poverty rate after social transfers – households with children, $0 < w < 0.5$	39	188	
At-risk-of-poverty rate after social transfers – households with children, $w = 1$	12	8077	
Median of the equivalised disposable household income			
At-risk-of-poverty threshold – single	10652 (PPS)		
At-risk-of-poverty threshold – 2 adults, 2 children	22370 (PPS)		
Inequality of income distribution S80/S20 income quintile share ratio	5.6		
Relative median at-risk-of-poverty gap – total	21	4146	
Relative median at-risk-of-poverty gap – men total	23	1944	
Relative median at-risk-of-poverty gap – women total	20	2220	
Relative median at-risk-of-poverty gap – 0-15 years	19	1048	
Relative median at-risk-of-poverty gap – 16-64 years	24	2080	
Relative median at-risk-of-poverty gap – 65+ years	19	1036	
Relative median at-risk-of-poverty gap – 16+ years	22	3116	
Relative median at-risk-of-poverty gap – men, 16-64 years	26	950	
Relative median at-risk-of-poverty gap – men, 65+ years	19	434	
Relative median at-risk-of-poverty gap – men, 16+ years	24	1384	
Relative median at-risk-of-poverty gap – women, 16-64 years	22	1130	
Relative median at-risk-of-poverty gap – women, 65+ years	20	602	

Relative median at-risk-of-poverty gap – women, 16+ years	21	1732	
Median income below the at-risk-of-poverty threshold – total			
Median income below the at-risk-of-poverty threshold – men total			
Median income below the at-risk-of-poverty threshold – women total			
Median income below the at-risk-of-poverty threshold – 0-15 years			
Median income below the at-risk-of-poverty threshold – 16-64 years			
Median income below the at-risk-of-poverty threshold – 65+ years			
Median income below the at-risk-of-poverty threshold – 16+ years			
Median income below the at-risk-of-poverty threshold – men, 16-64 years			
Median income below the at-risk-of-poverty threshold – men, 65+ years			
Median income below the at-risk-of-poverty threshold – men, 16+ years			
Median income below the at-risk-of-poverty threshold – women, 16-64 years			
Median income below the at-risk-of-poverty threshold – women, 65+ years			
Median income below the at-risk-of-poverty threshold – women, 16+ years			
Dispersion around the risk-of-poverty threshold – 40%	6	22499	
Dispersion around the risk-of-poverty threshold – 50%	11	22499	
Dispersion around the risk-of-poverty threshold – 70%	27	22499	
Before social transfers except old-age and survivor's benefits			
At-risk-of-poverty rate before social transfers – total			
At-risk-of-poverty rate before social transfers – men total			
At-risk-of-poverty rate before social transfers – women total			
At-risk-of-poverty rate before social transfers – 0-15 years			
At-risk-of-poverty rate before social transfers – 16-64 years			
At-risk-of-poverty rate before social transfers – 65+ years			
At-risk-of-poverty rate before social transfers – 16+ years			
At-risk-of-poverty rate before social transfers – men, 16-64 years			
At-risk-of-poverty rate before social transfers – men, 65+ years			
At-risk-of-poverty rate before social transfers – men, 16+ years			
At-risk-of-poverty rate before social transfers – women, 16-64 years			
At-risk-of-poverty rate before social transfers – women, 65+ years			
At-risk-of-poverty rate before social transfers – women, 16+ years			
Before social transfers including old-age and survivors' benefits			
At-risk-of-poverty rate before social transfers – total			
At-risk-of-poverty rate before social transfers – men total			
At-risk-of-poverty rate before social transfers – women total			
At-risk-of-poverty rate before social transfers – 0-15 years			
At-risk-of-poverty rate before social transfers – 16-64 years			
At-risk-of-poverty rate before social transfers – 65+ years			
At-risk-of-poverty rate before social transfers – 16+ years			
At-risk-of-poverty rate before social transfers – men, 16-64 years			
At-risk-of-poverty rate before social transfers – men, 65+ years			
At-risk-of-poverty rate before social transfers – men, 16+ years			
At-risk-of-poverty rate before social transfers – women, 16-64 years			
At-risk-of-poverty rate before social transfers – women, 65+ years			

At-risk-of-poverty rate before social transfers – women, 16+ years			
Gini coefficient	34		
Mean equivalised disposable income	21413 (PPS)		
Gender pay gap			

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 2005 is collected from two sources. First, data is collected by the Office of National Statistics (ONS), using the General Household Survey. Second, to ensure that EU-SILC is representative of the UK, a sample of 300 households is collected by NISRA (Northern Ireland Statistics and Research Agency) using the Continuous Household Survey (CHS). This small additional sample represents the (approximately) 2% of the UK population that live in Northern Ireland. All of the data analysis and manipulation is undertaken by ONS.

In 2005, 17004 addresses were sampled. EU-SILC UK aims to interview all adults aged 16 or over at every household at the sampled address. EU-SILC UK uses a probability, stratified two-stage sample design.

2.1.2 Sampling units (one stage, two stages)

Households are sampled from the small users Postcode Address File (PAF). This is an up to date list of all addresses maintained by the UK Post Office. 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 (i.e. the proportion of units sampled from any particular stratum will equal the proportion in the population with that characteristic). Stratification of a sample can lead to substantial improvements in the precision of survey estimates.

Initially, postcode sectors were allocated to 30 major strata. These were based on the 10 Government Office Regions in England, 5 subdivisions in Scotland, 2 in Wales and 1 in Northern Ireland. The English regions were divided between the former Metropolitan and non-Metropolitan counties. In addition London was subdivided into quadrants (Northwest, Northeast, Southwest and Southeast) with each quadrant being

divided into inner and outer areas (annex 1). Using a finer division of London in the regional stratifier has a large effect on the increase in precision.

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, 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 subdivided 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. The sampling frame was divided into 576 minor strata and one PSU selected from each. Of the 576 PSUs selected, 48 were randomly allocated to each month of the year. Each PSU formed a quota of work for an interviewer. Within each PSU, 23 addresses were randomly selected.

2.1.4 Sample size and allocation criteria

Member states have to achieve a Minimum Effective Sample size which for UK is 7,500 households and 13,750 persons aged 16 or older.

