

## EUROPEAN COMMISSION EUROSTAT



Directorate F: Social and information society statistics Unit F-4: Quality of life

EU-SILC 065 (2012 operation)

# **DESCRIPTION OF TARGET VARIABLES:** Cross-sectional and Longitudinal

2012 operation (Version May 2013

INTRODUCTION	9
AIM	
TIME REFERENCE	
REFERENCE POPULATION	
LEGAL BASIS	
TIMELY AND FLEXIBLE	
THE INTEGRATED DESIGN	
SELECTION OF THE SAMPLE	
SURVEY UNITS	
SAMPLE SIZE	
SAMPLE IMPLEMENTATION	
SURVEY DURATION AND TIME	
WEIGHTING	
TRACING RULES	43
IMPUTATION	
TRANSMISSION OF DATA AND DATA AVAILIBITY	54
GENERAL DEFINITIONS	59
DEFINITIONS	60
INCOME DATA	
GENERAL DESCRIPTION	72
GENERAL DESCRIFTION	
DOMAINS AND AREAS	
REFERENCE PERIODS	
UNITS	
MODES OF COLLECTION	
FLAGS	
INCOME FLAGS	
IDENTIFICATION NUMBERS AND RECORD OF PERSO	NS 84
HOUSEHOLD REGISTER (D-FILE)	91
DB010: YEAR OF THE SURVEY	92
DB020: COUNTRY	
DB030: HOUSEHOLD ID	
DB040: REGION	
DB050: PRIMARY STRATA	
DB060: PRIMARY SAMPLING UNITS (PSU)	
DB062: SECONDARY SAMPLING UNITS (SSU)	
DB070: ORDER OF SELECTION OF PSU	
DB075: ROTATION GROUP	
DB080: HOUSEHOLD DESIGN WEIGHT	
DB090: HOUSEHOLD CROSS-SECTIONAL WEIGHT	
DB100: DEGREE OF URBANISATION	
DB110: HOUSEHOLD STATUS	

DB120: CONTACT AT ADDRESS	107
DB130: HOUSEHOLD QUESTIONNAIRE RESULT	
DB135: HOUSEHOLD INTERVIEW ACCEPTANCE	
DEDCONAL DECICTED (D EH E)	112
PERSONAL REGISTER (R-FILE)	113
DD010. What or gwe gripting	114
RB010: YEAR OF THE SURVEY	
RB020: COUNTRY	
RB030C: CROSS-SECTIONAL PERSONAL ID.	
RB031: YEAR OF IMMIGRATION	
RB040: CURRENT HOUSEHOLD ID	
RB041: PERSONAL ID.	
RB050: PERSONAL CROSS-SECTIONAL WEIGHT	
RB060: PERSONAL BASE WEIGHT	
RB062: LONGITUDINAL WEIGHT (TWO-YEAR DURATION)	
RB063: LONGITUDINAL WEIGHT (TWO-TEAR DURATION)	
RB064: LONGITUDINAL WEIGHT (FOUR-YEAR DURATION)	
RB070: MONTH OF BIRTH	
RB080: YEAR OF BIRTH.	
RB090: SEX	
RB100: SAMPLE PERSON OR CO-RESIDENT.	
RB110: MEMBERSHIP STATUS	
RB120: MOVED TO	
RB140: MONTH MOVED OUT OR DIED.	
RB150: YEAR MOVED OUT OR DIED.	
RB160: Number of months in household during the income reference period.	
RB170: MAIN ACTIVITY STATUS DURING THE INCOME REFERENCE PERIOD.	
RB180: MONTH MOVED IN	
RB190: YEAR MOVED IN	
RB200: RESIDENTIAL STATUS.	
RB210: BASIC ACTIVITY STATUS	
RB220: FATHER ID	
RB230: MOTHER ID	
RB240: SPOUSE/PARTNER ID	
RB245: RESPONDENT STATUS.	
RB250: DATA STATUS	
RB260: Type of interview	
RB270: PERSONAL ID OF PROXY	
RL010: EDUCATION AT PRE-SCHOOL.	
RL020: EDUCATION AT COMPULSORY SCHOOL	
RL030: CHILD CARE AT CENTRE-BASED SERVICES	
RL040: CHILD CARE AT DAY-CARE CENTRE	
RL050: CHILD CARE BY A PROFESSIONAL CHILD-MINDER AT CHILD'S HOME OR AT CHILD	
MINDER'S HOME	
RL060: CHILD CARE BY GRAND-PARENTS, OTHERS HOUSEHOLD MEMBERS (OUTSIDE PARENTS)	
OTHER RELATIVES, FRIENDS OR NEIGHBOURS	
RL070: CHILDREN CROSS-SECTIONAL WEIGHT FOR CHILD CARE	
HOUSEHOLD DATA (H-FILE)	157
HB010: YEAR OF THE SURVEY	
HB020: COUNTRY	159

HB030: HOUSEHOLD ID	
HB040: DAY OF HOUSEHOLD INTERVIEW	
HB050: MONTH OF HOUSEHOLD INTERVIEW	
HB060: YEAR OF HOUSEHOLD INTERVIEW	
HB070: PERSON RESPONDING THE HOUSEHOLD QUESTIONNAIRE	
HB080: PERSON 1 RESPONSIBLE FOR THE ACCOMMODATION	
HB090: PERSON 2 RESPONSIBLE FOR THE ACCOMMODATION	
HB100: NUMBER OF MINUTES TO COMPLETE THE HOUSEHOLD QUESTIONNAIRE	
HH010: DWELLING TYPE	167
HH021: TENURE STATUS	
HH030: NUMBER OF ROOMS AVAILABLE TO THE HOUSEHOLD	172
HH031: YEAR OF CONTRACT OR PURCHASING OR INSTALLATION	173
HH040: LEAKING ROOF, DAMP WALLS/FLOORS/FOUNDATION, OR ROT IN WINDOW FRAMI	ES OR
FLOOR	174
HH050: ABILITY TO KEEP HOME ADEQUATELY WARM	175
HH060: CURRENT RENT RELATED TO OCCUPIED DWELLING	176
HH061: SUBJECTIVE RENT	177
HH070: TOTAL HOUSING COST	178
HH071: MORTGAGE PRINCIPAL REPAYMENT	180
HH081: BATH OR SHOWER IN DWELLING	181
HH091: INDOOR FLUSHING TOILET FOR SOLE USE OF HOUSEHOLD	
HS011: ARREARS ON MORTGAGE OR RENT PAYMENTS	183
HS021: ARREARS ON UTILITY BILLS	
HS031: ARREARS ON HIRE PURCHASE INSTALMENTS OR OTHER LOAN PAYMENTS	
HS040: CAPACITY TO AFFORD PAYING FOR ONE WEEK ANNUAL HOLIDAY AWAY FROM HO	оме . 187
HS050: CAPACITY TO AFFORD A MEAL WITH MEAT, CHICKEN, FISH (OR VEGETARIAN	
EQUIVALENT) EVERY SECOND DAY	189
HS060: CAPACITY TO FACE UNEXPECTED FINANCIAL EXPENSES	
HS070: DO YOU HAVE A TELEPHONE (INCLUDING MOBILE PHONE)?	
HS080: DO YOU HAVE A COLOUR TV?	
HS090: DO YOU HAVE A COMPUTER?	
HS100: DO YOU HAVE A WASHING MACHINE?	
HS110: DO YOU HAVE A CAR?	
HS120: ABILITY TO MAKE ENDS MEET	
HS130: LOWEST MONTHLY INCOME TO MAKE ENDS MEET	
HS140: FINANCIAL BURDEN OF THE TOTAL HOUSING COST	
HS150: FINANCIAL BURDEN OF THE REPAYMENT OF DEBTS FROM HIRE PURCHASES OR LO	
HS160: PROBLEMS WITH THE DWELLING: TOO DARK, NOT ENOUGH LIGHT	
HS170: NOISE FROM NEIGHBOURS OR FROM THE STREET	
HS180: POLLUTION, GRIME OR OTHER ENVIRONMENTAL PROBLEMS	
HS190: CRIME VIOLENCE OR VANDALISM IN THE AREA	
HY010: TOTAL HOUSEHOLD GROSS INCOME	
HY020: TOTAL DISPOSABLE HOUSEHOLD INCOME	
HY022: TOTAL DISPOSABLE HOUSEHOLD INCOME BEFORE SOCIAL TRANSFERS OTHER TH	
AGE AND SURVIVOR'S BENEFITS	
HY023: TOTAL DISPOSABLE HOUSEHOLD INCOME BEFORE SOCIAL TRANSFERS INCLUDIN	
AGE AND SURVIVOR'S BENEFITS	
HY025: WITHIN-HOUSEHOLD NON-RESPONSE INFLATION FACTOR	
HY030G/HY030N: IMPUTED RENT	
HY040G/HY040N: INCOME FROM RENTAL OF A PROPERTY OR LAND	
HY090G/HY090N: INTEREST, DIVIDENDS, PROFIT FROM CAPITAL INVESTMENTS IN	
UNINCORPORATED BUSINESS	215
HY050G/HY050N: FAMILY/CHILDREN RELATED ALLOWANCES	
HY060G/HY060N: SOCIAL EXCLUSION NOT ELSEWHERE CLASSIFIED	
HY070G/HY070N: HOUSING ALLOWANCES	

HY080G/HY080N: REGULAR INTER-HOUSEHOLD CASH TRANSFER RECEIVED	
HY081G/HY081N: ALIMONIES RECEIVED (COMPULSORY + VOLUNTARY)	
HY100G/HY100N: INTEREST REPAYMENTS ON MORTGAGE	223
HY110G/HY110N: INCOME RECEIVED BY PEOPLE AGED UNDER 16	224
HY120G/HY120N: REGULAR TAXES ON WEALTH	225
HY130G/HY130N: REGULAR INTER-HOUSEHOLD CASH TRANSFER PAID	226
HY131G/HY131N: ALIMONIES PAID (COMPULSORY + VOLUNTARY)	228
HY140G/HY140N: TAX ON INCOME AND SOCIAL CONTRIBUTIONS	229
HY145N: REPAYMENTS/RECEIPTS FOR TAX ADJUSTMENT	
HY170G/HY170N: VALUE OF GOODS PRODUCED FOR OWN CONSUMPTION	231
PERSONAL DATA (P-FILE)	233
TERSONAL DATA (I-FILE)	433
PB010: YEAR OF THE SURVEY	
PB020: COUNTRY	
PB030: PERSONAL ID	
PB040: PERSONAL CROSS-SECTIONAL WEIGHT	
PB050: PERSONAL BASE WEIGHT	
PB060: PERSONAL CROSS-SECTIONAL WEIGHT FOR SELECTED RESPONDENT	
PB070: PERSONAL DESIGN WEIGHT FOR SELECTED RESPONDENT	240
PB080: PERSONAL BASE WEIGHT FOR SELECTED RESPONDENT	241
PB090: DAY OF THE PERSONAL INTERVIEW	242
PB100: MONTH OF THE PERSONAL INTERVIEW	243
PB110: YEAR OF THE PERSONAL INTERVIEW	244
PB120: MINUTES TO COMPLETE THE PERSONAL QUESTIONNAIRE	245
PB130: MONTH OF BIRTH	246
PB140: YEAR OF BIRTH	
PB150: SEX	
PB160: FATHER ID	
PB170: MOTHER ID.	
PB180: SPOUSE/PARTNER ID	
PB190: MARITAL STATUS.	
PB200: CONSENSUAL UNION	
PB210: COUNTRY OF BIRTH.	
PB220A: CITIZENSHIP 1	
PB220B: CITIZENSHIP 2	
PE010: CURRENT EDUCATION ACTIVITY	
PE020: ISCED LEVEL CURRENTLY ATTENDED	
PE030: YEAR WHEN HIGHEST LEVEL OF EDUCATION WAS ATTAINED	
PE040: HIGHEST ISCED LEVEL ATTAINED	
PH010: GENERAL HEALTH.	
PH020: SUFFER FROM ANY A CHRONIC (LONG-STANDING) ILLNESS OR CONDITION	
PH030: LIMITATION IN ACTIVITIES BECAUSE OF HEALTH PROBLEMS	
PH040: Unmet need for medical examination or treatment	
PH050: MAIN REASON FOR UNMET NEED FOR MEDICAL EXAMINATION OR TREATMENT	
PH060: UNMET NEED FOR DENTAL EXAMINATION OR TREATMENT	
PH070: MAIN REASON FOR UNMET NEED FOR DENTAL EXAMINATION OR TREATMENT	
PL015: PERSON HAS EVER WORKED	
PL020: ACTIVELY LOOKING FOR A JOB	
PL025: AVAILABLE FOR WORK	
PL031: SELF-DEFINED CURRENT ECONOMIC STATUS	
PL035: WORKED AT LEAST 1 HOUR DURING THE PREVIOUS WEEK	
PL040: STATUS IN EMPLOYMENT	
PL050: OCCUPATION (ISCO-88 (COM))	284

PL051: OCCUPATION (ISCO-08 (COM))	. 286
PL060: NUMBER OF HOURS USUALLY WORKED PER WEEK IN MAIN JOB	. 288
PL073: NUMBER OF MONTHS SPENT AT FULL-TIME WORK AS EMPLOYEE	. 290
PL074: NUMBER OF MONTHS SPENT AT PART-TIME WORK AS EMPLOYEE	. 290
PL075: NUMBER OF MONTHS SPENT AT FULL-TIME WORK AS SELF-EMPLOYED (INCLUDING	
FAMILY WORKER)	. 290
PL076: NUMBER OF MONTHS SPENT AT PART-TIME WORK AS SELF-EMPLOYED (INCLUDING	
FAMILY WORKER)	. 290
PL080: NUMBER OF MONTHS SPENT IN UNEMPLOYMENT	. 290
PL085: NUMBER OF MONTHS SPENT IN RETIREMENT OR EARLY RETIREMENT	. 290
PL086: NUMBER OF MONTHS SPENT AS DISABLED OR/AND UNFIT TO WORK	
PL087: NUMBER OF MONTHS SPENT STUDYING	
PL088: NUMBER OF MONTHS SPENT IN COMPULSORY MILITARY SERVICE	. 290
PL089: NUMBER OF MONTHS SPENT FULFILLING DOMESTIC TASKS AND CARE RESPONSIBILITI	
PL090: NUMBER OF MONTHS SPENT IN OTHER INACTIVITY	
PL100: TOTAL NUMBER OF HOURS USUALLY WORKED IN SECOND, THIRD JOBS	
PL111: NACE REV.2	
PL120: REASON FOR WORKING LESS THAN 30 HOURS	
PL130: NUMBER OF PERSONS WORKING AT THE LOCAL UNIT	. 295
PL140: Type of contract	
PL150: MANAGERIAL POSITION	. 298
PL160: CHANGE OF JOB SINCE LAST YEAR	. 299
PL170: REASON FOR CHANGE	
PL180: MOST RECENT CHANGE IN THE INDIVIDUAL'S ACTIVITY STATUS	. 302
PL190: WHEN BEGAN FIRST REGULAR JOB	. 303
PL200: NUMBER OF YEARS SPENT IN PAID WORK	
PL211A: MAIN ACTIVITY ON JANUARY	
PL211B: MAIN ACTIVITY ON FEBRUARY	. 305
PL211C: MAIN ACTIVITY ON MARCH	. 305
PL211D: MAIN ACTIVITY ON APRIL	. 305
PL211E: MAIN ACTIVITY ON MAY	. 305
PL211F: MAIN ACTIVITY ON JUNE	. 305
PL211G: MAIN ACTIVITY ON JULY	. 305
PL211H: MAIN ACTIVITY ON AUGUST	. 305
PL211I: MAIN ACTIVITY ON SEPTEMBER	. 305
PL211J: MAIN ACTIVITY ON OCTOBER	. 305
PL211K: MAIN ACTIVITY ON NOVEMBER	. 305
PL211L: MAIN ACTIVITY ON DECEMBER	. 305
PY010G/PY010N: EMPLOYEE CASH OR NEAR CASH INCOME	. 307
PY020G/PY020N: NON-CASH EMPLOYEE INCOME	. 309
PY021G/PY021N: COMPANY CAR	. 311
PY030G: EMPLOYER'S SOCIAL INSURANCE CONTRIBUTION	. 312
PY031G: OPTIONAL EMPLOYER'S SOCIAL INSURANCE CONTRIBUTIONS	. 312
PY035G/PY035N: CONTRIBUTIONS TO INDIVIDUAL PRIVATE PENSION PLANS	. 314
PY050G/PY050N: CASH BENEFITS OR LOSSES FROM SELF-EMPLOYMENT	. 316
PY080G/PY080N: PENSION FROM INDIVIDUAL PRIVATE PLANS	. 321
PY090G/PY090N: UNEMPLOYMENT BENEFITS	. 323
PY100G/PY100N: OLD-AGE BENEFITS	
PY110G/PY110N: SURVIVOR' BENEFITS	
PY120G/PY120N: SICKNESS BENEFITS	
PY130G/PY130N: DISABILITY BENEFITS	
PY140G/PY140N: EDUCATION-RELATED ALLOWANCES	. 323
PY200G: GROSS MONTHLY EARNINGS FOR EMPLOYEES	. 331