In 2005, 17,004 addresses were selected for survey, yielding a sample of 9,820 eligible households.

Within these households 22,460 people were residents of which 16,675 were eligible for a personal interview (aged at least 16 years of age).

Provisionally, we estimate that these numbers correspond to effective sample sizes of 7850 households, and 13,340 adults over the age of 16.

For households the target is exceeded slightly, but for adults the effective sample size fall slightly short of the target.

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.
2. Systematic random sampling of 23 addresses within a PSU.

2.1.6 Sample distribution over time

Information for EU-SILC UK is collected week by week throughout the year by personal interview. In 2005, interviews took place from April 2005 to December 2005

(12-months fieldwork was condensed into 9 months to facilitate the change of the survey period from financial to calendar year).

Table 2.1 Distribution of the EU-SILC UK sample over time

Date of interview	Number of households
01/01/05 – 31/01/05	0
01/02/05 – 28/02/05	0
01/03/05 – 31/03/05	0
01/04/05 – 30/04/05	941
01/05/05 – 31/05/05	1149
01/06/05 – 30/06/05	1106
01/07/05 – 31/07/05	1058
01/08/05 – 31/08/05	1093
01/09/05 – 30/09/05	1167
01/10/05 – 31/10/05	1110
01/11/05 – 30/11/05	1236
01/12/05 – 31/12/05	960
Total	9820

The survey was carried out using Computer Assisted Personal Interviewing (CAPI) on laptop computers by face-to-face interviewers. In addition, some telephone interviewers were used to convert EU-SILC UK proxy interviews to full interviews.

2.1.7 Renewal of sample: rotational groups

2005 was the initial year for the common EU-SILC survey. In 2005, the GHS adopted a new sample design in line with European requirements, changing from a cross-sectional to a longitudinal design.

The new sample design follows a four-yearly sample rotation in which households remain in the sample for four years (waves) and one quarter of the sample is replaced each year. Each quarter of the sample is known as a replication.

Once the system is fully established (from year 4 onwards - 2008) the sample for any one year consists of 4 replications which have been in the survey for 1, 2, 3 or 4 years. As 2005 is the first year of this longitudinal design, this sample does not contain any follow-up interviewers.

Table 2.2 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

2.1.8 Weightings

This section describes the computation of the weights of the UK sample of EU-SILC 2005. The calculations comply in general with the EUROSTAT recommendations on the calculation of weights.

2.1.8.1 Design factor

The design factor, or *deft*, of an estimate p is the ratio of the standard error of p compared to that, that would have resulted had the survey design been a simple random sample of the same size.

The design weight is calculated with reference to the design of the sample to take into account the inclusion probability of the selection unit. Within the UK, direct sampling of addresses is used, but no extra weighting is applied to account for sampling households within addresses. The design weight, is defined as the inverse of the probability of selection. This is derived indirectly by dividing the population size or individuals by the sample size of individuals.

2.1.8.2 Non-response adjustments

All surveys accept that there will be some degree of non-response, although great efforts are made to keep it to a minimum.

The aim of non-response weights is the reduction of bias caused by unit non-response on a household level. The correlation of this bias requires a knowledge of the response probability of each of the responding households. The households can then be re-weighted by the inverse of this probability.

Weighting for unit non-response involves giving each respondent a weight so that they represent the non-respondents who are similar to them in terms of survey characteristics. To be able to use this method, information about non-respondents is needed. By their very nature, however, non-responding households yield very little information.

Within-household non-response inflation factor, which is related to Eurostat’s recommendation in PB040 (i.e. spreading the original weight a non-responder receives across responding members of their household), has not been supplied. However, a household non-response inflation factor has been provided based on household non-response UK Census-linked weights.

The decennial Census was found to be the most appropriate source of information about non-responding addresses on EU-SILC UK. Unlike EU-SILC UK, which relies upon voluntary co-operation from respondents, the Census is mandatory, therefore non-response is kept to an absolute minimum. By matching Census addresses with the sampled addresses of EU-SILC UK it was possible to match the address details of the EU-SILC UK respondents as well as the non-respondents with corresponding information gathered from the Census for the same address. It was then possible to identify any types of household that were being under-represented in the survey.

2.1.8.3 Adjustments to external data (level, variables used and sources)

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 the same as used on the British Labour Force Survey (LFS). The LFS derives household population estimates by excluding residents of institutions initially 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		
16-19	Males	16-19	Females
20-24	Males	20-24	Females
25-29	Males	25-29	Females
30-34	Males	30-34	Females
35-39	Males	35-39	Females
40-44	Males	40-44	Females
45-49	Males	45-49	Females
50-54	Males	50-54	Females
55-59	Males	55-59	Females
60-64	Males	60-64	Females
65-69	Males	65-69	Females
70-74	Males	70-74	Females
75+	Males	75+	Females

Regions

Metropolitan
Non-metropolitan
London
South East
Wales
Scotland
Northern Ireland

This procedure, also known as population based (grossing) weighting, was carried out using GES SAS macro. This method ensures that all individuals within a household are given the same final weights.

2.1.8.4 Final cross-sectional weight

The final cross-sectional weight was obtained after “integrative” calibration. Integrative calibration can use calibration variables defined at the individual and household level (only individual variables were used in this instance).

Eurostat recommend using NUTSII. EU-SILC UK has not used NUTSII, instead, a Region variable used on the British General Household Survey has been utilised. A detailed classification like NUTSII poses the problem of small cells (when there are not enough respondents within a calibration group).

2.1.9 Substitutions

In 2005, no substitutions were made.

2.2 Sampling errors

Sampling errors: refers to the variability that occurs at random because of the use of a sample rather than a census.

2.2.1 Standard errors and effective sample size

Table 2.3 Mean, Total Number of Observations and Standard Errors for Income Components (unweighted).