ANNEXES	333 -
ANNEX 1: NUTS	333 -
ANNEX 2: CLASSIFICATION OF COUNTRIES	
ANNEX 3: NACE: STATISTICAL CLASSIFICATION OF ECONOMIC ACTIVITIES	
ANNEX 4: ISCO: INTERNATIONAL STANDARD CLASSIFICATION OF OCCUPATIONS	
ANNEX 5: THE ENTERPRISE AND LOCAL UNIT	
ANNEX 6: REGISTER FILES IN EU-SILC	
ANNEX 7: COMPANY CAR	
ANNEX 8: 2012 MODULE ON HOUSING CONDITIONS (GUIDELINES AND QUESTIONNAIRE)	
UNIT	363 -
MODE OF DATA COLLECTION	
REFERENCE PERIOD.	
DEFINITIONS	
DATA TRANSMISSION	
1. ITEMS ASKED AT HOUSEHOLD LEVEL	366 -
HC010: SHORTAGE OF SPACE IN THE DWELLING	
HC020: SIZE OF THE DWELLING IN SQUARE METERS	367 -
HC030: ADEQUATE ELECTRICAL INSTALLATIONS	
HC040: ADEQUATE PLUMBING/WATER INSTALLATIONS	
HC050: DWELLING EQUIPPED WITH HEATING FACILITIES	370 -
HC060: DWELLING COMFORTABLY WARM DURING WINTER TIME	371 -
HC070: DWELLING COMFORTABLY COOL DURING SUMMER TIME	372 -
HC080: OVERALL SATISFACTION WITH THE DWELLING	
HC090: ACCESSIBILITY OF GROCERY SERVICES	374 -
HC100: ACCESSIBILITY OF BANKING SERVICES	
HC110: ACCESSIBILITY OF POSTAL SERVICES	
HC120: ACCESSIBILITY OF PUBLIC TRANSPORT	377 -
HC130: ACCESSIBILITY OF PRIMARY HEALTH CARE SERVICES	378 -
HC140: ACCESSIBILITY OF COMPULSORY SCHOOL	379 -
HC150: IMMEDIATE RISK OF CHANGING THE DWELLING	381
HC160: MAIN REASON FOR THE EXPECTATION TO BE FORCED TO LEAVE THE DWELLING.	382
2. ITEMS ASKED AT INDIVIDUAL LEVEL	383
PC170: CHANGE OF THE DWELLING	383
PC180: MAIN REASON FOR THE CHANGE OF THE DWELLING	
3. ADDITIONAL VARIABLES FOR NATIONAL CONSIDERATION	
PRODUCTION OF RENEWABLE ENERGIES FOR OWN CONSUMPTION	
DWELLING EQUIDDED WITH ALD CONDITIONING EACH ITIES	

## Introduction

#### **AIM**

EU-SILC is the EU reference source for comparative statistics on income distribution and social exclusion at European level, particularly in the context of the 'Programme of Community action to encourage cooperation between Member States to combat social exclusion' and for producing structural indicators on social cohesion for the annual spring report to the European Council.

It provides two types of annual data:

- Cross-sectional data pertaining to a given time or a certain time period with variables on income, poverty, social exclusion and other living conditions, and
- Longitudinal data pertaining to individual-level changes over time, observed periodically over a four year period.

The first priority is to be given to the delivery of comparable, timely and high quality cross-sectional data. Longitudinal data is limited to income information and a limited set of critical qualitative, non-monetary variables of deprivation, aimed at identifying the incidence and dynamic processes of persistence of poverty and social exclusion among subgroups in the population. The longitudinal component is also more limited in sample size compared to the primary, cross-sectional component. Furthermore, for any given set of individuals, microlevel changes are followed up only for a limited duration, such as a period of four years.

For both the cross-sectional and longitudinal components, all household and personal data are linkable. Furthermore, modules providing updated information in the field of social exclusion is included starting from 2005.

## TIME REFERENCE

The cross-sectional and the longitudinal data are produced annually.

## REFERENCE POPULATION

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

Small parts of the national territory amounting to no more than 2% of the national population and the national territories listed below may be excluded from EU-SILC.

#### National territories that may be excluded from EU-SILC

Country	Territories	
France	French Overseas Departments and territories	
Netherlands	The West Frisian Islands with the exception of Texel	
Ireland	All offshore islands with the exception of Achill, Bull, Cruit, Gorumna, Inishnee, Lettermore, Lettermullan and Valentia	
United kingdom	Scotland north of the Caledonian Canal, the Scilly Islands	

## **LEGAL BASIS**

The introduction of a legal act for EU-SILC was decided by the Directors of social statistics in June 2000. A framework regulation (regulation (EC) n° 1177/2003) was adopted by the Council and European Parliament on 16 June 2003 and published in the Official Journal on 3 July 2003. Following the successive EU enlargements, this regulation was amended by regulation (EC) n° 1553/2005 of 7 September 2005 and regulation (EC) n° 1791/2006 of 20 November 2006.

In parallel, Eurostat and the MS developed the technical aspects of the instrument. Practically, the five following Commission regulations implementing the framework regulation were elaborated:

- <u>Definitions</u>: regulation (EC) n°1980/2003 of 21 October 2003, amended by regulation (EC) n° 676/2006) of 2 May 2006;
- <u>Fieldwork aspects and imputation procedures:</u> regulation (EC) n°1981/2003 of 21 October 2003;
- Sampling and tracing rules: regulation (EC) n°1982/2003 of 21 October 2003;
- <u>List of target primary variables:</u> regulation (EC) n°1983/2003 of 21 October 2003;
- Content of intermediate and final quality reports: regulation (EC) n° 28/2004 of 5 January 2004.

In addition, every year a Commission regulation describing the list of secondary target variables (annual modules) is published. At the time of writing this document, the following regulation have been published:

- <u>Module 2005</u> on the list of target secondary variables relating to the intergenerational transmission of poverty: Commission Regulation (EC) N° 16/2004 of 6 January 2004;
- <u>Module 2006</u> on the list of target secondary variables relating to social participation: Commission Regulation (EC) N° 13/2005 of 6 January 2005;
- <u>Module 2007</u> on the list of target secondary variables relating to housing conditions: Commission Regulation (EC) N° 315/2006 of 22 February 2006;
- Module 2008 on the list of target secondary variables relating to over-indebtedness and financial exclusion: Commission Regulation (EC) N° 215/2007 of 28 February 2007;
- Module 2009 on the list of target secondary variables relating to material deprivation: Commission Regulation (EC) N° 362/2008 of 14 April 2008.
- <u>Module 2010</u> on the list of target secondary variables relating to intra-household sharing of resources: Commission Regulation (EC) N° 646/2009 of 23 July 2009.
- Module 2011 on the list of target secondary variables relating to intergenerational transmission of disadvantages: Commission Regulation (EU) N° 481/2010 of 1 June 2010.
- <u>Module 2012</u> on the list of target secondary variables relating to housing conditions: Commission Regulation (EU) N° 1157/2010 of 9 December 2010.

The EU-SILC project was launched in 2003, on the basis of a 'gentlemen agreement' in six Member States (Belgium, Denmark, Greece, Ireland, Luxembourg, and Austria) as well as in Norway.

The starting date for the EU-SILC instrument under the Framework Regulation is 2004 for 12 Member States<sup>1</sup>, Estonia, Norway and Iceland. A derogation was given for Germany, the Netherlands, the UK and nine of the then ten new Member States (all except Estonia) to start in 2005 under the condition that they supply comparable data for the year 2004 for the common EU indicators that have been adopted by the Council in the context of the open method of co-ordination.

Bulgaria and Turkey started the full implementation of the EU-SILC instrument in 2006 while Romania and Switzerland did it in 2007.

Three further countries, i.e. Croatia, the former Yugoslav Republic of Macedonia (FYROM) and Serbia, are in test implementation at the time of writing this document.

<sup>&</sup>lt;sup>1</sup> Belgium, Denmark, Ireland, Greece, Spain, France, Italy, Luxembourg, Austria, Portugal, Finland and Sweden.

### TIMELY AND FLEXIBLE

Since improving timeliness has been one of the tool's core objectives, and because it is universally recognised that the longitudinal dimension takes more time in data production, priority has been given to the delivery of timely and comparable cross-sectional data.

Another characteristic is flexibility in terms of data sources and sampling design. Eurostat strongly encourages the use of existing data sources, whether they are surveys or registers and the use of national sampling design.

Nevertheless, an integrated design for those countries planning to launch a new operation is recommended by Eurostat. This design aims to be the most cost effective and efficient for both, cross-sectional and longitudinal requirements.

On the other hand, the integration of the new instrument into established national statistical systems is recommended and should be promoted.

#### THE INTEGRATED DESIGN

As mentioned above one characteristic of EU-SILC is flexibility in terms of sampling design.

In this way, the cross-sectional and longitudinal data can come from separate sources, i.e., the longitudinal dataset does not need to be "linkable" with the cross-sectional dataset at the micro-level. Of course, such linkage is not precluded, and would normally be possible when the two types of data come from the same source. Depending on the country, micro-data could come from:

- two or more national sources (surveys and/or registers);
- one or more existing national sources combined or not with a new survey;
- a new harmonised survey to meet all EU-SILC requirements.

The only constraint is that for both, the cross-sectional and longitudinal components, all household and personal data will be linkable.

An integrated design ( 'the rotational design') for those countries that launched a new survey was proposed by Eurostat.

Rotational design refers to the sample selection based on a number of subsamples or replications, each of them similar in size and design and representative of the whole population. From one year to the next, some replications are retained, while others are dropped and replaced by new replications.

The fundamental characteristic of the integrated design is that the cross-sectional and longitudinal statistics are produced from essentially the same set of sample observations, thus avoiding unnecessary duplications which entirely separate cross-sectional and longitudinal surveys will involve.

#### Why an integrated design?

Annual cross-sectional estimates can be produced from:

- independent samples from year to year; or
- a long-term panel (i.e. retaining the same sample from one year to the next), or
- a rotational design i.e. a combination of the above two rotating a part of the sample from one year to the next and retaining the other part unchanged.

Cross-sectional estimates for a single year are essentially unaffected by the pattern of rotation (theoretically, modest improvements may be achieved with partial overlaps using special estimation procedures).

In principle, annual cross-sectional estimates can be produced using independent (non-overlapping) samples each year. The major consideration favouring independent samples is that such a system avoids cumulating of respondent burden which repeated interviewing of the same units would involve. The statistical advantage is that the data can be cumulated over survey years more efficiently to obtain larger sample sizes, permitting more detailed analysis and, even more importantly, greater spatial breakdown for the production of regional (subnational) estimates. Independent annual samples may succeed in achieving better response rates, and in any case are free from the cumulative effect of sample attrition over time. The last mentioned aspect also makes the control and implementation of the sample less

complex. The main disadvantage of independent samples is the greater sampling error involved in the measurement of year-to-year net change and trends. Independent samples also tend to have higher fieldwork costs than overlapping samples re-using the same units: this is because of the higher costs of selecting and locating new sample units.

The other extreme would be to use a fixed panel, i.e. using the same sample from year to year. The advantages and disadvantages are just the opposite of those noted above for independent annual samples. Cumulative respondent burden and sample attrition, as well as the greater complexity in control and follow-up of the lag sample, are major problems. The high positive correlations preclude efficient cumulation of the data over time. However, for the same reason, the system is efficient for the measurement of net change over time. In any case, gross i.e. micro-level changes can be measured only on the basis of a panel of observations.

The appropriate pattern of rotation is determined primarily on the basis of a compromise between the two objectives:

- cumulation of data over time, so as to achieve increased sample size, which favours maximum rotation i.e. independent samples; and
- the measurement of change over time, which favours maximum overlap.

The effect of departures from these patterns depends on the correlation over time.

In the case of EU-SILC, the measurement of trends (changes over time) is likely to be clearly more important than cumulating data over years, favouring large overlaps (P) from one year to the next. However, as noted above, there are practical limitation in continuing with the same sample, i.e. having large overlaps (P close to 1.0) from year to year.

A rotational sample design appears to be the most suitable option for a cross-sectional survey, without precluding the other options in particular circumstances.

The longitudinal component of EU-SILC will consist of selecting an initial sample, then following up individuals in that sample annually over time, i.e. for the annual longitudinal component the sample must of course be related over time, allowing only the last two options:

- a long-term panel (i.e. retaining the same sample from one year to the next), or
- a rotational design i.e. a combination of the above two rotating a part of the sample from one year to the next and retaining the other part unchanged.

For the combined cross-sectional and longitudinal components, the options are given by the 'intersection' of the above two sets, i.e. a rotational design or a long-term design.

Due to the fact that as it was mentioned above 'the rotational design' is the most suitable option for EU-SILC cross-sectional component, and due that a 'rotational design' updates the sample every year, Eurostat has recommended this design for countries that start a new survey.

On the other hand, the most important objectives of the longitudinal component of EU-SILC is to allow the calculation of the *Social Cohesion Indicator on*" at persistent-risk-of poverty rate". This indicator is computed as the percentage of the population living in households where the equivalised disposable income was below the 60% threshold for the current year and at least two out of the preceding three years. In this way, at the population selected the first year need to be followed-up at least 4 years, i.e. the panel duration should be of at least 4

years. For the above mentioned reason Eurostat has recommended a rotational design with 4 sub-samples or replications.

Figures 1 and 2 below illustrate the type of structure which has been recommended by Eurostat. This structure will be suitable for meeting the combined cross-sectional and longitudinal requirements.

Figure 1: Illustration of a simple rotational design

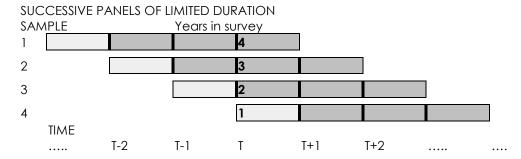


Figure 1 illustrates a simple rotational design (once the system is fully established). The sample for any one year consists of 4 replications, which have been in the survey for 1-4 years (as shown for 'Time = T' in the figure). Any particular replication remains in the survey for 4 years; each year one of the 4 replications from the previous year is dropped and a new one added. Between year T and T+1 the sample overlap is 75%; the overlap between year T and year T+2 is 50%; and it is reduced to 25% from year T to year T+3, and to zero for longer intervals.

For EU-SILC, such a 'linear' rotation pattern is the simplest and most appropriate in so far as the main interest is in monitoring year-to-year changes.

Figure 2 illustrates how a rotation pattern may be started from year 1.