Income Component	Mean	Number of Observations	Standard Error
Total household income variables			
Total household gross income	30948.34	9003	
Total disposable household income	22787.75	9820	
Total disposable household income before social transfers other than old-age and survivor benefits	20968.52	9003	
Total disposable household income before social transfers including old-age and survivors' benefits	16448.40	9003	
Net income components at household level			

Income from rental of a property or land	220.22	9003	
Family/child related allowances	784.09	9003	
Social exclusion not elsewhere classified	437.70	9003	
Housing allowances	453.81	9820	
Regular inter-household cash transfer received	170.52	9003	
Interest, dividends, etc.	667.86	9003	
Interest repayments on mortgage	Not supplied	Not supplied	Not supplied
Income received by people aged under 16	Not supplied	Not supplied	Not supplied
Regular taxes on wealth	Not supplied	Not supplied	Not supplied
Regular inter-household cash transfer paid	Not supplied	Not supplied	Not supplied
Tax on income and social contributions	Not supplied	Not supplied	Not supplied
Repayments/receipts for tax adjustment	Not supplied	Not supplied	Not supplied
Gross income components at household level			
Income from rental of a property or land	275.62	9003	
Family/child related allowances	653.64	9003	
Social exclusion not elsewhere classified	383.42	9003	
Housing allowances	453.81	9820	
Regular inter-household cash transfer received	170.52	9003	
Interest, dividends, etc.	854.19	9003	
Interest repayments on mortgage	2270.91	9721	
Income received by people aged under 16	10.77	9820	
Regular taxes on wealth	873.33	9820	
Regular inter-household cash transfer paid	133.23	9003	
Tax on income and social contributions	6757.36	9003	
Net income components at personal level			
Employee cash or near cash income	8004.31	16675	
Non-cash employee income	154.55	16675	
Contributions to individual private pension plans	Not supplied	Not supplied	Not supplied
Cash benefits or losses from self-employment	1408.31	16675	
Value of goods produced for own-consumption	0	16675	
Pension from individual private plans	12.63	16675	
Unemployment benefits	37.00	16675	
Old-age benefits	2507.69	16675	
Survivor's benefits	24.50	16675	
Sickness benefits	132.65	16675	
Disability benefits	109.23	16675	
Education-related allowances	39.77	16675	
Gross income components at personal level			
Employee cash or near cash income	11070.61	16675	
Non-cash employee income	213.33	16675	
Contributions to individual private	111.20	16585	

pension plans			
Cash benefits or losses from self-employment	2003.07	16675	
Value of goods produced for own consumption	0	16675	
Pension from individual private plans	15.98	16675	
Unemployment benefits	37.25	16675	
Old-age benefits	2713.23	16675	
Survivor's benefits	26.07	16675	
Sickness benefits	132.65	16675	
Disability benefits	109.22	16675	
Education-related allowances	39.77	16675	
Gross monthly earnings for employees	1554.30	9175	

Table 2.4 Mean, Total Number of Observations (before and after imputation) and Standard Errors for Income Components (weighted).

Income Component	Mean	Number of Observations (000's)	Standard Error
Total household income variables			
Total household gross income	30703.37	23,711	
Total disposable household income	22379.67	25,969	
Total disposable household income before social transfers other than old-age and survivor benefits	20753.21	23,711	
Total disposable household income before social transfers including old-age and survivors' benefits	16737.36	23,711	
Net income components at household level			
Income from rental of a property or land	209.29	23,711	
Family/child related allowances	734.61	23,711	
Social exclusion not elsewhere classified	445.30	23,711	
Housing allowances	471.23	25,969	
Regular inter-household cash transfer received	181.47	23,711	
Interest, dividends, etc.	619.50	23,711	
Interest repayments on mortgage	Not supplied	Not supplied	
Income received by people aged under 16	Not supplied	Not supplied	
Regular taxes on wealth	Not supplied	Not supplied	
Regular inter-household cash transfer paid	Not supplied	Not supplied	
Tax on income and social contributions	Not supplied	Not supplied	
Repayments/receipts for tax adjustment	Not supplied	Not supplied	
Gross income components at household level			
Income from rental of a property or land	261.12	23,711	
Family/child related allowances	612.33	23,711	

Social exclusion not elsewhere classified	389.70	23,711	
Housing allowances	471.23	25,969	
Regular inter-household cash transfer received	181.47	23,711	
Interest, dividends, etc.	797.53	23,711	
Interest repayments on mortgage	2249.45	25,690	
Income received by people aged under 16	10.14	25,969	
Regular taxes on wealth	848.27	25,969	
Regular inter-household cash transfer paid	140.22	23,711	
Tax on income and social contributions	6731.07	23,711	
Net income components at personal level			
Employee cash or near cash income	8201.52	44,422	
Non-cash employee income	138.84	44,422	
Contributions to individual private pension plans	Not supplied	Not supplied	
Cash benefits or losses from self-employment	1197.35	44,422	
Value of goods produced for own-consumption	0	44,422	
Pension from individual private plans	13.37	44,422	
Unemployment benefits	41.62	44,422	
Old-age benefits	2206.58	44,422	
Survivor's benefits	26.20	44,422	
Sickness benefits	137.12	44,422	
Disability benefits	111.99	44,422	
Education-related allowances	49.10	44,422	
Gross income components at personal level			
Employee cash or near cash income	11303.19	44,422	
Non-cash employee income	203.23	44,422	
Contributions to individual private pension plans	106.29	44,191	
Cash benefits or losses from self-employment	1657.24	44,422	
Value of goods produced for own consumption	0	44,422	
Pension from individual private plans	17.32	44,422	
Unemployment benefits	41.87	44,422	
Old-age benefits	2382.52	44,422	
Survivor's benefits	27.94	44,422	
Sickness benefits	137.12	44,422	
Disability benefits	111.99	44,422	
Education-related allowances	49.05	44,422	
Gross monthly earnings for employees	1533.81	25,276	

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.

There are no known coverage errors associated with EU-SILC UK.

Table 2.5 Contact at address

	Frequency	Percent	Cumulative percent
Address contacted (11)	15429	90.7	90.7
Address cannot be located (21)	23	0.1	90.8
Address unable to access (22)	2	0	90.8
Address does not exist or is non-residential or is unoccupied or not principal address (23)	1424	8.4	99.2
Missing	126	0.7	99.9
Total	17004	100	100

2.3.2 Measurement and processing errors

2.3.2.1 Measurement errors

Measurement error occurs when data are consistently biased in a certain way, such that the variation from the true values for the population will not average to zero over repeats of the survey. For example, if a certain section of the population is excluded from the sampling frame, estimates may be biased because non-respondents to the survey have different characteristics to respondents. Another cause of bias may be that interviewers systematically influence responses in one way or another. Substantial efforts have been made to avoid measurement errors, for example, through extensive interviewer training and by weighting the data collected for non-response.