Figure 2. Illustration of the rotation pattern in the first years

SURVEY ROUND (TIME)

1 2 3 4 5 6 7 .....

PATTERN FROM YEAR 1

At the beginning, a cross-sectional representative sample of households is selected. It is divided into say 4 sub-samples, each by itself representative of the whole population and similar in structure to the whole sample. One sub-sample is purely cross-sectional and is not followed up after the first round. Respondents in the second sub-sample are requested to participate in the panel for 2 years, in the third sub-sample for 3 years, and in the fourth for 4 years. From year 2 onwards, one new panel is introduced each year, with request for participation for 4 years. In any one year, the sample consists of 4 sub-samples, which together constitute the cross-sectional sample. In year 1 they are all new samples; in all subsequent years, only one is new sample. In year 2, three are panels in the second year; in year 3, one is a panel in the second year and two in the third year; in subsequent years, one is a panel for the second year, one for the third year, and one for the fourth (final) year.

## **SELECTION OF THE SAMPLE**

According to the Commission Regulation on sampling and tracing rules, the selection of the sample will be drawn according to the following requirements:

- 1. For all components of EU-SILC (whether survey or register based), the cross-sectional and longitudinal (initial sample) data shall be based on a nationally representative probability sample of the population residing in private households within the country, irrespective of language, nationality or legal residence status. All private households and all persons aged 16 and over within the household are eligible for the operation.
- 2. Representative probability samples shall be achieved both for households, which form the basic units of sampling, data collection and data analysis, and for individual persons in the target population.
- 3. The sampling frame and methods of sample selection shall ensure that every individual and household in the target population is assigned a known and non-zero probability of selection.
- 4. By way of exception, paragraphs 1 to 3 shall apply in Germany exclusively to the part of the sample based on probability sampling according to Article 8 of the Regulation of the European Parliament and of the Council (EC) No 1177/2003 concerning Community Statistics on Income and Living Conditions.

Article 8 of the EU-SILC Regulation of the European Parliament and of the Council mentions:

- 1. The cross-sectional and longitudinal data shall be based on nationally representative probability samples.
- 2. By way of exception to paragraph 1, Germany shall supply cross-sectional data based on a nationally representative probability sample for the first time for the year 2008. For the year 2005, Germany shall supply data for one fourth based on probability sampling and for three fourths based on quota samples, the latter to be progressively replaced by random selection so as to achieve fully representative probability sampling by 2008.

For the longitudinal component, Germany shall supply for the year 2006 one third of longitudinal data (data for year 2005 and 2006) based on probability sampling and two thirds based on quota samples. For the year 2007, half of the longitudinal data relating to years 2005, 2006 and 2007 shall be based on probability sampling and half on quota sample. After 2007 all of the longitudinal data shall be based on probability sampling.

## **SURVEY UNITS**

In terms of the units involved, four types of data are involved in EU-SILC:

- (i) variables measured at the household level;
- (ii) information on household size and composition and basic characteristics of household members;
- (iii) income and other more complex variables termed 'basic variables' (education, basic labour information and second job) measured at the personal level, but normally aggregated to construct household-level variables; and
- (iv) variables collected and analysed at the person-level 'the detailed variables' (health, access to health care, detailed labour information, activity history and calendar of activities').

For set (i)-(ii) variables, a sample of households including all household members is required.

Among these, sets (i) and (ii) will normally be collected from a single, appropriately designated respondent in each sample household – using a household questionnaire for set (i) and a household member roster for set (ii). Alternatively, some or all of these may be compiled from registers or other administrative sources.

Set (iii) concerning mainly but not exclusively the detailed collection of household and personal income – must be collected directly at the person level, covering all persons in each sample household. In most countries, i.e. in the so-called 'survey countries', these income variables will be collected through personal interviews with all adults aged 16+ in each sample household. This collection will be normally combined with that for set (iv) detailed variables, since the latter also must also be collected directly at the person level.

By contrast, in 'register countries', set (iii) variables will be compiled from registers and other administrative sources, thus avoiding the need to interview all members (adults aged 16+) in each sample household.

Set (iv) variables will normally be collected through direct personal interview in all countries. These are too complex or personal in nature to be collected by proxy; nor are they available from registers or other administrative sources. For the 'survey countries', this collection will normally be combined with that for set (iii) variables as noted above – consequently both normally based on a sample of complete households, i.e. covering all persons aged 16+ in each sample household.

However, from the substantive requirements of EU-SILC, it is *not essential* that – in contrast to set (iii) variables – set (iv) variables be collected for all persons in each sample household. It is possible to do this collection on a representative sample of persons (adult members aged 16+), such as by selecting one such person per sample household. It is expected that this option will normally be followed in 'register countries', since for these countries interviewing all household members for set (iii) is not involved. In countries which choose to do so, the sampling process involved will be the selection of *persons* (usually one adult member aged 16+ per household) directly or through a sample of households. The selected individuals may be termed 'selected respondents'. Randomised selection procedures must be used to ensure that a representative sample of persons is obtained from the representative sample of households.

Table 1 summarises the type of survey units for sampling, analysis and data collection involved in EU-SILC. The ultimate units used in the sample selection may be addresses, households or persons, each unit selected with a known probability. From these, it is always necessary to construct a sample of households, the probability of each household in the sample being determined through its association (or identity, as the case may be) with units in the sample selected. The analysis units can be households, all members, adult members, or possibly a subsample of adult members; these are the units to which the information collected pertains. Their probabilities of selection (or the corresponding sample weights) are determined through their association with the sample household. The collection unit refers to the person or source providing the information.

Table 1 Survey units for sampling, analysis, and data collection

Sampling unit		Analysis units	Collection unit/source	
Selected	constructed		'survey country'	'register country'
Address		Set (i): household	Household respondent (HR)	Registers +HR
Or	Household	Set (ii): all household members	Household respondent*	Registers +HR
Household Or Person		Set (iii): household and personal income and basic	Personal interview (all members 16+)	Registers (all members 16+)
(aged 16+)		variables Set (iv): detaile	d variables	
		All members 16+	Personal interview**	
		Selected respondent		Personal interview

<sup>\*</sup> combined with set (i) household interview

In each country, EU-SILC involves the provision of cross-sectional and longitudinal data, both for 'income and basic variables' (I) and 'detailed variables' (S). Combining these dimensions gives four basic data components in EU-SILC:

- ° (CI) Cross-sectional income component (included basic variables).
- ° (CS) Cross-sectional detailed component
- ° (**LI**) Longitudinal income component (included basic variables).
- ° (**LS**) Longitudinal detailed component

<sup>\*\*</sup> combined with set (iii) personal interview

Substantive requirements of EU-SILC impose certain conditions on the samples for these components. The basic (essential, minimum) condition which must be satisfied by any data structure in EU-SILC can be expressed as:

$$\begin{array}{cccc}
(a) & CS & \subseteq & CI \\
(b) & LS & \subseteq & LI
\end{array}$$

... the basic condition of EU-SILC data structure.

The basic condition means that the detailed data must be collected on the same sample as the income data, or on a subsample of the latter. The condition applies separately to both the cross-sectional and longitudinal components.

#### SAMPLE SIZE

On the basis of various statistical and practical considerations and the precision requirements for the most critical variables, the minimum effective sample sizes to be achieved were defined. These are presented in the Annex II of the Framework Regulation (and its subsequent revisions) and in table I hereafter

Sample size for the longitudinal component refers, for any pair of consecutive years, to the number of households successfully interviewed in the first year in which all or at least a majority of the household members aged 16 or over are successfully interviewed in both the years.

For the cross-sectional component, the plans are to achieve the minimum effective sample size of around 131.000 households in the EU as a whole (137.000 including Iceland and Norway). The allocation of the EU sample among countries represents a compromise between two objectives: the production of results at the level of individual countries, and production for the EU as a whole. Requirements for the longitudinal data will be less important. For this component, an effective sample size of around 98.000 households (103.000 including Iceland and Norway) is planned.

Member States using registers for income and other data may use a sample of persons (selected respondents) rather than a sample of complete households in the interview survey. The minimum effective sample size in terms of the number of persons aged 16 or over to be interviewed in detail is in this case taken as 75 % of the figures shown in columns 3 and 4 of the table I, for the cross-sectional and longitudinal components respectively.

The minimum effective sample size to be achieved for those countries selecting a sample of persons rather than a sample of households or address will be as set out in the table II hereafter.

The reference is to the effective sample size, which is the size required if the survey were based on simple random sampling (design effect in relation to the 'risk of poverty rate' variable = 1.0). The actual sample sizes will have to be larger to the extent that the design effects exceed 1.0 and to compensate for all kinds of non-response. Furthermore, the sample size refers to the number of valid households which are households for which, and for all members of which, all or nearly all the required information has been obtained.

For countries with a sample of persons design, information on income and other data shall be collected for the household of each selected respondent and for all its members.

Table I. Minimum effective sample size for countries (based on the use of a sample of households/address)

EU-Member States	Households		Persons aged 16 or over to be interviewed	
	Cross-sectional	Longitudinal	Cross-sectional	Longitudinal
Belgium	4 750	3 500	8 750	6 500
Bulgaria	4 500	3 500	10 000	7 500
Czech Republic	4 750	3 500	10 000	7 500
Denmark	4 250	3 250	7 250	5 500
Germany	8 250	6 000	14 500	10 500
Estonia	3 500	2 750	7 750	5 750
Greece	4 750	3 500	10 000	7 250
Spain	6 500	5 000	16 000	12 250
France	7 250	5 500	13 500	10 250
Ireland	3 750	2 750	8 000	6 000
Italy	7 250	5 500	15 500	11 750
Cyprus	3 250	2 500	7 500	5 500
Latvia	3 750	2 750	7 650	5 600
Lithuania	4 000	3 000	9 000	6 750
Luxembourg	3 250	2 500	6 500	5 000
Hungary	4 750	3 500	10 250	7 750
Malta	3 000	2 250	7 000	5 250
Netherlands	5 000	3 750	8 750	6 500
Austria	4 500	3 250	8 750	6 250
Poland	6 000	4 500	15 000	11 250
Portugal	4 500	3 250	10 500	7 500
Romania	5 250	4 000	12 750	9 500
Slovenia	3 750	2 750	9 000	6 750
Slovakia	4 250	3 250	11 000	8 250
Finland	4 000	3 000	6 750	5 000
Sweden	4 500	3 500	7 500	5 750
United Kingdom	7 500	5 750	13 750	10 500
Total of EU Member States	130 750	98 250	272 900	203 850
Iceland	2 250	1 700	3 750	2 800
Norway	3 750	2 750	6 250	4 650
Total including Iceland and Norway	136 750	102 700	282 900	211 300

Table II. Minimum effective sample size for countries using a sample or persons

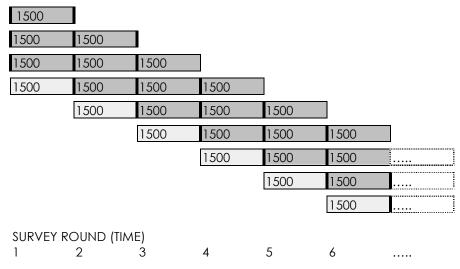
<b>EU-Member States</b>	Households / Persons aged 16 or over to be interviewed in <u>detail</u>		Persons aged 10 cove	
	Cross-sectional	Longitudinal	Cross-sectional	Longitudinal
Denmark	5 500	4 250	9 500	7 250
Netherlands	6 500	5 000	11 500	8 750
Slovenia	6 750	5 000	16 250	12 250
Finland	5 000	3 750	8 500	6 250
Sweden	5 750	4 500	9 500	7 500
Non EU countries				
Iceland	3 000	2 000	5 000	3 250
Norway	4 750	3 500	8 000	6 000

Countries using a sample of persons (selected respondents) must select an extra sample to cover population 14 and 15 years old.

## The integrated design (example)

#### A) Countries using a sample of households address

Take the case of Poland. The sample size requirements for the cross-sectional component is 6000 and for the longitudinal component (two consecutives years) 4500.



In columns we can read the cross-sectional component and in rows the longitudinal component. Every year we have a sample of 6000 households for the cross-sectional component.

For every two consecutives years, we have a sample of 4500 households/address for EU-SILC longitudinal component (this sample is based on 3 panels (replications), i.e. each panel has a sample size of 1500). From the 4<sup>th</sup> year of survey implementation we will have a panel with four longitudinal observations, a panel with 3 and a panel with 2.

#### B) Countries using a sample of persons

If Poland chooses to select a sample of persons instead a sample of households the required sample size will be 11.250 households (selected respondents) for EU-SILC cross-sectional component and 8.500 for EU-SILC longitudinal component. In this case each panel will have a sample size of approximately 2850 households.

## SAMPLE IMPLEMENTATION

The following rules about sample implementation are laid down in the CR on fieldwork aspects and imputation procedures.

- 1. Each Member State shall follow appropriate procedures to maximise the response rates achieved, in accordance with its own "best practices". In the case of an interview survey, at least three call-backs shall be made before a household or individual is accepted as non-responding, unless there are conclusive reasons (such as a definite refusal to co-operate, circumstances endangering the safety of the interviewer, etc.) why this cannot be done.
- 2. EU-SILC shall be based on the selection and implementation of a probability sample. As a rule, the units enumerated in the survey shall be exactly the same units as those selected for the purpose in accordance with the sampling design, i.e. not substituted for by other units.
- 3. Records shall be kept of the outcome of each household and person selected for the sample, distinguishing (i) eligible units successfully enumerated, (ii) eligible units not successfully enumerated, (iii) selected units not found to be eligible for the survey and, (iv) units not successfully enumerated where the eligibility status could not be determined. Reasons for the failure to successfully enumerate eligible units shall be recorded, identifying at least the main categories such as non-contact, refusal, and incapacity to respond (such as being ill). Circumstances of units found to be ineligible or in the uncertain eligibility category shall also be recorded.
- 4. The proxy rate shall be kept as limited as possible for the income personal variables and for any variables required for at least one household member aged 16 or more.
- 5. In the cross-sectional component and in the first year of each panel constituting the longitudinal component, controlled substitutions may be allowed only where the response rate falls below 60% and one of the following situations arises:
  - address non-contacted because it cannot be located or is inaccessible, or,
  - address contacted but interview not completed because the household refuses to co-operate, the entire household is temporarily away, or the household is unable to respond.

No substitutions shall be allowed for second and subsequent waves of a panel in the longitudinal component.

Procedures shall be followed to ensure that the process of substitution is controlled to the maximum extent possible. These include the use of a design which ensures that substitutes are selected so as to match the substituted units closely for important characteristics. The substitutions shall be allowed only after special efforts have been made to convince refusals, and properly scheduled call-backs have been made to other non-respondents. A household shall not be substituted by another non-sample household at the same address.

#### SURVEY DURATION AND TIME

The following rules about survey duration and time are laid down in the CR on fieldwork aspects and imputation procedures.

- 1. The interval between the end of the income reference period and the time of the interview for the respondent concerned shall be limited to 8 months as far as possible. This applies both to the household and personal samples, and irrespective of whether the reference period used is fixed in terms of calendar dates for the whole sample or is a moving reference period determined according to the timing of the interview for the household or person concerned.
- 2. By way of exception to paragraph 1, if the income variables are collected from registers the interval between the end of the income reference period and the time of interview for current variables shall be limited to 12 months.
- 3. Where all the data are collected through field interviewing and a fixed income reference period is used, the total duration of the data collection of the sample shall be limited to 4 months as far as possible.
- 4. Where the data are collected through field interviewing using a moving income reference period and the fieldwork duration exceeds 3 months, the total annual sample shall be shared approximately equally between the fieldwork months. In this case, the total fieldwork duration for the cross-sectional component and each wave of the longitudinal component shall not exceed 12 months.
- 5. For the longitudinal component, the collection or compilation of data, for a given unit (household or person), between successive waves shall be kept as close as possible to 12 months.

#### WEIGHTING

#### I. Introduction

The objective of the present section is to outline a unified structure for the whole weighting procedure for the standard integrated EU-SILC design, covering the initial sample, and its cross-sectional as well as longitudinal development. Such an integrated structure is possible and desirable, given that different parts of the EU-SILC design are inter-related.

According to the Commission Regulation on sampling and tracing rules (EC No 1982/2003, §7.4): Weighting factors shall be calculated as required to take into account the units' probability of selection, non-response and, as appropriate, to adjust the sample to external data relating to the distribution of households and persons in the target population, such as by sex, age (five-year age groups), household size and composition and region (NUTS II level), or relating to income data from other national sources where the Member States concerned consider such external data to be sufficiently reliable.

On the other hand, the Framework Regulation (No 1177/2003) pointed out in its article 10 that: Member States shall transmit to the Commission (Eurostat) in the form of micro-data files weighted cross-sectional and longitudinal data which has been fully checked, edited and imputed in relation to income.

#### II. Weighting for the first year of each sub-sample

#### 1. Design weights (Household weights DB080 and "Selected respondent" weights PB070)

These weights are of methodological interest, but are not used in substantive analysis. Actually, the design weights need to be defined for all selected units, and not only for responding units. DB080 is computed as follows:

In case of households are sampled (or addresses or other units containing households):

$$DB080_h = 1 / (probability of selection of h)$$

- In case of persons are sampled:

$$DB080_h = 1 / \Sigma$$
 (probabilities of selection of eligible persons in h)

"Eligible persons" are persons who are given a non-zero probability in the selection procedure, such as persons aged 14+ or 16+. In the particular situation where the probability of selection is the same for all eligible persons in each household, the denominator is simply the number of such persons in the household multiplied by that probability of selection.

When households or persons are selected from lists which contain "blanks", i.e. non-existing or unoccupied structures, the unit not being a private household, the household or person listed does not exist..., it is important to ensure that the selection probabilities are computed correctly. For instance, if there are N listings which contain N' actual units, and an equal probability sample of n listing yielding n' actual units is selected, then the selection probability is:

$$\pi_i = \frac{n}{N}$$
 if N'is known
$$= \frac{n}{N}$$
 otherwise (the most common case)

PB070 is defined only when a sample of persons is used, for the selected respondent k:

 $PB070_k = 1$  / (probability of selection of the selected respondent k)

#### 2. Adjustments for non-response

The principle is to adjust the household design weights to allow for the bias which is caused when all measured variables are missing for some of the sample households. The main reasons for not having information are the household refuses to cooperate or is temporarily away. However, other factors may cause household non-response: the data collected are of insufficient quality, the questionnaire has been lost... Non-response is particularly critical when the non-responding households over-represent survey characteristics, which may create substantial bias in the estimates. For instance, one can admit that households with high incomes would be less willing to cooperate to income surveys than households with low incomes.

This step involves estimating response rates or propensities to response as functions of characteristics available for responding and non-responding households, and also characteristics of the areas where the households are located. Basically, the design weights have to be inflated by the inverse of the response propensities in order to compensate for the loss of units in the sample.

A classical procedure consists in modifying the design weights by a factor inversely proportional to the response rate within each "homogeneous group", wherein the response probabilities are assumed to be equal:

$$DB080_{h}^{(N)} = DB080_{h} \cdot \frac{1}{R_{K}}$$

Where R<sub>K</sub> denotes s the (weighted) response rate in the group k the household h belongs to:

$$R_{k} = \frac{sum \ of \ design \ weights \ of \ responding units \ in \ cell \ k}{sum \ of \ design \ weights \ of \ selected \ units \ in \ cell \ k}$$

Numerous, very small weighting cells can result in a large variation in  $R_K$  values, and should be avoided. On the other hand, if only a few broad classes are used, little variation in the response rates across the sample may be captured – making the whole re-weighting process ineffective. On practical ground, cells of average size 100-300 units may be recommended.

An alternative to estimate response probabilities is to use a regression-based approach. Using an appropriate model such as logit regression, response propensities can be estimated as a function of auxiliary variables, which are available for both responding and non-responding cases. When many auxiliary variables are available, this approach is preferable to the first one. A very important point when using the regression approach is to ensure that weights assigned are confined to be within reasonable limits.

In dealing with the effect of non-response, it is of crucial importance to identify responding and non-responding units correctly:

- Selected units which turn out to be non-eligible or non existent must be excluded and not counted as non-responding.
- Imputation has to be made for units with unknown status, i.e. when it is not clear
  whether they are non-eligible or non-respondents. Every unit has to be assigned
  uniquely to one category or the other.

 In surveys where substitution has been allowed, non-responding original units for which successful substitutions have been made are to be considered as 'responding units' in the computation of response rates for the purpose of determining nonresponse weights.

When a sample of persons is involved, exactly the same non-response adjustment as above for the household level applies to the selected respondent as well. Let  $DB080^{(N)}$  the household weight after final non-response adjustment; then the selected respondent non-response weight is given by:

$$PB070^{(N)} = PB070 \cdot \left[ \frac{DB080^{(N)}}{DB080} \right]$$

This follows from the fact that household and personal non-responses always occur together according to EU-SILC interview acceptance procedures. The household interview or data compilation is accepted only when the personal interview has been accepted for the selected respondent.

#### 3. Adjustment to external sources (calibration): SILC target variables DB090 and PB060

The key feature of this step is the modification of the household weights DB080<sup>(N)</sup> to reproduce from the sample population characteristics, namely totals and category frequencies. For example, in a human population survey, age and sex are natural ancillary variables. The distribution of the human population by age and sex is often known from other statistical sources such as a census or a population register and by proper modification of the survey weights, the population structure may be exactly reproduced by the sample. For variables in the survey correlated with the ancillary information, higher precision in estimates is usually obtained on application of the new calibrated weights.

More precisely, suppose that there exist J auxiliary variables  $x_1...x_j...x_J$ , called calibration variables, with known population totals (for the numerical variables) or marginal counts (for the categorical variables). Without loss of generality, we can assume that all the calibration variables are numerical (otherwise, we consider the 0/1 variables for each category).

We seek new household weights DB090 that are "as close as possible" (as determined by a certain distance function) to the initial weights  $DB080^{(N)}$ . These new weights are calibrated on the totals  $X_i$  of the J auxiliary variables; in other words they verify the calibration equations:

$$\forall j=1...J \qquad \sum_{k \in s} DB090_k \cdot x_{jk} = X_j.$$
Where  $DB090_k = g_k \times DB080^{(N)}$ 

The SAS macro CALMAR, developed in the French Statistical Office (INSEE), can calculate calibrated weights.

When using CALMAR, it is recommended to use a bounded method and to impose lower and upper bounds LO and UP on the weight adjustment factors  $g_k$ , usually referred to as gweights. In practice, one has to keep in mind that the choice of the bounds is not free and directly depends on the calibration variables which are chosen: the limits must be adjusted taking into account the differences between the estimates based on the "old" initial weights and the benchmark totals that the new weights are to reproduce, so CALMAR can find a solution within the constraints applied to the problem. In practice, those limits are determined by some "guess and check": we start with a small interval [LO,UP] and we enlarge it until CALMAR finds a solution. Putting calibration bounds prevents from negative and extreme

weights. Extreme weights can lead to unexpected values especially for domain estimates. Negative weights are not acceptable from a practical point of view.

At this stage, Eurostat recommends an "integrative" calibration. The idea is to use both household and individual external information in a single-shot calibration at household level. The individual variables are aggregated at household level by calculating household totals such as the number of male/female in the household, the number of persons aged of 16 and over.....The calibration is done then at household level using household variables and the individual variables in their aggregated form. This technique ensures "consistency" between household and individual estimates by making the household and the individual weights equal.

In the framework of calibration, it is critical that the external control variables are strictly comparable to the corresponding survey variables, the distribution of which is being adjusted. For instance, EU-SILC micro data must not be calibrated on the basis of ILO LFS counts if ILO status is not measured properly in EU-SILC.

When a sample of persons is involved, the final household weights DB090 determined above can be used to compute the corresponding weights PB060 for the selected respondents:

$$PB060 = PB070 \cdot \left\lceil \frac{DB090}{DB080} \right\rceil$$

#### 4. Personal weights (SILC target variables RB050 and PB040)

The calibrated household weight is assigned to each of its members  $RB050_{j\in h} = DB090_h$ . The weights PB040 are derived simply by filtering RB050 to the persons who have received an individual questionnaire (PB040 = RB050). This is based on the fact that for responding households all the individual questionnaires are completed. If individual non-response is restricted, Eurostat recommends indeed imputing individual records at least for individual income components. In this case, personal weights should not be adjusted for individual non-response and consistency between total income and income components is preserved.

#### III. Computation of base weights (SILC target variables RB060, PB050 and PB080)

The base weights are the back spine for the computation of both cross-sectional weights and longitudinal weights. They are computed and updated for a single panel and, as such, they will rarely be used for estimating population parameters. The cross-sectional and longitudinal weights are obtained by combining the base weights in an appropriate way, which will be described later.

In the following we consider a panel (sub-sample, rotation group) selected fresh at time t=1 from population  $P_1$ , and then enumerated for a total of 4 waves, t=1 to 4. Let  $s_1$  be the sample of all persons in the households enumerated at t=1.

For each person in this set, we define the personal base weight at wave t=1 as:

$$\omega_{\scriptscriptstyle L}^{\rm (RB)} = RB060 = RB050$$

Similarly, we define (when applicable) the personal base weight at wave t=1 for selected respondent as:

$$\omega_1^{(SB)} = PB080 = PB060$$

At each subsequent wave, persons have left the population between years t and t+1, due to death, migration out of the country, movement out of the private household sector to an institution or collective household, or have become excluded from the target population for any other reason. We also have to deal with total non-response (attrition) when, for a person who still is in the target population, the measured variables are missing. Some possible causes of missingness are:

- No contact
- Refuse to participate to the survey
- Information not available
- Unable to trace a unit that has moved
- Questionnaires lost

"Base weights" at subsequent waves are obtained by adjusting for attrition base weights from wave 1. In general, in order to determine base weight  $\omega_t^{(RB)}$  (t = 2, 3 or 4) from known  $\omega_{t-1}^{(RB)}$ , we can use the following procedure. Consider the set of persons, denoted  $s_t$ , enumerated at (t-1) who are still in-scope at t. For each person j in this set, we define the following binary variable:

- $r_{i}=1$  if the person is in  $s_{t}$ , i.e. is successfully enumerated at t
- r<sub>i</sub>=0 otherwise, i.e. the person is not successfully enumerated at t

Using a logit model, for instance, we can determine the response propensity  $p_j$  of each person in the above set as a function of a vector of auxiliary variables  $V_i$ :

$$p_{j} = \Pr(R_{j} = 1 | V_{j})$$

Where  $R_j$  is a random indicator of response, whose realisation in  $r_j$ . For any person j in  $s_t$ , the required weight is:

RB060 = 
$$\omega_{t,j}^{(RB)} = \frac{\omega_{t-1,j}^{(RB)}}{p_j}$$
 for wave t>2.

The application of the above procedure requires that for each person enumerated at (t-1), the person's status at t is precisely known. This means that each person in the panel at (t-1) can be classified into one of the following categories uniquely:

- 1. enumerated at t
- 2. remains in the population, but not enumerated at t
- 3. moves out of the population

In practice, for a proportion (of non-enumerated persons) it cannot be determined whether they belong to (2) or (3). Each such person has to be assigned to one or the other of these two groups on the basis of some appropriate exogenous information or model. This may be done, for instance, on the basis of a logit regression model determining the person's propensity to remain in the population as a function of a set of auxiliary variables.

In so far as most non-response occurs at the household level, a majority of the relevant auxiliary variables will be geographical and household level variables (region, household size and type, tenure); also constructed variables (household income, household work status, ...). Some personal variables are also likely to be useful (gender, age, employment status,...) – the sort of variables correlated with persons moving to new address, setting up a new household, remaining traceable, etc. The main difference from similar adjustment for non-response at wave 1 is that a great deal is known about non-respondents at subsequent waves, in so far as those persons have already been enumerated before.

There are certain (small) categories of households and individuals which, according to EU-SILC rules, are not followed-up. Examples are households not enumerated at wave 1 or for two consecutive waves thereafter, or even not enumerated at a single wave for some specified reasons. Also, persons below a certain age (under 14, or under 16 in some countries) are not followed up if they move "alone", i.e. without being accompanied by an adult sample person. For the present purpose, all these categories are treated as non-respondents – even if these have not been recorded as such in the survey because of particular EU-SILC tracing rules. The above applies to all household members covered in R-file, including persons aged 16+, and irrespective of whether an initial sample of households or persons has been used.

For the personal interview sample (P-file), the above provide the starting weights but a further adjustment is required depending on the type of the sample. For a sample of households, the adjustment arises from within-household non-response (which in most countries is very small). First, base weights  $\omega^{(RB)}$  are applied to the completed (and accepted) personal interview sample. Then the results are calibrated on gender and age (in single years) according to the distribution of the R-file sample aged 16+ weighted by the same base weights. The resulting weights  $\omega^{(PB)} = PB050$  for the completed individual interview sample are these post-calibration weights. The result is that the P-file sample gives the same age-sex distribution, as the R-file sample for persons aged 16+.

For a sample of persons, there is no "within household non-response". For income and other data compiled for all household members aged 16+, the already computed base weights are used unchanged, which gives PB050=RB060.

For non-income variables collected through the personal interview with selected respondents (one per household), the personal interview data weighted by:

$$PB080 = \, \omega_t^{(SB)} = \, \omega_{t-1}^{(SB)} \cdot \left\{ \frac{\omega_t^{(RB)}}{\omega_{t-1}^{(RB)}} \right\}, \, \, t \geq 2 \, , \label{eq:pb080}$$

are calibrated on gender and age (in single years) according to the distribution of the total sample aged 16+ weighted differently, namely by  $\omega^{(RB)}$ . The resulting weights for the completed individual interview sample are these post-calibration weights.

There remain some additional categories of persons to be considered:

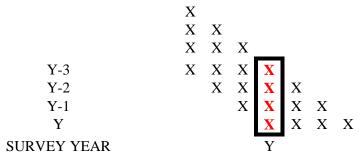
- Children born to sample women. They receive the weight of the mother.
- Persons moving into sample households from outside the survey population. They receive the average of base weights of existing household members.
- Persons moving into sample households from other non-sample households in the population these are "co-residents" and are given zero base weight.

These are also persons who had a base weight to begin with, then were not enumerated for one wave, but subsequently returned as the sample persons not enumerated in wave 2 but returning in wave 3; and those not enumerated in wave 3 but returning in wave 4. Since during their absence, base weights of other persons in the sample are adjusted to take into account that absence; on return these persons cannot be re-assigned a positive weight without adjusting the weights of other persons. Hence it is convenient at this stage (during their absence) to retain a zero base weight for such "returnees".

#### IV. Cross-sectional weights, year 2 onwards

In the next figure the rotation groups in a rotational design are represented and particularly the structure of the cross-sectional sample at each year (in bold):

panel introduced in Year



The cross-sectional sample at Y is clearly representative of the target cross-sectional population at Y, through the selection of a sub-sample at Y in this population. On the other hand, the three "old" sub-samples do not represent some "immigrants" entering the target population. The figure below summarizes the situation for each panel.