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 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, all income data is “checked” at the point of collection to make sure that Net values are not greater than Gross values for an individual.

Data is converted from Blaise to SPSS and is edited using this software.

There are no known outstanding processing errors associated with EU-SILC UK, other than that discussed in the erratum on Page 4.

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, opinion-type questions, questions on health and income are omitted.

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 certain respondents. In the UK, respondents are allowed to refuse to answer all income questions. As such, information for these respondents is missing. Similarly, proxy respondents are not asked any income questions, apart from one question relating to 'total personal disposable income' (this variable has been incorporated into HY025).

It was agreed after a meeting with Jean-Marc Museux (Eurostat) on 10/01/2007 that the UK would impute this missing data and supply a full set of income variables for each eligible person by 01/08/2007.

2.3.3.1 Achieved sample size

2005 was the initial year of EU-SILC UK insofar as the cross-sectional component is concerned. EU-SILC 2005 did not comprise a longitudinal component.

Table 2.6 Sample size and accepted interviews

	Total
Persons 16 years and older	16675
Number of accepted personal questionnaires	16675
Accepted household interviews	9820

2.3.3.2 Unit non-response

Household non-response rates (NRh):

$$NRh = (1 - (Ra * Rh)) * 100$$

Ra = Number of addresses successfully contacted / Number of valid addresses selected.

Rh = Number of household interviews completed and accepted for data base / number of eligible households at contacted addresses.

$$Ra = 15429 \text{ (DB120 = 11)} / 17004 \text{ (DB120 = all)} - 1424 \text{ (DB120 = 23)}.$$

$$Ra = 0.99$$

$$Rh = 9820 \text{ (DB135 = 1)} / 17004 \text{ (DB130 = all)}.$$

$$Rh = 0.58$$

$$NRh = (1 - (0.99 * 0.58)) * 100$$

$$NRh = 43\%$$

Individual non-response rates (NRp):

$$NRp = (1 - (Rp)) * 100$$

Rp = Number of personal interviews completed / number of eligible individuals in the household whose interviews were completed and accepted for the database.

$$Rp = 16675 \text{ (RB250 = 11 + 12 + 13)} / 17633 \text{ (RB245 = 1 + 2 + 3)}$$

$$Rp = 0.95$$

Overall individual non-response rates (NRp):

$$NRp = (1 - (0.99 * 0.58 * 0.95)) * 100$$

$$NRp = 46\%$$

2.3.3.3 Distribution of households

Table 2.7 **Distribution of original units by ‘record of contact at address’**

	Number	Percentage
Total (DB120 = 11 to 23)	16878	100
Address contacted (DB120 = 11)	15429	91.4
Address non-contacted (DB120 = 21 to 23)	1449	8.5
Total address non-contacted (DB120 = 21 to 23)	1449	100
Address cannot be located (DB120 = 21)	23	0.1
Address unable to access (DB120 = 22)	2	0
Address does not exist or is non-residential or is unoccupied or not principal residence (DB120 = 23)	1424	8.4

Table 2.8 Distribution of address contacted by ‘household questionnaire result’ and by household interview acceptance.

	Number	Percentage
Total	15429	100
Household questionnaire completed (DB130 = 11)	9820	63.6
Interview not completed (DB130 = 21 to 24)	5609	36.4
Total interview not completed (Db130 = 21 to 24)	5609	100
Refusal to co-operate (DB130 = 21)	3672	21.6
Entire household temporarily away for duration of fieldwork (DB130 = 22)	0	0
Household unable to respond (illness, incapacity) (DB130 = 23)	361	1.7
Other reasons	1676	10.9
Household questionnaire completed (DB135 = 1+2)	9820	100
Interview accepted for database (DB135 = 1)	9820	100
Interview rejected (DB135 = 2)	0	0

2.3.3.4 Distribution of substituted units

No substituted units were used as part of EU-SILC 2005.

2.3.3.5 Item non-response

All variables provided for EU-SILC 2005 (UK) contain full information. No partial information is provided for any variable.

Table 2.9 Distribution of item non-response (before imputation)

Variable	Full Information		Missing Value	
	Count	Per cent	Count	Per cent
Household gross income	6598	67.2	3222	32.8
Total disposable household income	6975	71.0	2845	29.0
Total disposable household income before social transfers other than old-age and survivor's benefits	6382	65.0	3438	35.0
Total disposable household income before social transfers including old-age and survivors' benefits	6383	65.0	3437	35.0
Net income components at household level				
Income from rental of a property or land	8877	90.4	943	9.6
Family/child related allowances	8796	89.6	1024	10.4
Social exclusion not elsewhere classified	8851	90.1	969	9.9
Housing allowances	9696	98.7	124	1.3
Regular inter-household cash transfer received	8987	91.5	833	8.5
Interest, dividends etc.	8144	82.9	1676	17.1
Income received by people aged under 16	0	0	9820	100
Regular taxes on wealth	0	0	9820	100
Regular inter-household cash transfer paid	0	0	9820	100

Tax on income and social contributions	0	0	9820	100
Repayments / receipts for tax adjustment	0	0	9820	100
Gross income components at household level				
Income from rental of a property or land	8953	91.2	867	8.8
Family/child related allowances	8796	89.6	1024	10.4
Social exclusion not elsewhere classified	8851	90.1	969	9.9
Housing allowances	9696	98.7	124	1.3
Regular inter-household cash transfer received	8987	91.5	833	8.5
Interest, dividends etc	9721	99.0	99	
Income received by people aged under 16	9820	100	0	0
Regular inter-household cash transfer paid	8991	91.6	829	8.4
Tax on income and social contributions	6901	70.3	2919	29.7
Net income components at personal level				
Employee cash or near cash income	16153	96.9	522	5.3
Non-cash employee income	16675	100	0	0
Contributions to individual private pension plans	0	0	16675	100
Cash benefits or losses from self-employment	16657	99.9	18	0.2
Value of goods produced for own-consumption	16675	100	0	0
Pension from individual private plans	16625	99.7	50	0.3
Unemployment benefits	16667	99.9	8	0.1
Old-age benefits	16049	96.2	626	3.8
Survivor's benefits	16661	99.9	14	0.1
Sickness benefits	16583	99.4	92	0.6
Disability benefits	16534	99.2	141	0.8
Education-related allowances	16670	100	5	0
Gross income components at personal level				
Employee cash or near cash income	15631	93.7	1044	6.3
Non-cash employee income	16675	100	0	0
Contributions to individual private pension plans	16585	99.5	90	0.5
Cash benefits or losses from self-employment	16662	99.9	13	0.1
Value of goods produced for own-consumption	16675	100	0	0
Pension from individual private plans	16468	98.8	207	1.2
Unemployment benefits	16667	100	8	0
Old-age benefits	16064	96.3	611	3.7
Survivor's benefits	16649	99.8	26	0.2
Sickness benefits	16583	99.4	92	0.6
Disability benefits	16534	99.2	141	0.8
Education-related allowances	16670	100	5	0
Gross monthly earnings for employees	8221	49.3	8454	50.7

Table 2.10 Distribution of item non-response (after imputation).

Variable	Full Information		Missing Value	
	Count	Per cent	Count	Per cent
Household gross income	9003	91.6	817	8.3
Total disposable household income	9820	100	0	0
Total disposable household income before social transfers other than old-age and survivor's benefits	9003	91.6	817	8.3
Total disposable household income before social transfers including old-age and survivors' benefits	9003	91.6	817	8.3
Net income components at household level				
Income from rental of a property or land	9003	91.6	817	8.3
Family/child related allowances	9003	91.6	817	8.3
Social exclusion not elsewhere classified	9003	91.6	817	8.3
Housing allowances	9820	100	0	0
Regular inter-household cash transfer received	9003	91.6	817	8.3
Interest, dividends etc.	9003	91.6	817	8.3
Income received by people aged under 16	0	100	9820	0
Regular inter-household cash transfer paid	0	0	9820	100
Repayments / receipts for tax adjustment	0	0	9820	100
Gross income components at household level				
Income from rental of a property or land	9003	91.6	817	8.3
Family/child related allowances	9003	91.6	817	8.3
Social exclusion not elsewhere classified	9003	91.6	817	8.3
Housing allowances	9820	100	0	0
Regular inter-household cash transfer received	9003	91.6	817	8.3
Interest, dividends etc	9003	91.6	817	8.3
Income received by people aged under 16	9820	100	0	0
Regular inter-household cash transfer paid	9003	91.6	817	8.3
Tax on income and social contributions	9003	91.6	817	8.3
Net income components at personal level				
Employee cash or near cash income	16675	100	0	0
Non-cash employee income	16675	100	0	0
Contributions to individual private pension plans	0	0	16675	100
Cash benefits or losses from self-employment	16675	100	0	0
Value of goods produced for own-consumption	16675	100	0	0
Pension from individual private plans	16675	100	0	0
Unemployment benefits	16675	100	0	0
Old-age benefits	16675	100	0	0
Survivor's benefits	16675	100	0	0

Sickness benefits	16675	100	0	0
Disability benefits	16675	100	0	0
Education-related allowances	16675	100	0	0
Gross income components at personal level				
Employee cash or near cash income	16675	100	0	0
Non-cash employee income	16675	100	0	0
Contributions to individual private pension plans	16585	99.4	90	0.5
Cash benefits or losses from self-employment	16675	100	0	0
Value of goods produced for own-consumption	16675	100	0	0
Pension from individual private plans	16675	100	0	0
Unemployment benefits	16675	100	0	0
Old-age benefits	16675	100	0	0
Survivor's benefits	16675	100	0	0
Sickness benefits	16675	100	0	0
Disability benefits	16675	100	0	0
Education-related allowances	16675	100	0	0
Gross monthly earnings for employees	9175	55.0	7500	44.9

2.3.3.6 Total item non-response

Table 2.11 Number of observations and total item non-response

	Number of sample observations	Number of sample observations not taken into account due to item non-response	Non-response at individual level (if applicable)	Non-response at household level
At-risk-of-poverty after social transfers – total	22499			
At-risk-of-poverty after social transfers – men total	10811			
At-risk-of-poverty after social transfers – women total	11688			
At-risk-of-poverty after social transfers – 0-15 years	4731			
At-risk-of-poverty after social transfers – 16-24 years	1950			
At-risk-of-poverty after social transfers – 25-49 years	7628			
At-risk-of-poverty after social transfers – 50-64 years	4242			
At-risk-of-poverty after social transfers – 65+ years	3948			
At-risk-of-poverty after social transfers – 16+ years	17768			
At-risk-of-poverty after social transfers – 16-64 years	13820			
At-risk-of-poverty after social transfers – 0-64 years	18551			
At-risk-of-poverty after social transfers – men 16-24 years	922			
At-risk-of-poverty after social transfers –	3662			

men 25-49 years				
At-risk-of-poverty after social transfers – men 50-64 years	2036			
At-risk-of-poverty after social transfers – men 65+ years	1812			
At-risk-of-poverty after social transfers – men 16+ years	8432			
At-risk-of-poverty after social transfers – men 16-64 years	6620			
At-risk-of-poverty after social transfers – men 0-64 years	8999			
At-risk-of-poverty after social transfers – women 16-24 years	1028			
At-risk-of-poverty after social transfers – women 25-49 years	3966			
At-risk-of-poverty after social transfers – women 50-64 years	2206			
At-risk-of-poverty after social transfers – women 65+ years	2136			
At-risk-of-poverty after social transfers – women 16+ years	9336			
At-risk-of-poverty after social transfers – women 16-64 years	7200			
At-risk-of-poverty after social transfers – women 0-64 years	9552			
At-risk-of-poverty after social transfers – employed	9254			
At-risk-of-poverty after social transfers – unemployed	269			
At-risk-of-poverty after social transfers – retired	3988			
At-risk-of-poverty after social transfers – other inactive	892			
At-risk-of-poverty after social transfers – men, employed	4784			
At-risk-of-poverty after social transfers – men, unemployed	148			
At-risk-of-poverty after social transfers – men, retired	1734			
At-risk-of-poverty after social transfers – men, other inactive	402			
At-risk-of-poverty after social transfers – women, employed	4470			
At-risk-of-poverty after social transfers – women, unemployed	121			
At-risk-of-poverty after social transfers – women, retired	2254			
At-risk-of-poverty after social transfers – women, other inactive	490			
At-risk-of-poverty after social transfers – single, <65 years	1629			
At-risk-of-poverty after social transfers – single, 65+ years	1376			
At-risk-of-poverty after social transfers – single, male	1311			
At-risk-of-poverty after social transfers – single, female	1694			