Panel introduced in year	Sample and weight	Population
,	C	D
Y	$(s_{1},\omega_{1}^{(RB)})$	$P_{Y}$
Y-1	$(s_{2,}\omega_{2}^{(RB)})$	$\mathrm{P_{Y}-IN_{Y}^{(new)}}$
Y-2	$(s_{3}, \omega_{3}^{\prime (RB)})$	$P_{_{\boldsymbol{Y}}}-(IN_{_{\boldsymbol{Y}}}^{(new)}+IN_{_{\boldsymbol{Y}-l}}^{(new)})$
Y-3	$(s_{4,}\omega'_{4}^{(RB)})$	$P_{Y} - (IN_{Y}^{(new)} + IN_{Y-1}^{(new)} + IN_{Y-2}^{(new)})$

- P<sub>Y</sub> is the target cross-sectional population at Y.
- IN (new) is the population entering the target population and forming separate household (no initial population member) during the year preceding Y.
- s<sub>k</sub> is the sample enumerated in k-th year of a specified panel, for example in year 3 of panel Y-2 in the third row above.
- $\omega_k^{(RB)}$  is the corresponding base weight at k-th year of the specified panel. (RB) indicates that the reference is to base weights of the total population (R-file).
- $\omega_3^{(RB)}$  are the base weights  $\omega_3^{(RB)}$  at t=3, modified to incorporate re-entries into the sample. This refers to sample persons who were of course present at t=1, not present in the sample at t=2, but are re-enumerated again at t=3.  $\omega_3^{(RB)}$  is an extension of  $\omega_3^{(RB)}$ : it gives a non-zero weight to returnees at t=3. This requires that the  $\omega_3^{(RB)}$  weights of all other sample persons have to be adjusted (see annex).
- $\omega''_4^{(RB)}$  These are a modification of base weights  $\omega_4^{(RB)}$  at t=4, as will be defined below.

We use a simple procedure to estimate first adjustment to the base weights  $\omega_4^{(RB)}$ :

$$\omega_4^{\prime (RB)} = \left(\frac{\omega_3^{\prime (RB)}}{\omega_3^{(RB)}}\right) \cdot \omega_4^{(RB)}.$$

Then, in the same way as going from  $\omega_3^{(RB)}$  to  $\omega_3^{(RB)}$  to accommodate returnees at t=3, we go from  $\omega_4^{(RB)}$  to  $\omega_4^{(RB)}$ , adjusting for returnees at t=4.

In order to put the four cross-sections together we first multiply the weights of units according to their origin (initial population or immigrants at previous wave) in order to take into account the number of times the subpopulation they refer to is represented in the different panels. We have:

Let  $\omega_j$  be the weight of unit j after the above mentioned modification. Within a household, each member j has been assigned a weight  $\omega_j$ , except for "co-residents", i.e. for every household members who are not eligible for inclusion in the panel, for whom  $\omega_j$ =0. Average of these weights over all household members (including co-residents) is assigned to each member (including co-residents). We recommend applying this averaging process to all households, including households not containing a co-resident. Finally, the four panels are combined and the weights are scaled by a factor of 4:

$$\omega'_i = \omega_i / 4$$

The last step will be to calibrate these weights against external standards; using the approach already described in II. Integrative calibration will ensure that members in the same household all receive the same weight. Household cross-sectional weight is the same as the average personal cross-sectional weight: DB090=RB050

By replacing  $\omega^{(RB)}$  by  $\omega^{(PB)}$  throughout, we obtain personal cross-sectional weight PB040. Similarly, by replacing it by  $\omega^{(SB)}$ , we obtain the selected respondent cross-sectional weight PB060.

#### Remark: trimming

Trimming refers to recoding of extreme weights to more acceptable values. The objective of trimming is to avoid excessive increase in variance due to weighting, and possibly give rise to influential data, even though the process introduces some bias. The aim is to seek a trimming procedure which reduces the mean squared error. Basically, at each step of the weighting procedure, the distribution of the resulting weight adjustments should be checked.

There is no rigorous procedure for general use for determining the limits for trimming. While more sophisticated approaches are possible, it is desirable to have a simple and practical approach. Such an approach may be quite adequate for the purpose if the permitted limits are wide enough.

The following simple procedure is recommended with:

- $\omega_{i}^{(1)}$  = weight before adjustment (non-response, calibration...)
- $-\omega_i^{(2)}$  = weight determined after adjustment
- $\overline{\omega}^{(1)}, \overline{\omega}^{(2)}$  their respective mean values,

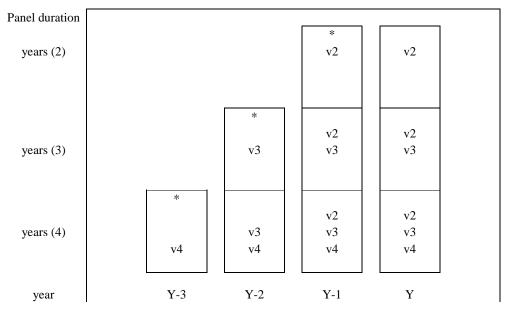
Any computed adjusted weights outside the following limits should be recoded to the boundary of these limits:

$$1/C \le \frac{\omega_i^{(2)}/\overline{\omega}^{(2)}}{\omega_i^{(1)}/\overline{\omega}^{(1)}} \le C$$

A reasonable value for the parameter is C=3. Since trimming alters the mean value of the weights, the above adjustment may be applied iteratively, with the mean re-determined after each cycle. A very small number of cycles should suffice normally.

#### V. Longitudinal weights (SILC variables RB062, RB063 and RB064)

We consider the longitudinal data set delivered each year, after EU-SILC year 2, when the normal rotational system has been established. The set consists of three panels of duration 2, 3 and 4 years as shown below. We will refer to each panel by its current duration.



<sup>\*</sup> Panel selected. Each square represents an annual data set. V2-V4: longitudinal variables to be defined.

These are three longitudinal data sets of different durations which are of interest:

- Longitudinal set of two-year duration, involving annual data from year (Y-1) and Y. All the three panels 2, 3 and 4 contribute to this set. In the diagram, V2 stands for the required longitudinal weight to be used in the analysis of these data. The diagram also shows the annual data sets for which this variable is required.
- Longitudinal sets of three year duration, involving annual data from years (Y-2) to Y.
   Panels 3 and 4 contribute to this set. V3 is the required longitudinal weight for the analysis of this set. The annual data sets for which this variable is required is shown in the diagram.
- Longitudinal set of four year duration. Only panel 4 with data from years (Y-3) to Y contributes to this set. V4 is the required longitudinal weight for its analysis.

## Longitudinal set of two year duration, for the most recent period (Y-1) to Y (variable RB062)

Sample from panel	weight	population not represented *
 (2)	$\omega_2^{(RB)}$	-
(3)	$\omega_3^{(RB)}$	$IN_{Y-l}^{(\mathrm{new})}$
(4)	$\omega_4^{'(RB)}$	$IN_{Y-1}^{(new)} + IN_{Y-2}^{(new)}$

<sup>\*</sup> IN: entrants in the year preceding Y, forming separate households.

To ensure proper representation of the special groups identified in the last column, we firstly multiply the weights assigned to cases in

- 
$$IN_{Y-1}^{(new)}$$
 by 3

- 
$$IN_{Y-2}^{(new)}$$
 by 3/2

Then the required target variables can be computed as follows: RB062<sub>j</sub> =  $\frac{\omega_j}{3}$  where  $\omega_j$  is the weight for any unit j as defined above.

#### Longitudinal set of three years duration, for (Y-2) to Y (variable RB063)

Sample from panel	weight	population not represented *
(3)	$\omega_3^{(RB)}$	
(4)	$\omega_4^{(RB)}$	$IN_{Y-2}^{(new)}$

After multiplying the weights assigned to cases in  $IN_{Y-2}^{(new)}$  by 2, the required target variable for all the longitudinal units of interest can be computed as:

$$RB063_j = \frac{\omega_j}{2}$$

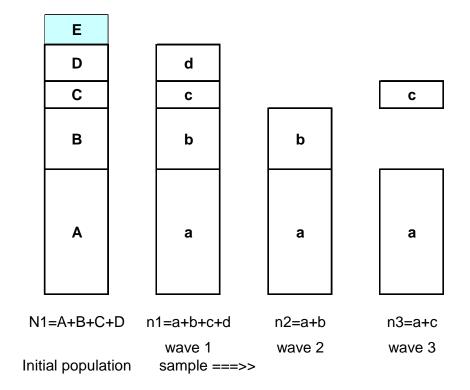
#### Longitudinal set of four years duration, for (Y-3) to Y (variable RB064)

For the four year panel, (Y-3) to Y: the modified base weights  $\omega_4^{(RB)}$  directly give the required target weights.

Only panel 4 with data from years (Y-3) to Y contributes to this set and the longitudinal weight is given by  $\omega_4^{(RB)}$ .

This weight is not equal to RB060. For example, members with RB110 = 4 in the last wave will have RB064 equal to zero while RB060 will be equal to the weight of the mother.

**ANNEX:** Weighting of re-entries



A sample is selected from the initial population at wave 1. We conceptualise the population as being divided into 5 parts, A to E, according to its potential response status.

A = part of the population which potentially responds at all three waves, W=1 to 3.

B = potential respondents at W=1 and W=2, but not at W=3

C = potential respondents at W=1 and W=3, but not at W=2 (re-entries)

D = potential respondents at W=1, but not at any subsequent wave

E = potential non-respondents at W=1.

The last mentioned group (E) are not followed up in EU-SILC. They only affect the sample weights at W=1, but not thereafter. Hence they are of no further interest in this note.

Let us assume for simplicity that all quantities above refer to the 'longitudinal' population, i.e. to all units at wave 1 that remain in-scope at waves 2 and 3.

2. Suppose that w1, the (person-level) weights at wave W=1, have been appropriately determined taking into account the design weights, non-response at wave 1, and any calibration adjustments.

Then, wave 2 weights, w2, can be determined from the wave 1 weights, w1, by taking into account non-response between waves 1 and 2. For instance, conditional on appropriately selected auxiliary variables, we determine response propensities

$$\mathbf{r}_{12} = \mathbf{P}(\mathbf{n}_2 | \mathbf{n}_1),$$

where the right-hand side is an abbreviation indicating the propensity, for the n1 sample units, to be present in sample n2<sup>1</sup>. With the previous wave weights w1 modified as

(1) 
$$W_2 = W_1/P(n_2|n_1),$$

the achieved sample (n2=a+b) at wave 2 with weights w2 represents the population N1, just as does n1 with the original weights w1. Similarly, with weights at wave 2 modified as

(2) 
$$w_3 = \frac{w_2}{P(a|n_2)} = \frac{w_1}{P(a|n_2)P(n_2|n_1)},$$

the 'longitudinal' sample a with weights w3 represents the population N1, just as does n2 with weights w2, and n1 with the original weights w1.

3. The objective is to determine weights  $w_3$ ' such that n3=(a+c) represents the population N1. Clearly, in terms of the propensity to be in a conditional on being in (a+c), weights  $w_3$  and  $w_3$ ' relate as:

$$w_3 = w_3'/P(a|n_3)$$
, giving

(3) 
$$w_3' = w_3 . P(a|n_3) = \frac{w_2 . P(a|n_3)}{P(a|n_2)} = \frac{w_1 . P(a|n_3)}{P(a|n_2) . P(n_2|n_1)}$$

As noted, the response propensities are determined conditional on appropriately selected auxiliary variables. Generally, we use auxiliary variables referring to wave 1 for estimating  $P(n_2|n_1)$ , to wave 2 for estimating  $P(a|n_2)$ , and to wave 3 for estimating  $P(a|n_3)$ . This means that the three propensities in (3) are defined only for units common to all the three waves, namely for set a. Therefore, (3) can be used to define the required weights only for units in set a.

For the remaining units (c) in sample n3, we may use the following slightly approximate solution.

4. An alternative to (3) is

(4) 
$$w_3'' = w_1/P(n_3|n_1).$$

The objective of (4) is the same as that of (3): to provide weights such that n3=(a+c) represents the population N1. However, (4) is less precise than (3), as it goes directly from wave 1 to wave 3 and disregards information specific to wave 2. However, it is determinable for all units n3=(a+c).

We can use (3) for units in the larger set a, and (4) for the remaining (re-entries) c.

<sup>&</sup>lt;sup>1</sup> As noted above, strictly this refers to units from sample n1 which are *still in scope* of the target population at n2.

5. The introduction of wave 4 causes no further complication in EU-SILC. For units which are enumerated in both waves 3 and 4, we have the required wave 4 weights analogous to (1):

$$w_4 = w_3' / P(n_4|n_3).$$

For units enumerated in waves 2 and 4, but not in wave 3, we have the required wave 4 weights analogous to (4):

$$w_4 = w_2/P(n_4|n_2).$$

Note that in accordance with EU-SILC follow-up rules for non-response, no cases are retained in wave 4 which were not enumerated in both waves 2 and 3. Hence no further complications are involved.

### TRACING RULES

The main objective of the longitudinal component of EU-SILC is to study changes over time at individual level, such as transitions from school to work and from work to retirement, flows into and out of economic activity and work and, above all, changes in the level of income and poverty of individuals and households.

One of the most important objectives of the longitudinal component of EU-SILC is to allow the calculation of the *Social Cohesion Indicator on*" at persistent-risk-of poverty rate". This indicator is computed as the percentage of the population living in households where the equivalised disposable income was below the 60% threshold for the current year and at least two out of the preceding three years. The population consists of all the persons that have been living for four years in private households.

As a consequence, it is necessary in the longitudinal component of EU-SILC to trace individuals on a minimum of a four-year period.

Longitudinal surveys require a set of procedures that indicate who is traced and interviewed through time.

#### **Target population**

In each wave, the longitudinal component of EU-SILC should ideally represent the current target population, i.e. the population of all persons living in private households within the national territory of the country concerned. Excluded from the target population are persons living in collective households and in institutions. For practical reasons, small parts of the national territory (the excluded areas) may also not be covered in the survey.

In practice the target population which can be covered will differ in certain respects from the above as a result of the manner in which the longitudinal sample is constructed. The longitudinal component of EU-SILC will comprise one or more panels. Each panel will begin with the selection of an initial sample representing the target population at the time of its selection, in the same way as the cross-sectional survey. This initial sample is then followed-up over time (for a minimum of duration of 4 years; or the duration may be longer or indefinite depending upon the design adopted in the country), according to specified tracing rules defined below. The objective of the tracing rules is to reflect in the initial sample any changes in the target population and to follow-up individuals over time. The sample for the EU-SILC longitudinal component at any given time (year) will in general consist of (i) follow-up of the initial sample(s) selected at earlier times, plus (ii) any new 'initial sample' selected at the time concerned. The latter covers 'rotational designs', as well as any supplements which may be added to the sample from time to time to compensate for panel attrition.

Thus, depending on the tracing rules, the longitudinal sample at any given time may not exactly represent the current 'cross-sectional' target population. The type of demographic changes which need to be reflected include births to individuals in the original population, movements of persons from outside the original population (from collective households, institutions or abroad) into private households containing individuals from that population, and into new private households not containing such individuals. With the possible exception of sample supplements added specially for the purpose, the last mentioned category of inmigrants is generally not covered by the panel tracing procedures. Deducted from the population are individuals who have died, moved out of scope (abroad or outside the private household sector), or become ineligible for other reasons.

#### Initial sample and sample persons

As already mentioned in 'Survey units', the information collected in EU-SILC pertains to the following types of units. This applies to both the cross-sectional and longitudinal components.

- 1. Households, for the collection of household level variables
- 2. All household members, for the collection of demographic and other basic information on household members, including on household size and composition
- 3. All household members aged 16+, for the collection of income and basic information
- 4. Selected respondents, which may include all members aged 16+ or a random subsample thereof (usually one such person per household), for the collection of detailed information, and
- 5. Former household members (for the longitudinal component only), on whom some elementary information on activity status and time spent in the household during the income reference period may be collected.

The information for Set 4 concerns 'detailed' variables which must be collected through a personal interview in all countries, irrespective of whether or not registers are used for other purposes. EU-SILC permits two types of samples for this purpose:

- An initial sample of 'complete' households, i.e. covering all persons in each household. Among these only persons aged 16+ at the time are eligible for the detailed personal interview.
- A random sample of persons. Again, only persons aged 16+ at the time are eligible for the detailed personal interview.