At-risk-of-poverty after social transfers – single, total	3005			
At-risk-of-poverty after social transfers – 2 adults, no children, both <65	3826			
At-risk-of-poverty after social transfers – 2 adults, no children, at least one 65+	2730			
At-risk-of-poverty after social transfers – other households without children	1530			
At-risk-of-poverty after social transfers – single parent, at least one child	1697			
At-risk-of-poverty after social transfers – 2 adults, 1 child	2139			
At-risk-of-poverty after social transfers – 2 adults, 2 children	3412			
At-risk-of-poverty after social transfers – 2 adults, 3+ children	1745			
At-risk-of-poverty after social transfers – other households with children	1335			
At-risk-of-poverty after social transfers – households without children	11091			
At-risk-of-poverty after social transfers – households with children	10328			
At-risk-of-poverty after social transfers – owner or rent-free	16570			
At-risk-of-poverty after social transfers – tenant	5922			
At-risk-of-poverty after social transfers – households without children, $w=0^1$	932			
At-risk-of-poverty rate after social transfers – households without children, $0 < w < 1$	1357			
At-risk-of-poverty after social transfers – households without children, $w=1$	5181			
At-risk-of-poverty after social transfers – households with children, $w=0$	321			
At-risk-of-poverty after social transfers – households with children $0 < w < 0.5$	188			
At-risk-of-poverty after social transfers – households with children, $w=1$	8077			
Median of the equivalised disposable household income				
At-risk-of-poverty threshold – single				
At-risk-of-poverty threshold – 2 adults, 2 children				
Inequality of income distribution S80/S20 income quintile share ratio				
Relative median at-risk-of-poverty gap – total	4146			
Relative median at-risk-of-poverty gap – men total	1944			
Relative median at-risk-of-poverty gap – women total	2220			
Relative median at-risk-of-poverty gap – 0-15 years	1048			

Relative median at-risk-of-poverty gap – 16-64 years	2080			
Relative median at-risk-of-poverty gap – 65+ years	1036			
Relative median at-risk-of-poverty gap – 16+ years	3116			
Relative median at-risk-of-poverty gap – men, 16-64 years	950			
Relative median at-risk-of-poverty gap – men, 65+ years	434			
Relative median at-risk-of-poverty gap – men, 16+ years	1384			
Relative median at-risk-of-poverty gap – women, 16-64 years	1130			
Relative median at-risk-of-poverty gap – women, 65+ years	602			
Relative median at-risk-of-poverty gap – women, 16+ years	1732			
Median income below the at-risk-of-poverty threshold – total				
Median income below the at-risk-of-poverty threshold – men total				
Median income below the at-risk-of-poverty threshold – women total				
Median income below the at-risk-of-poverty threshold – 0-15 years				
Median income below the at-risk-of-poverty threshold – 16-64 years				
Median income below the at-risk-of-poverty threshold – 65+ years				
Median income below the at-risk-of-poverty threshold – men, 16-64 years				
Median income below the at-risk-of-poverty threshold – men, 65+ years				
Median income below the at-risk-of-poverty threshold – women, 16-64 years				
Median income below the at-risk-of-poverty threshold – women, 65+ years				
Median income below the at-risk-of-poverty threshold – women, 16+ years				
Dispersion around the risk-of-poverty threshold – 40%	22499			
Dispersion around the risk-of-poverty threshold – 50%	22499			
Dispersion around the risk-of-poverty threshold – 70%	22499			
At-risk-of-poverty rate before social transfers – total				
At-risk-of-poverty rate before social transfers – men total				
At-risk-of-poverty rate before social transfers – women total				
At-risk-of-poverty rate before social transfers – 0-15 years				
At-risk-of-poverty rate before social transfers – 16-64 years				

At-risk-of-poverty rate before social transfers – 65+ years				
At-risk-of-poverty rate before social transfers – 16+ years				
At-risk-of-poverty rate before social transfers – men, 16-64 years				
At-risk-of-poverty rate before social transfers – men, 65+ years				
At-risk-of-poverty rate before social transfers – men, 16+ years				
At-risk-of-poverty rate before social transfers – women, 16-64 years				
At-risk-of-poverty rate before social transfers – women, 65+ years				
At-risk-of-poverty rate before social transfers – women, 16+ years				
Before social transfers including old-age and survivors' benefits				
At-risk-of-poverty rate before social transfers – total				
At-risk-of-poverty rate before social transfers – men total				
At-risk-of-poverty rate before social transfers – women total				
At-risk-of-poverty rate before social transfers – 0-15 years				
At-risk-of-poverty rate before social transfers – 16-64 years				
At-risk-of-poverty rate before social transfers – 65+ years				
At-risk-of-poverty rate before social transfers – 16+ years				
At-risk-of-poverty rate before social transfers – men, 16-64 years				
At-risk-of-poverty rate before social transfers – men, 65+ years				
At-risk-of-poverty rate before social transfers – men, 16+ years				
At-risk-of-poverty rate before social transfers – women, 16-64 years				
At-risk-of-poverty rate before social transfers – women, 65+ years				
At-risk-of-poverty rate before social transfers – women, 16+ years				
Gini coefficient	24999			
Mean equivalised disposable income	24999			
Gender pay gap				

2.4 Mode of data collection

Table 2.12 Distribution of RB250 and RB260

	Total
RB250 – Data Status	
Information completed only from interview (11)	19624
Interview completed only from registers (12)	0
Total	19624
RB260 – Type of interview	
Face-to-face CAPI (2)	17523
Proxy interview (5)	2131
Total	19624

Table 2.13 Distribution of household members aged 16 and over by ‘RB250’

Household Members 16+ (RB245 = 1 to 3)

	Total	RB250 = 11	RB250 = 12	RB250 = 13	RB250 = 21	RB250 = 22	RB250 = 23	RB250 = 31	RB250 = 32	RB250 = 33
Total	17633	16675	0	0	0	0	0	0	0	958
%	100	95	0	0	0	0	0	0	0	5

Household Members 16+ (RB245 = 2)

EU-SILC 2005 (UK) did not use substituted respondents.

Household Members 16+ (RB245 = 3)

EU-SILC 2005 (UK) did not use substituted respondents.

Table 2.14 Distribution of household members aged 16 and over by ‘RB260’

Household Members 16+ (RB245 = 1 to 3) and RB250 = 11 or 13

	Total	RB260 = 1	RB260 = 2	RB260 = 3	RB260 = 4	RB260 = 5	Missing
Total	17633	0	16097	0	0	578	958
%	100	0	91	0	0	3	5

Household Members 16+ (RB245 = 2) and RB250 = 11 or 13

EU-SILC 2005 (UK) did not use substituted respondents.

Household Members 16+ (RB245 = 3)

EU-SILC 2005 (UK) did not use substituted respondents.

2.5 Interview duration

Table 2.15 Interview duration in minutes (mean)

Questionnaire	Frequency	Mean (minutes)
Household Questionnaire	9820	13
Individual Questionnaire	16675	26
Total (Household + Individual)	9820	50

***Nb. Not all households and individuals have a value for HB100 and PB120 due the way this variable is derived by the UK.

2.6 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

All pre-imputation and post-imputation data editing was conducted using custom software written in SAS V8. All donor-based imputation processing was conducted in Canceis. Canceis was developed to perform minimum change nearest neighbour imputation (NIM). NIM was developed by Mike Bankier of Statistics Canada in 1992.

It was agreed after a meeting with Jean-Marc Museux (Eurostat) on 10/01/2007 that the UK would impute missing income data for proxy respondents and supply a full set of income variables for each eligible person by 01/08/2007.

2.7 Imputed rent

Imputed rent was not calculated as part of EU-SILC 2005.

2.8 Company cars

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 £10001 – 13000 would be given a 'list' price of £11,500. Third, 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.
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 (Vehicle Certification Agency, UK). 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 2.16 Average CO₂ emission by Cylinder Capacity

Cylinder Capacity	Average CO ₂ emission
Up to 1400	155
1401 to 2000	197
2001 to 4000	252

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 2004/05 is shown in table 2.17.

Table 2.17 Band price of a motor vehicle based on CC and average CO₂ emissions

Cylinder Capacity	Average CO ₂ emissions	Car price (£)
Up to 1400cc	155	0 – 11,999
1401 to 2000cc	197	12,000 – 24,999
2001 to 4000cc	252	25,000 – 99,999

Cars that fall into a price band are given the appropriate cylinder capacity and the data in the table 2.18 is used to apply an appropriate tax rate (the tax rate used by Her Majesties Revenue and Customs to value the benefit for tax purposes - raw data supplied by HMRC, UK).

Table 2.18 Tax rate based on CO₂ emission rates (per cent)

2004/2005	CO ₂ tax emission rate (percentage rate)
155	17
200	26
245	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. In addition, the car price is divided by 52 to produce a weekly figure.

$$\text{Car benefit} = (\text{car price}/52) * \text{CO}_2 \text{ tax emission rate}$$

No Net version of this benefit was provided in 2005.

3. Comparability

This section reports on the differences between EUROSTAT definitions and the definitions the UK applied in EU-SILC 2005. It also reports on the impact of these differences with regards 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).

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.

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.

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.

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 uprated (using the UK's average earnings index) to the interview date. Income from investment and perhaps employee

non-cash income are perhaps the two sources of income, where there is some doubt about whether the survey really measures current income. In these cases, what respondents most likely provide is the most recent annual or half-yearly income that they received from this source. This income would be annualised, although there is no uprating.

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 around the interview date. So for a household interviewed in early January 2005, we can regard their income as being measured for the period July 2004 to June 2005, and similarly for a household interviewed in December 2005, the income estimate can be regarded as referring to the period July 2005 to June 2006. Since interviews are spread evenly throughout the year, for any one survey year, the interview reference periods collectively, are centred around 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 2005 survey, measures current annual income in 2005.

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 small.

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 year April 2005 – March 2006. All interviewing for EU-SILC UK took place between April 2005 and January 2006.

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

Interviews took place between 1st April and 31st December 2005. The General Household Survey was re-designed to meet the EU-SILC requirement. One aspect of this re-design was the move from financial years (April to March) to calendar years. This move to calendar years meant that the first year of EU-SILC data collection in

2005, actually took place from 1st April to 31st December 2005. So 12-months of interviewing was condensed into a 9-month period.

From 2006 onwards EU-SILC UK will use continuous interviewing with data collection being evenly spread over complete calendar years.

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.

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 investigates the differences between the national definitions and standard EU-SILC definitions.

All income information is collected on an individual respondent basis and aggregated to create household-level variables.

Total disposable household gross income (HY010)

No difference between national and standard definition.

Total disposable household income (HY020)

In the UK, information is collected about the total disposable income of proxy respondents, using one variable 'ntincest'. This information is used to derive the EU-SILC variable HY025 – in effect two HY020 variables are created, one including proxy respondents the other excluding them. The non-response inflation factor (HY025) is then calculated by dividing the proxy version of HY020 by the non-proxy version of HY020.

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

No difference between national and standard definition.

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

No difference between national and standard definition.

Imputed rent (HY030G/N)

This variable was not provided as part of the 2005 data delivery as it is mandatory from 2007 onwards.

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

No difference between national and standard definition.

Family/children related allowances (HY050G/N)

No difference between national and standard definition.

Social exclusion not elsewhere classified (HY060G/N)

No difference between national and standard definition.