Both these schemes are meant to represent the entire target population of persons (and hence also all private households) at the time of sample selection. They differ only in the type of sample selected from that population.

Set 4 defines samples for the other sets. These consist of all households containing at least one Set 4 person (Set 1), all current members of these households (Set 2). Among current members, only persons aged 16+ at the end of the income reference period are eligible for the collection of income and related information under Set 3.

Individuals selected for the purpose of Set 4 are termed sample persons. These are all or a subset of persons in the initial sample which are followed up over the duration of the panel to obtain the longitudinal sample of observations. Thus, in principle, all members of households in the initial sample of 'complete' households are sample persons. For an initial sample of persons, the term applies only to the individuals selected (normally one per sample household). Other individuals in sample households are termed co-residents. A sample household is defined as a household containing at least one sample person.

For those countries where a sample of complete households is selected, exactly the same information (all Sets 1-4) is required from sample persons and from co-residents. For countries using a random sample of persons (normally one person per household), Sets 1-3 apply to sample persons as well as co-residents in the households, while the personal interview (Set 4) applies only to the sample persons.

#### Follow-up of sample persons

To study changes over time at individual level, it is necessary that all sample persons are followed-up over time, despite the fact that they may move to a new location during the life of

the panel. However, in the implementation of EU-SILC some restrictions will be applied for practical reasons, as explained below.

#### Movement

Ideally, all sample persons once selected should be followed up to whatever new place they move to. However, for cost and other practical reasons, it has been decided that in EU-SILC persons moving only within the confines of the target population as defined above will be followed-up: in other words, *person remaining or moving within private households in the national territory covered in the survey*. Sample persons moving to a collective household or to an institution, moving to national territories not covered in the survey, or moving abroad (to a private household, collective household or institution, within or outside the EU), would normally not be traced. The only exception would be the continued tracing of those moving temporarily (for actual or intended duration of less than 6 months) to a collective household or institution within the national territory covered, who are still considered a member of the household.

#### Age range

The longitudinal sample must also remain representative of all age groups in the population. This means than in principle, persons of all ages should be followed up. However, in view of cost and other practical considerations, separate follow-up may be restricted to persons above a certain age. The appropriate choice of the age cut-off will depend on the type of EU-SILC design adopted by the country.

The minimum EU-SILC requirements are for a follow-up of individuals in the longitudinal sample for a period of four years. For panels of such short duration, it is acceptable (in view of cost and other practical reasons) to separately follow-up only persons aged 14 or over at the time of selection of the initial sample for a panel.

The practical effect of this limitation is that children aged under 14 in the initial sample will not be covered in the longitudinal sample – but only if they move 'independently' to a new household containing no member aged 14+ from their original household. Also, since households in the longitudinal sample include all private households containing at least one sample person, when the follow-up is confined to sample persons above a certain age (such as 14+), the resulting sample will fall short of the ideal by excluding households which contain only sample person(s) below that age limit (and no older sample persons).

In addition, to reflect demographic changes in the population accurately, it is also necessary that provision is made to include new-born children into the sample. This can be achieved by including children born to sample women also as sample persons and following them up using the normal procedures. For short panels of 4-year duration, it has been decided not to follow-up new born children. This results in under-coverage of babies who move to households containing no person aged 14+ from their original household – a circumstance which should be rare in EU countries.

The implication of these restrictions on the follow-up of children is that longitudinal (persistent) poverty among them cannot be estimated exactly. However, as noted, the approximation will be confined to children moving into new households not containing any person aged 14+ from their original household.

Hence it is not sufficient to confine the selection to persons aged 16+ within each household for the purpose of follow-up. For a 4-year panel, the selection should at least cover persons aged 14+.

Longer the duration of the panel, more necessary it would be to lower the age limit above which all sample persons will need to be followed. It is recommended that if the panel duration exceeds say 8 years, the follow-up covers persons of all ages, including children born to sample women during the course of the panel survey.

As noted earlier, two types of sample designs are possible under EU-SILC for the detailed personal interview survey: a sample of 'complete' households, in which all persons aged 16+ are eligible for the detailed personal interview; or a sample of persons, in which normally one person aged 16+ is selected per sample household for the purpose.

It is important to emphasise that in the design employing a sample of persons, the inclusion of persons aged under 16 is a more critical requirement than that in a sample of complete households. This is because in a sample of persons, those aged under 16 can enter the interview sample on achievement of age 16 only if they were already selected into the sample for this purpose.

It is consequently recommended by Eurostat, for countries using a sample of persons (register countries) to select a sample of persons aged 14+ in case of a four-year panel and to bring their household into the sample:

- The selected persons aged 14+ (i.e. the selected respondents) are the only ones to be followed up if they move
- Selected respondents aged 14-15 at the time of selection will not be interviewed in detail till they reach the age of 16 but must be followed-up (traced) even though no detailed personal interviews at all is involved in the household (they are 'activated' for interviewing when they reach the age of 16). Household and income information should nevertheless be collected for such households, normally using registers.
- The size of the selected sample would need to be appropriately increased to achieve the required number of interviews with persons aged 16+.

If panels of duration longer than four years are employed, the age limit for the selection of individuals would need to be lowered further.

#### Non-respondents

A household which refuses interview may be dropped from the sample. Any sample persons are automatically dropped from further follow-up.

For a short panel of 4 years duration, a household which has not been enumerated for two consecutive years or non-contacted the first year of the panel (due to the impossibility of accessing address, because the whole household is temporarily away or is unable to respond due to incapacity or illness) may be dropped, along with any sample person in it. Non-enumerated a single year due to the impossibility of locating the address, the address being non-residential or unoccupied, lost (no information on what happened to the household) may be dropped.

In countries using panels of longer duration, more thorough follow-up procedures are recommended because of the greater danger of panel attrition. As a general recommendations only household after two *consecutive* non-interviews may be dropped.

#### Precise tracing rules

Based on the above, the EU-SILC tracing rules are summarised below:

- 1. Children aged under 14 will not be traced if they move to a new household containing no sample person aged 14+. In this sense, they are not considered 'sample persons'. Sample persons aged 14+ will be normally traced.
- 2. Detailed interview will be conducted with persons aged 16+, and in the case a sample of complete households is used, with all persons aged 16+ (whether sample persons or co-residents) in the household.
- 3. Sample persons aged 14+ who have moved to another private household within the country are traced to the new location. Those aged 16+ are interviewed.
- 4. Strictly, the reference here is to territory of the country included in the target population. Those moving to certain small and specified excluded areas are dropped from the survey, as are persons moving out of the country.
- 5. Sample persons aged 14+ temporarily in a collective household or institution but still considered as members of a private household are traced and, if aged 16+, are to be interviewed by proxy.
- 6. However, sample persons aged 14+ who have moved to a collective household, are institutionalised or moved abroad on a permanent or indefinite basis, for actual or intended duration of 6 months or more, or for a short stay but who cannot be considered a member of any private household, are dropped from the survey. (In that case, the following information should be recorded from someone who was a member of the person's household at the previous wave: to where did the person move, date of movement, number of months spent in the household during the income reference period and main activity status during the income reference period).
- 7. For sample persons who died, no information other than date of death, number of months spent in the household during the income reference period and main activity status during the income reference period will be collected.
- 8. For sample persons aged 14+ who have not been contacted in the previous wave because of the impossibility to access the address (for atmospheric reasons) or because the whole household was temporary absent or unable to respond (illness, incapacitated,...) or for other reasons, a new contact will be attempted in the present wave. If the sample person has not been contacted the first year or two consecutives years due to the reasons mentioned above, the sample person may be dropped from the survey.
- 9. Also will be dropped from the survey sample persons aged 14+ who have not been contacted because of the impossibility to locate the address or because the address was non-residential or unoccupied, lost (no information on what happened to the survey) and who or whose household refused to co-operate
- 10. Co-residents are included in EU-SILC as long as they continue to live with a sample person. Personal information is required, using normal procedures, if aged 16+. However, co-residents are not traced if they move to a household not containing a sample person (aged 14+).
- 11. For former residents ("the former household members"), who spent at least 3 months in the household during the income reference period, the following information will be required (only initial households): number of months spent in the household during the income reference period and main activity status during the income reference period.

12. The age cut-off of 14 years will be lowered if panels of duration longer than four years are used. Persons of all ages in the initial sample (including children born to sample women) should be treated as sample persons to be followed-up in panels of duration exceeding 8 years.

The age refers to the age that person is in the first wave of each panel.

The following table summarize the follow-up of sample persons, sample households and coresidents:

Table 1.Rules for the follow-up of sample persons, sample households and co-residents

Sample persons	To be
Moving to a private household within the	Followed to the new location of the
national territory covered in the survey	household
Other persons temporarily away but who	Covered in the household they belong to
are still considered as members of the	
household	
Persons no longer members of a private	Dropped from the survey
household, or those who have moved	
outside the national territory covered in	
the survey	
Sample households	To be
Non enumerated a single year due to the	Dropped
impossibility to locate the address, the	
address being non-residential or	
unoccupied, lost (no information on what	
happened to the household), or the	
household refusing to co-operate	
Non contacted the first year of the panel	Dropped
or non contacted two consecutive years	
due to the impossibility to access the	
address, because the whole household is	
temporarily away or is unable to respond	
due to incapacity or illness or for other	
reasons	
<b>Co-residents</b>	To be
Living in a household containing at least	Followed
one sample person	
Living in a household not containing any	Dropped
sample person	

Note: For more detail information see Annex 6

#### Organisation of the tracing

For countries where a sample of households/address was selected, the tracing will be done from the address that exist in the previous wave.

As the main risk of attrition in a panel survey is linked to the movers, measures to avoid this risk have to be taken by the NDUs to collect the maximum possible information when a sample person is moving. The NDUs have to establish special procedures to trace all moving/split-off households.

Most importantly, every effort is to be made to trace moving people before the interviewers visit. Several measures can be taken, e.g. (a) asking about intention or expectation of move at the previous interview; (b) contact by mail or phone in the intervening period between the waves; (c) requesting the household to inform of a move (with appropriate financial incentives) etc.

In order to be able to trace moving/split households, the first task of the interviewer, when coming to the address of the household in previous wave, is to get all the information for the identification of the household and on the changes in the household composition. It is important to obtain the date, reason of and the new address of the movers.

If the interviewer is not able to get the new address, then an attempt has to be made by the supervisor and or by the central team. It is recommended that within each NDU, at least one person is concerned only with finding the new addresses of these households in the population, using the postal system/other sources.

Another proposal which may be considered is to use specialised interviewers for follow the movers: they could be paid more, and have a closer relationship with the supervisor.

#### Information to be collected

In the initial household, the whole information required for current household members, basic information for former household members and also basic information on households members in previous wave that are no longer household members will be collected.

In the split-off household, only the whole information required for current household members will be collected.

The whole information required for current household members, the basic information for former household members and the basic information on household members in previous waves that are no longer household members are laid down in the Commission Regulation on the list of target primary variables.

Where a sample person is in the survey for more than one year, information will be obtained on whether the person remained at the same address or moved to a different address from one year to the next.

### **IMPUTATION**

In EU-SILC missing data problems can arise from diverse sources in a number of forms. The discussion is concerned with the problem of imputation for item non-response, particularly with the problem encountered in constructing total household income in the presence of missing information on some income components. Similar problems arise when the information is available on some but not all the members of a household.

The discussion is confined to cross-sectional context only. Editing and imputation of longitudinal data involves to take into account auxiliary values from current wave, previous and future waves (countries using a rotational or long-term panel will apply a common imputation method for the cross-sectional and longitudinal component).

There are two types of reasons for impute missing data, one may be called statistical and other practical. The statistical reason of imputation is to minimise the mean squared error of survey estimates, in particular the non-response bias component that arises when the pattern of missing data is not random. The practical reasons concern consistency between the results from different analyses (which may handle - and be affected - differently by the problem of missing data), and the convenience of not having to deal with the missing data problem at the analysis stage.

In certain situations, such as when the incidence of item non-response is low and/or when the non-response happens not to be selective, it may be a reasonable option to ignore the problem and confine the analysis only to cases with complete information.

This, however, is not a general option in the case of EU-SILC. This is because total household income is made up of a large number of components. In a large proportion of the cases, information on some but not all components may be available. It is not acceptable to reject a case if the information is incomplete, as that would result in the loss of much valuable information. Hence it is essential to impute missing values in the income variables where that can be reasonably done. Furthermore, since the total income of a household is made-up of incomes of its individual members, it is also necessary to take into account the problem of missing individual interviews within otherwise completed households.

#### Missing data in EU-SILC

#### Coverage and sample selection errors

These arise for instance when units in the target population are not represented (whether implicitly or explicitly) in the sampling frame, or when the unit selection probabilities are distorted, or other sample selection errors occur. Generally, such distortions are extremely difficult to correct. Some corrections may be possible on the basis of information external to the sampling frame. Such adjustments are variously called bench-marking, post-stratification, calibration, etc.

#### **Unit non-response**

This refers to absence of information on whole units (households and/or persons) selected into the sample. Normally the impact of unit non-response is reduced by attaching appropriate weights to the responding cases. Some of the information for weighting comes from within the survey, such as information on units' selection probabilities, and unit non-response rates for different subgroups in the sample. This may be called 'weighting' proper. In addition,

weighting normally also makes use of external control distributions of population characteristics (e.g. by household size, location, age and sex, activity status). This is similar to the bench-marking, post-stratification or calibration mentioned above.

#### Partial unit non-response.

EU-SILC involves two levels of units of analysis: household and persons. In analysis involving the distribution units at either of these levels, non-response can be dealt with through weighting. However, a special feature of EU-SILC is that a number of variables at the household level are not collected directly with the household as the unit, but are constructed by aggregating information on individual members of the household. An example is the variable 'number of economically active members in the household according with self-defined current activity status', which requires information on the activity status of all household members.

The most important of this class of variables concern components of household income. It can be constructed only if information on income is available for all members of the household. The term 'partial unit non-response' is introduced to describe the situation where some but not all individual members of a household selected for the survey have been successfully enumerated. Two possible approaches of dealing with this problem are: (i) adjustment of sample weights of enumerated individuals in the household with the objective of compensating for members not enumerated; or (ii) construction of the required variables for each non-enumerated person in the household through imputation.

#### Item non-response

This refers to the situation when a sample unit has been successfully enumerated, but not all the required information has been obtained.

In certain situations, such as when the incidence of item non-response is low, it may be a reasonable option to ignore the problem and confine the analysis only to cases with complete information. However, as noted above, this is not an option in the case of EU-SILC.

In Table 1, two types of approaches (which may be used in combination) are mentioned: imputation and weighting.

Table 1. Treating missing data

Missing data	Compensating measures	
coverage and sample selection errors	Bench-marking, post-	
	stratification, calibration	
Unit non-response	Bench-marking, post-	Weighting
	stratification, calibration	
'partial' unit non-response	Weighting	Imputation
Item non-response	Imputation	Weighting
Target variables (gross income		Modelling
components)		

## The construction of target income variables

EU-SILC requires income components to be in the gross form. Components which are available (collected) as net amounts still have to be converted to the required gross form. These present a different 'missing value' problem. Most likely, the appropriate approach will be some type of modelling, rather than purely statistical imputation.

#### EU-SILC target variables for imputation

According with EU-SILC Framework Regulation: 'MS shall transmit to the Commission (Eurostat) in the form of micro-data files weighted cross-sectional and longitudinal data which has been checked, edited and **imputed in relation to the income**'.

The Commission Regulation on sampling and tracing rules mentions, in relation to the imputation:

- 1. Where non-response to income variables at component level results missing data, appropriate methods of statistical imputation shall be applied,
- 2. Where any gross income variable at component level is collected directly, appropriate methods of statistical imputation and/or modelling shall be applied to obtain the required target variables.
- 3. When non-response to an individual questionnaire occurs within a sample household, appropriate statistical procedures for weighting, or imputation shall be used to estimate the total income of the household.

Also the Commission Regulation in fieldwork aspects and imputation procedures refers to the imputation as follows:

- 1. The procedure applied to the data should preserve variation of and correlation between variables. Methods that incorporate 'error components' into the imputed values shall be preferable to those that simply impute a predicted value.
- 2. Methods which take into account the correlation structure (or other characteristics of the joint distribution of the variables) shall be preferable to the marginal or univariate approach.

#### Desirable characteristics of an imputation procedure

A set of rules is needed as a guide to generate acceptable imputation results. The quality of the results always requires considerable amounts of good judgement during the imputation process, in the identification of patterns, in the selection of the appropriate techniques, choice of auxiliary variables, etc.

Various approaches to the imputation of missing values are possible. It is neither necessary nor possible to insist on any particular methodology in the case of EU-SILC. However, there are clearly some desirable properties which the procedure should have, and some procedures are better than other in terms of those properties.

The procedure should preserve variation of and correlations between variables. Methods that incorporate into the imputed values some 'error component' are preferable to those which simply impute a predicted value. Similarly, methods which take into account the correlation structure (or other characteristics of the joint distribution of the variables) are preferable to the marginal or univariate approach which deals with the imputation of each variable separately. On the other hand, it is also desirable to limit the complexity or the computational work involved in the construction of the imputations. Special techniques such as multiple imputation or methods using neural networks may be ruled out in view of this consideration, despite some desirable statistical properties they may have.

#### Partial unit non-response:

#### Adjusting for personal interview non-response within interviewed households

It is necessary to correct for the effect of non-responding individuals within a household in aggregating personal level income variables to construct the corresponding variables at the household level. Otherwise, income of individuals not interviewed is not added up into the total household income.

The same applies to other variables constructed at the household level through aggregation of person-level variables.

One possible approach to dealing with the 'partial unit non-response' problem would be full imputation of missing personal interviews.

Adjustment of sample weights can provide a simpler alternative, however.

A simplified procedure, such as it was applied in the case of ECHP, is justified on the ground that only a small proportion (around 3% overall) of the households were affected by the problem, though of course it could substantially affect the data for particular households.

#### TRANSMISSION OF DATA AND DATA AVAILIBITY

#### **Deadlines**

According to article 10 'Transmission of data' and Article 12 'Access for scientific purposes to EU-SILC confidential data' of the Framework Regulation of the European Parliament and of the Council concerning Community statistics on income and living conditions (EU-SILC):

Member States shall transmit to the Commission (Eurostat) in the form of micro-data files weighted cross-sectional and longitudinal data which has been fully checked, edited and imputed in relation to income.

Member States shall transmit the data in electronic form, in conformity with an appropriate technical format to be adopted in accordance with the procedure laid down in article 14.

#### Cross-sectional component

Member States shall transmit the micro-data files relating to year of survey N to the Commission (Eurostat), preferably within eleven months after the end of the data collection. The extreme deadline for the transmission of micro-data to Eurostat shall be 30 November (N+1) for Member States where data are collected at the end of year N or through a continuous survey or through registers and 1 October (N+1) for other Member States.

Together with the micro-data files, Member States shall transmit social cohesion indicators based on the cross-sectional sample of year N that shall be included in the annual Spring report of year (N+2) to the European Council.

The dates of transmission of data also apply for the transmission of comparable data for cross-sectional common EU indicators for Member States, which start annual collection of data after 2004 in compliance with article 4(2) of the Framework Regulation.

Micro-data files at Community level for data collected up to year N shall be made available for scientific purposes by the end of February N+2.

Table 1: Dates for transmission and publication/dissemination of cross-sectional data

Year of survey	Deadline for transmission of the data and the social cohesion indicators	Transmission of indicators from Eurostat to the Commission	Dissemination of micro-data	Publication of annual report of social cohesion
N	<ul> <li>Preferably 11 months after the end of the data collection</li> <li>1 October year N+1</li> <li>exceptions until 30 November year N+1</li> </ul>	Mid December <sup>1</sup> year N+1 to be published beginning of year N+2	End February year N+2	End June year N+2
2003	1 Oct 2004 (30 Nov 2004)	Mid Dec 2004	none	none
2004	1 Oct 2005 (30 Nov 2005)	Mid Dec 2005	End Feb 2006	End Jun 2006
2005	1 Oct 2006 (30 Nov 2006)	Mid Dec 2006	End Feb 2007	End Jun 2007
2006	1 Oct 2007 (30 Nov 2007)	Mid Dec 2007	End Feb 2008	End Jun 2008

<sup>&</sup>lt;sup>1</sup> Transmission should happen before end of November, but there is a conflict with the exceptions of transmission of the data to Eurostat. Therefore data that arrives end of November at Eurostat, can be considered only if it is completely correct.

#### Longitudinal component

Member States shall transmit the micro-data files up to year N to the Commission (Eurostat) preferably within fifteen months after the end of the fieldwork. The mandatory deadline for the transmission of micro-data to Eurostat shall be the end of March (N+2), each year starting from the second year of EU-SILC. The first transmission of data, covering longitudinally linked data for the survey years 2004 and 2005, for Member States starting annual data collection in 2004; for the survey years 2005 and 2006, for Member States starting annual data collection in 2005, shall take place respectively by end March 2007 and 2008. The next transmission shall cover the first three survey years 2004-2006 (2005-2007) and shall take place respectively by end March 2008 and 2009. Thereafter, each year longitudinal data covering the preceding four survey years (revised from previous releases as necessary) shall be provided.

For the longitudinal component, micro-data files at Community level for data collected up to year N shall be made available for scientific purposes by the end of July N+2. The first issue of longitudinal micro-data files for those Member States which start the data collection in 2004 shall cover 2004 and 2005 and shall take place at the end of July 2007. The second issue in July 2008 shall cover years 2004-2006, for those Member States which start the data collection in 2004, and years 2005 and 2006, for those Member States which start the data collection in 2005. The third issue in July 2009 shall cover years 2004-2007, for those Member States which start the data collection in 2004; 2005-2007 for those Member States which start data collection in 2005. Thereafter, each July release shall cover longitudinal data at Community level for the four most recent years available.

Table 2: Dates for transmission and dissemination of longitudinal data

Year of survey	Deadline for transmission of the data	Years to transmit (and to disseminate)	Dissemination of micro-data
N	<ul> <li>Preferably 15 months after the of the data collection</li> <li>31 March year N+2</li> </ul>	N-3, N-2, N-1, N	End July year N+2
2004	No transmission	none	none
2005	31 Mar 2007	2004, 2005	End Jul 2007
2006	31 Mar 2008	2004, 2005, 2006	End Jul 2008
2007	31 Mar 2009	2004, 2005, 2006, 2007	End Jul 2009
2008	31 Mar 2010	2005, 2006, 2007, 2008	End Jul 2010
2009	31 Mar 2011	2006, 2007, 2008, 2009	End Jul 2011

The table refers to Member States starting the longitudinal component in 2004. Member States which have started in 2003 should diminish the year in the table by 1, Member States which start only in 2005 should add 1 to the year.

#### Sample to be transmitted

#### Rotational panel scheme with 4 subsamples

Under a rotational panel scheme with 4 subsamples, Member States shall annually transmit in year N+2 not only the rotational subsample up to year N with four year duration to the Commission (Eurostat), but also the current rotational subsamples with shorter duration (3 years and 2 years).

In this way, the Commission (Eurostat) will yearly get 3 over 4 subsamples that will cover at least the most recent 2 years. From the third year of data transmission, the Commission (Eurostat) will get 3 over 4 subsamples that will respectively cover the four, three and two most recent years. Each year all the subsamples will be transmitted together.

For each subsample, data of the previous years will be updated according to the longitudinal controls.

The Commission (Eurostat) will annually make available for scientific purposes micro-data files at Community level of these subsamples. In this way, the Commission (Eurostat) will yearly make 3 over 4 subsamples that will cover at least the most recent 2 years available for scientific purposes. From the third year of data dissemination, 3 over 4 subsamples that will respectively cover the four, three and two most recent years will be disseminated.

Tables 3a to 3e illustrate the case of a Member State which starts the longitudinal survey in 2004:

Table 3a: Subsamples to transmit to Eurostat in year 2007

X7 6	Subsample	Subsample	Subsamp	Subsample	Subsample	Subsample	Subsample	Subsample
Year of	$1^1$	2	le 3	4	1'	2'	3'	4'
survey								
2004								
2005								
2006								
2007								
2008								
2009								

Table 3b: Subsamples to transmit to Eurostat in year 2008

Year of survey	Subsample 1	Subsample 2	Subsamp le 3	Subsample 4	Subsample 1'	Subsample 2'	Subsample 3'	Subsample 4'
2004								
2005								
2006								
2007								
2008								
2009								

Subsamples to transmit
Subsample not to transmit, because it does not cover at least 2 years

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<sup>&</sup>lt;sup>1</sup> Needs to be collected for the cross-sectional component in the case of an integrated survey

Table 3c: Subsamples to transmit to Eurostat in year 2009

Year of survey	Subsample 1	Subsample 2	Subsample 3	Subsample 4	Subsample 1'	Subsample 2'	Subsample 3'	Subsample 4'
2004								
2005								
2006								
2007								
2008								
2009								

Table 3d: Subsamples to transmit to Eurostat in year 2010

Year of survey	Subsample 4	Subsample 1'	Subsample 2'	Subsample 3'	Subsample 4'	Subsample 1''	Subsample 2"
2004							
2005							
2006							
2007							
2008							
2009							

Table 3e: Subsamples to transmit to Eurostat in year 2011

Year of survey	Subsample 4	Subsample 1'	Subsample 2'	Subsample 3'	Subsample 4'	Subsample 1"	Subsample 2"
2004							
2005							
2006							
2007							
2008							
2009							

Subsamples to transmit
Subsample not to transmit, because it does not cover at least 2 years

#### Panel scheme (pure panel)

Under a panel scheme such as ECHP, Member States will yearly transmit updated longitudinal data covering the preceding <u>four</u> survey years to the Commission (Eurostat), the two first data transmissions will cover respectively the two and three most recent years.

If during the panel new households (not split off households) are added to panel (substitute the loss of other panel households, ...), the new households should be considered the same way than a new subsample in a rotational survey. They should only be transmitted when they cover at least 2 years.

#### Files to transmit to Eurostat

The target variables will be sent to EUROSTAT in 4 different files:

- 1. Household Register (D)
- 2. Personal Register (R)
- 3. Household Data (H)
- 4. Personal Data (P)

The household register file (D) must contain every selected household, also those where the address could not be contacted or which could not be interviewed.

In the other files records related to a household will only exist if the household has been contacted AND has a completed household interview in the household data file (H) and at least one member has complete data in the personal data file (P). This member must be the selected respondent if this mode of selection is used.

The personal register file (R) must contain a record for every person currently living in the household or temporarily absent. In the longitudinal component it must also contain a record for every person registered in the R-file of the previous year or living at least 3 months in the household during the income reference method.

The personal data file (P) must contain a record for every eligible person for whom the information could be completed from interview and/or registers.

#### Format and Transmission

#### **Format**

The files must be in CSV-format (comma separated values). Following rules apply:

- header row (first record with the variable names)
- delimiter of variables is comma (,)
- decimal separator is point (.)
- character values must NOT be enclosed by quotes
- blank variables are represented by nothing between the commas (...,...)
- the first three variables should be Year, Country and ID (for the rest of the variables no fixed order is required)

e.g.

DB010,DB020,DB030,DB040,DB040\_F,DB050,DB060,DB050\_F,DB060\_F,DB090,DB090 F....

```
2003,BE,1,BE01,1,,,-2,-2,1.25,1,...
2003,BE,2,BE05,1,536,,1,-2,1.12345,1,...
2003,BE,3,BE01,1,,,-2,-2,1,1,...
```

#### Means of transmission

The means to send the data to Eurostat will be Stadium from the first year of the survey on. Stadium requires an installation on both sides (at Eurostat and in the Member States).

#### Register Files in EU-SILC

To fill in the register files focusing on the variables and their values see Annex 6.

## **General definitions**

## **DEFINITIONS**

## For the cross-sectional and longitudinal components of EU-SILC, the following definitions will be applied:

#### Year of survey

Means the year in which the survey-data collection, or most of the collection, is carried out.

#### Fieldwork period

Means the period of time in which the survey component is collected.

#### Reference period

Means the period of time to which a particular item of information relates.

#### **Cross-sectional data**

Means the data pertaining to a given time or a certain time period. The cross-sectional data may be extracted either from a cross-sectional sample survey with or without a rotational sample or from a pure panel sample survey (on condition that cross-sectional representativeness is guaranteed); such data may be combined with register data (data on persons, households or dwellings compiled from a unit-level administrative or statistical register).

#### Target primary areas

Means the subject areas to be collected on an annual basis.

#### Target secondary areas

Means the subject areas to be collected every four years or less.

#### Gross income

Means the total monetary and non-monetary income received by the household over a specified 'income reference period', before deduction of income tax, regular taxes on wealth, employees', self-employed and unemployed (if applicable) compulsory social insurance contributions and employers' social insurance contributions, but after including interhousehold transfers received.

#### Disposable income

Means gross income less income tax, regular taxes on wealth, employees', self-employed and unemployed (if applicable) compulsory social insurance contributions, employers' social insurance contributions and inter- household transfers paid.

#### Collective household

Refers to a non-institutional collective dwelling such as a boarding house, dormitory in an educational establishment or other living quarters shared by more than five persons without sharing household expenses. Also included are persons living as lodgers in households with more than five lodgers.

#### Institution

Refers to old persons' home, health care institutions, religious institutions (convents, monasteries), correctional and penal institutions. Basically, institutions are distinguished from collective households, in that in the former, the resident persons have no individual responsibility for their housekeeping. In some cases, old persons' home can be considered as collective households on the basis of this last rule.

#### <u>Age</u>

Refers to the age at the end of the income reference period except for the childcare variables where the age refers to the age at the time of interview.

#### The following definitions will be applied for the longitudinal component of EU-SILC:

#### Longitudinal data

Means the data pertaining to individual-level changes over time, observed periodically over a certain duration. The longitudinal data may come either from a cross-sectional survey with a rotational sample where individuals once selected are followed-up or from a pure panel survey; it may be combined with register data.

#### Initial sample

Refers to the sample of households or persons at the time it is selected for inclusion in EU-SILC.

## Sample persons

Means all or a subset of the members of the households in the initial sample who are over a certain age.

#### Age limit used to define sample persons

In case of a four-year panel, this age limit shall not be higher than 14 years. In countries with a four-year panel using a sample of addresses or of households, all household members aged 14 and over in the initial sample shall be sample persons. In countries with a four-year panel using a sample of persons, this shall involve the selection of at least one such person per household.

The above mentioned minimum age limit shall be lower in case of a longer panel duration. For a panel duration exceeding eight years, members of all ages in the initial sample shall be sample persons, and children born to sample women during the time the mother is in the panel shall be included as sample persons.

#### Panel duration

Means the number of years over which sample persons, once selected into the sample, belong to the panel to obtain or compile longitudinal information.

#### Rotational design

Refers to the sample selection based on a number of sub-samples or replications, each of them similar in size and design and representative of the whole population. From one year to the next, some replications are retained, while others are dropped and replaced by new replications.

In the case of a rotational design based on 4 replications with a rotation of one replication per year, one of the replications shall be dropped immediately after the first year, the second shall be retained for two years, the third for 3 years, and the fourth shall be retained for 4 years. From the second year onwards, one new replication shall be introduced each year and retained for 4 years.

#### Sample household

Means a household containing at least one sample person. A sample household shall be included in EU-SILC for the collection or compilation of detailed information if it contains at least one sample person aged 16 or more.

#### Co-residents or non-sample persons

Co-residents are all current residents of a sample household other than those defined above as sample persons.