Housing allowances (HY070G/N)

No difference between national and standard definition.

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

No difference between national and standard definition.

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

No difference between national and standard definition.

Interest repayments on mortgage (HY100G/N)

No difference between national and standard definition.

Income received people aged under 16 (HY110G/N)

Income for people aged under 16 years of age is only collected if the individual earns over £30.

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.

No information is collected from registers.

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

For all income components subject to taxation and/or social security contributions, respondents are asked to provide net and gross amounts.

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.

For approximately 40% of cases, in records that had gross and net as target variables, either both values were missing or one was missing while the other was present. In cases where both were missing, two new values, along with an associated period if required, were imputed from a single donor. However, in cases where only one value

was missing, analyses indicated that it was not possible to impute the single missing value in a similar way. Significantly, the difference between gross and net in the imputed data did not always reflect the statistical structure of observed differences between gross and net in records where both values were present. In income from earnings, for example, there was an observable relationship between the percentage difference between gross and net and an increase in either. Furthermore, the variance at each point along that relationship was quite constrained. This clearly reflected the underlying fiscal facts associated with the income in question. That is, within a relatively narrow margin, the more you earn the more tax you are likely to pay. However, imputing gross or net when only one was missing in a way similar to imputing gross *and* net when both were missing often gave rise to data in conflict with observed relationships.

Due to the complexity of factors underlying the relationships between net and gross, and how those factors might change across different income target variables, it was not feasible to explore and identify an imputation strategy for each individual income question. Consequently, a relatively simple but effective donor selection strategy was implemented.

For all potential donors, 3 new variables were derived. The first indicated the percentage difference between gross and net [perc_diff]. The second and third were considered to be imputation classes. Net_col was a collapsed version of net (i.e., net in £5000 increments), while Gross_col was a collapsed version of gross (i.e., gross in £5000 increments). The size of the increments for different income variables was based on the formula: (net or gross range/20) thus always giving rise to imputation classes with 20 increments.

For records that needed an imputed value for net, the gross_col imputation class was also derived from the observed value for gross. During imputation the value perc_diff was selected from a pool of donors who matched exactly on the gross_col imputation class. Net was then calculated using the imputed perc_diff and the observed value for gross. A similar procedure was employed for records that needed an imputed value for gross. In this case, however, the perc_diff value was taken from donors who matched exactly on the net_col imputation class and gross was calculated from the imputed perc_diff value and the observed value for net.

This simple strategy not only preserved any implicit relationship between gross and net during imputation, but also the variance in the relationship.

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

GHS 2005

Due to the nature of the data collection EU-SILC UK utilises the same income variables as GHS 2005, the major difference between the two surveys being that EU-SILC includes data for Northern Ireland, whereas the GHS is representative of Great Britain only.

EU-SILC UK was conducted as a singular cross-sectional survey. The gross sample of EU-SILC UK comprised 17004 households of which 9820 household interviews were finally conducted and collected.

GHS 2005 is also a cross-sectional survey. The GHS is a multi-purpose survey carried out by the Office for National Statistics (ONS). The GHS collects information on a range of topics from people living in private households in Great Britain. The survey started in 1971 and has been carried out continuously since then, except for breaks in 1997/98 (when the survey was reviewed) and 1999/2000 (when the survey was re-developed).

The gross sample of GHS 2005 comprised 18695 households of which 12802 household interviews were finally conducted and collected.

GHS 2005 is used for a comparison of income and target variables.

EFS 2004

The Expenditure and Food Survey is a comprehensive overview of all aspects of household expenditure and income for the year 2004-2005 derived from a survey of around 7,000 households in the UK. 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.

EFS2004 is used as a comparison for income variables.

4.1.2 Comparisons

Table 4.1 Comparison of income target variables – EU-SILC 2005, GHS 2005 and EFS 2004 (weighted)

	EU-SILC 2005 (mean)	GHS 2005 (mean)	EFS 2004 (mean)
Total household gross income	30703.37		
Total disposable household income	22379.67		
Total disposable household income before social transfers other than old-age and survivor's benefits	20753.21		
Total disposable household income before social transfers including old-age and survivor's benefits	16737.36		

Net income components at household level			
Income from rental of a property or land	209.29		
Family/child related allowances	734.61		
Social exclusion not elsewhere classified	445.30		
Housing allowances	471.23		
Regular inter-household cash transfer received	181.47		
Interest, dividends etc.	Not supplied		
Income received by people aged under 16	Not supplied		
Regular taxes on wealth	Not supplied		
Regular inter-household cash transfer paid	Not supplied		
Taxes on income and social contributions	Not supplied		
Repayments/receipts for tax adjustment	Not supplied		
Gross income components at household level			
Income from rental of a property or land	261.12		
Family/child related allowances	612.33		
Social exclusion not elsewhere classified	389.70		
Housing allowances	471.23		
Regular inter-household cash transfer received	181.47		
Interest, dividends etc.	797.53		
Interest repayments on mortgage	2249.45		
Income received by people aged under 16	10.14		
Regular taxes on wealth	848.47		
Regular inter-household cash transfer paid	140.22		
Tax on income and social contribution	848.47		
Net income components at personal level			
Employee cash or near cash income	8201.52		
Non-cash employee income	138.84		
Contributions to individual private pension plans	0		
Cash benefits or losses from self-employment	1197.35		
Value of goods produced for own-consumption	0		
Pension from individual private plans	13.37		
Unemployment benefits	41.62		
Old-age benefits	2206.58		
Survivor's benefits	26.20		
Sickness benefits	137.12		
Disability benefits	111.99		
Education-related allowances	49.10		
Gross income components at personal level			
Employee cash or near cash income	11303.19		
Non-cash employee income	203.23		
Contributions to individual private	106.29		

pension plans			
Cash benefits or losses from self-employment	1657.24		
Value of goods produced for own-consumption	0		
Pension from individual private plans	17.32		
Unemployment benefits	41.87		
Old-age benefits	2382.52		
Survivor's benefits	27.94		
Sickness benefits	137.12		
Disability benefits	111.99		
Education-related allowances	49.05		
Gross monthly earnings for employees	1533.81		

Annexes

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.