#### Entire household

A sample household is said to be entire (whole) if it remains as one household, without forming an additional household and without the household disappearing, even though there might have been changes in its composition from the previous wave due to deaths, members moving out of scope or co-resident leaving the household, people joining the household, or births.

#### Initial/Split-off household

Sample household from wave x is said to have been 'split' if its sample persons from wave x reside at the time of wave x+1 in more than one private household within the national territories included in the target population.

When a split has occurred, one (and only one) of the resulting households shall be defined as the "initial" household, while one or more of the others are termed "split-off" households.

The following approach shall be followed in order to distinguish between "initial" and "split-off" households:

- If any sample person of the wave x still lives at the same address as the last wave, then his/her household shall be defined as the "initial" household. All sample persons who have moved shall form one or more "split-off" households;
- If no sample person lives at the address of the last wave, then the household of the sample person who had the lowest person number in the register for the last wave shall be the initial household. In the case in which this person is no longer alive or in a private household within the national territory of the target population, the initial household shall be the household of the sample person with the lowest person number.

#### **Fusion**

Sample persons from different sample households from the previous wave join together to form a new household.

## **INCOME DATA**

One of the main EU-SILC objectives is to produce comparable and timely cross-sectional and longitudinal data on <u>income</u> and on the **level and composition of poverty** and social exclusion.

The measure of poverty in the EU is based on the disposable income while to study income distribution and compare income between European Countries the total gross and the gross income at component level are required.

The first step to be resolved in setting up a conceptual framework for income distribution analysis is the choice of reference period over which income should be measured. It is useful to start from first principles and recall that one of the concepts which we are trying to capture is current economic well-being, for which disposable income - what households have available to spend or save - is a proxy. The question then arises as to what is the best choice of reference period over which to measure household income such that it most closely represents 'current economic well-being'. A further consideration is that the income variable may be required for two distinct purposes: (i) in its own right, to measure the distribution of income across households, and (ii) as a classificatory and/or substantive variable to be used in conjunction with other social indicators, in particular the indicators of social exclusion. The ideal reference period for the first purpose may not be the same as for the second and compromise may be needed.

The spectrum of choices of reference period ranges from lifetime income to income received over the most recent period - say the last week or month. 'Annual' income lies between these two extremes and is the concept most commonly adopted – for example, it is the recommendation of the Canberra Group. However 'annual' can be interpreted in a variety of ways and in order to achieve comparability between countries it is important that the same interpretation is used throughout. Later will be discussed how a 12 month reference period can be interpreted and applied. However, the two extremes of the spectrum - lifetime and current income – will be examined below because they can clarify the choices which have to been discussed in defining annual income.

#### Lifetime income

The proposition here is that a household's current economic well-being today is determined not just by income in the most recent period, but also by past experience - and indeed by future expectations. A university student may have the expectation of a good job and so their low income whilst they are studying may be a poor indicator of their 'true' position within the income distribution. (Indeed their earnings potential may enable them to take out loans which enable them to sustain a lifestyle in excess of that which their current income could support.) At the other end of the lifecycle, a retired person may not only benefit from income from savings set aside during their working lives - which would in any case be reflected in their current income - but may also be drawing down some of their savings to finance current consumption. (Dissaving of this kind will not be captured in the EU definition of disposable income.) In addition they may benefit from past consumption made possible by past earnings. For example, their ownership of consumer durables may be higher than their current income would allow. Past income or future expectations may also influence social exclusion in less direct ways: for example, a person's social position within their community.

Even during their working lives, people may have incomes which fluctuate considerably from year to year, so that to focus on the income of any particular year - let alone a particular week or month – will give a misleading impression of their position within the income distribution. The self-employed, particularly farmers, exemplify this. A self-employed farmer may experience years when yields are high and markets are buoyant, followed by years of poor weather and of depressed world prices. They may be able to smooth the resulting fluctuations in income so that fluctuations in their consumption are not so pronounced, for example by managing their personal borrowing and saving and/or their investment in their business so that a certain standard of living may be maintained throughout. However, the ability to do this will depend on how well future income can be forecast and will not always be possible for this and other reasons, such as how the overall level of income compares with that of essential expenditure in the good years.

Similar remarks can be made about the individual who experiences a number of periods of unemployment through their working life. Their economic well-being may not be dictated solely by their economic status at a point in time. The person who has a well-paid job now but has experienced unemployment in the past might not necessarily be as 'well-off' as someone on the same salary but with no such episodes. For example, they may have different perceptions of job security which may affect their expenditure patterns and thus their economic well-being.

Lifetime income will tend to smooth out such fluctuations, and therefore will generally be more equally distributed than incomes measured over a shorter period.

However, to what extent do people in practice manage their finances so that lifetime income is a better indicator of current economic well-being than income over a period closer to the current time? It is debatable to what extent the person who is now on benefit income is affected by the fact that they have held down a well-paid job in the past, and vice versa. Even for the elderly, the provision they made for their retirement during their working lives may be perfectly well captured by their current income from pensions (however financed) and interest income from savings. The benefit they obtain from living in a property which they own outright will also be captured in current income through imputed rent. If lifetime rather than current income is used as a classificatory variable alongside social exclusion indicators such as current ability to afford a certain standard of food and clothing, counter-intuitive results are bound to be obtained.

There are also considerable conceptual problems in defining lifetime incomes. For example, what discount rate, or rates, should be used? Forecasts have to be made of future income flows to produce complete lifetime profiles. For today's children, this involves a complex series of assumptions about future levels of human capital, the returns to that capital, and the type and amount of work effort by individuals.

In addition there are numerous practical difficulties in measurement even of cumulative income received up to the point of interview, in addition to those introduced by the need to make forecasts. Although in countries where income data are obtained from registers it may be possible to construct cumulative income flows with a reasonable degree of accuracy, the problems of recall will be considerable where data are obtained through interview surveys. (For simplicity, these two groups of countries will henceforth be referred to, respectively, as 'register' and 'survey' countries.) Some very long-running panel surveys may be able to supplement the data collected on income at each wave with data on periods covered in previous waves and possibly with retrospective questions to cover periods before the survey began, but here again there will be recall problems.

#### Current income

At the other end of the spectrum from lifetime income lies current income – what an individual has available to spend or save 'today'. In practice, this means the income received over a short period in the immediate past, such as during last week or month. Such a short reference period is meaningful only on the assumption that people spend or save what they get virtually instantaneously and that they do not smooth their expenditure to take account of the irregular nature of some income flows.

For the person with stable, regular monthly or weekly income flows, for example the employee on a fixed salary or a retired person on pension income, current income defined in this way may represent a reasonable picture of their current economic well-being. Even in such cases it can be argued that there may be some influence from past income experiences. For example, the person who has recently got a job after a period of unemployment may be paying off debts incurred whilst out of work. The retired person may, as already discussed, be running down their savings to finance current expenditure.

However, virtually everyone will have some income flows which are irregular. Is it reasonable to assume that they are spent immediately, affecting economic well-being only at the time of receipt? Two factors are likely to affect the reasonableness of this assumption: the size of the receipt and whether it is expected by the recipient and can therefore be taken into account in their budgeting. The Canberra Group recommends excluding large amounts, such as inheritances and lump sum retirement payments, from income in any case, and regarding them as capital transfers. Small amounts that are one-time or irregular, such as cash gifts from relatives or unexpected bonuses, will probably be spent virtually immediately. However, there are a number of important income components which are irregular in the sense of not being received as frequently as salaries or benefit income but which are not unexpected. For example, property income received annually or bi-annually is likely to influence current budgeting even if not received during the most recent accounting period.

We have already seen that self-employment income may also be erratic over time, and this is true not just over a person's lifetime but also over shorter periods. Many self-employed people experience 'lumpy' income flows over quite short periods, and have to ensure that sufficient money is set aside to finance consumption over periods during which perhaps no income at all may be received. Seasonal workers also experience irregular flows of employment income. For example, the ski instructor may be able to earn sufficient in a few months to support themselves for the rest of the year. Both the seasonal worker and the self-employed person are in effect setting up short-term patterns of saving and dis-saving to cope with irregular income flows. Even amongst employees receiving regular monthly or weekly wages and salaries, some may receive annual bonuses or have the possibility of overtime working only at certain times of the year. It would be misleading to take income over the most recent week or month as an estimate of the current economic well-being of any of these groups, whenever that period happened to fall.

To be able to manage one's finances in these situations implies the expectation of a certain stability of income, albeit over a longer period than that which might be considered the 'current' period. For the casual worker on low wages however, there may be no such possibility of income/expenditure management: for them the financial pressures may be such that income is in fact spent as soon as it is received. Although it might therefore appear that current income might be a reasonable representation of their current economic well-being, this may nevertheless not be the case. If the income received over the last period is atypical, it may give an overly optimistic (or pessimistic) view.

Thus the use of a relatively short accounting period for income, such as a month or a week, will accentuate the influence of short-run fluctuations, and at the aggregate level will lead to income distribution estimates which imply a greater level of inequality than is the case when income is measured over a longer period.

These arguments lead to the conclusion that income should be measured over a period longer than the immediate past.

#### Annual income

An annual accounting framework is most commonly adopted for income distribution analysis. It represents a compromise between the two extremes just discussed: it is not subject to the same level of fluctuation as income in the immediate past, but it does not raise the measurement problems of lifetime income. Most direct taxes use an annual accounting framework, as do many of the more intermittent income components such as property income. A twelve month reference period is also the common period for which owners of small enterprises derive a measure of profit or loss for their business, and it also enables income from seasonal activities to be captured.

However, the term 'annual' is open to a variety of interpretations and for comparable data to be compiled across the EU, we have to be very clear about how it is to be defined. The main choices are between:

- a fixed twelve month period preceding the survey period, for which data are most readily available; or
- a moving twelve month period immediately preceding the time of data collection/compilation for each respondent or unit in the survey.

In the above, the 'survey period' refers to the time during which the information is collected/compiled for sample as a whole. The concept applies whether the income data are obtained through interview surveys or registers. In practice it may vary from a short duration of a few weeks or months, to a whole year as in continuous annual surveys.

The reference period is the time to which the information relates. The reference period may be fixed, i.e. defined in terms of specified calendar dates, same for all respondents/units in the sample; or it may be a moving reference period, defined as a specified duration immediately preceding the particular time of data collection for each sample unit. In the latter case, the exact calendar period to which the data relate would generally vary from one sample unit to another. Furthermore, the information aggregated over the sample units will be unevenly distributed over a period longer than the length of the moving reference period (equalling in fact to the sum of the survey and reference period lengths).

Each type of reference period has its own advantages as discussed below.

We will first consider situations where income data are obtained through interview surveys ('survey countries'). The situation is quite different in countries where income data are obtained from registers.

#### Fixed twelve month reference period

The major advantage of using a fixed reference period is that it provides information related to a defined time period which is the same for all respondents. The most appropriate choice will be the period for which income records are most readily available overall (i.e. for most survey units) – meaning in most circumstances the tax year. The fact that respondents are able

to consult records which provide complete data over the twelve month period will greatly aid data quality.

This is the preferred option: for most EU Member States, respondents will have records most readily available for the tax year, which normally is the calendar year. Thus the option equates, for the majority of countries, to the calendar year preceding interview.

In all countries, greater flexibility is required in the case of the self-employed.

There are also disadvantages in using a fixed reference period, whether it refers to the tax year or the preceding calendar year. How serious these disadvantages are depends on the timing and duration of the data collection period. With a long gap between the income reference period and the time of data collection, a major disadvantage is that other variables, for example those measuring household composition, economic activity status and social exclusion, are measured at the time of interview and might not relate well to income measured over a period considerably in the past. Such variables can only sensibly be related to current income, which cannot be constructed if data are only collected for a fixed period in the past.

The disadvantages become most clear when we consider a continuous survey where the fieldwork is spread over all 12 months. In this case some respondents would be interviewed up to 12 months after the end and as much as 24 months from the beginning of the reference period, seriously magnifying recall problems. Furthermore, in order to capture work-related transitions and for income checking purposes, an activity log of up to 24 months will be needed if current income is to be collected as well as calendar year totals. Hence at least in continuous surveys, the use of a fixed reference period would not be appropriate.

#### Moving twelve month period preceding the interview

The second option, of using a 12 month moving reference period immediately preceding the interview, has the major advantage of matching most closely with the circumstances of the household at the time of interview as measured by other variables. It is the twelve month period closest to the time of interview and might therefore be expected to minimise recall problems – though it will not of course eliminate them and may cause difficulties if the records the respondent has available refer to another period such as the tax year. In countries where reliance is best placed on tax record data, this option will not provide as accurate income data as the one of using the tax year as the fixed reference period.

Another disadvantage of using a moving reference period is that it results in information relating to different times for different respondents in the sample, and also to different reference periods for different countries depending the timing and duration of fieldwork

However, if the fieldwork can be carried out over a short period soon after the end of the tax (or calendar) year, this option becomes very similar to the first one of using a fixed reference period.

If fieldwork is spread over a period of time, such as over all 12 months of the year in a continuous survey, the differences between the actual reference periods will be maximised among different respondents within a single country. This effect has to be taken into account in aggregating the data. Despite this problem, however, a moving reference period is generally the appropriate choice in a continuous survey. As noted above, the use of a fixed reference period would tend to result in large response errors and burden (which in addition are uneven among respondents in the survey).

#### **Registers**

This discussion has concentrated so far on considerations for survey countries. For register countries, the arguments around respondent recall and resulting data quality do not, of course, apply. For them the choice is reduced to that between the period closest to that at which other variables are measured or that which corresponds with the period which makes most sense from an administrative point of view (e.g. as used for tax or other administrative systems).

For the EU-SILC, the use of the preceding calendar year as the income reference period has been considered as the appropriate choice in these countries. Some of the non-income EU-SILC variables may be obtained from interview surveys rather than registers, and the problem of mismatch between those and income data will remain, depending on the time lag between the two.

#### Total annual income or modified annual income?

Whichever choice of 12 month period is made, there is a further decision to be taken about whether 'annual' income is to be defined as total income over that 12 month period or whether only some components are to be measured over 12 months whilst for others more emphasis is to be placed on the level of receipts over a current or relatively short period closest to the time of interview. The latter will here be termed 'modified' annual income.

From the point of view of most accounting frameworks, for example the national accounts, the term 'annual income' is defined as total income received over a 12 month period. Why might one wish to deviate from this convention? There are three main arguments when the data are collected through interview surveys:

- for some components, current income may give a better picture of current economic well-being, particularly if income is to be analysed against other variables measured at the time of interview, whilst for other components annual (total) income may be more appropriate;
- for some components, data quality may be improved by taking income received in a short recent period and multiplying it by an appropriate factor (=12 / length of the reference period used in months) to obtain an estimate of annual income, rather than asking respondents to reconstruct their income receipts over a 12 month period;
- even when it may result in some reduction in data quality, simpler or approximate procedures may be preferred so as to limit respondent burden.

At most only the first of these applies to register countries.

Taking the first of these arguments, the contention here is that if a person has experienced changes in income over a year – for example, they may have moved from employment into retirement or unemployment or vice versa – it is only their current economic status, and therefore their current income, which best describes their current economic well-being. Previous statuses and the income flows resulting from them should be ignored as irrelevant to the situation at the time of interview. For intermittent but regular income components, such as property income, measurement over the year is still appropriate – the recipient can be assumed still to be benefiting from them even if there happened to be no receipts in the most recent period. Thus a modified total income measure would take current values of some components (for example benefit income, wages and salaries) multiplied up to produce an annualised figure, and add to it total annual income for those components which are intermittent over the year (for example property income, earnings from seasonal work). For self-employment income, there may be no choice but to take total annual income for the most

recent period for which the respondent has produced annual accounts. If these accounts are for a year some time in the past it may be necessary to apply an inflation factor and possibly other adjustments to reflect any changes in trading conditions. There are in any case particular problems in capturing data on self-employment income which accurately reflect the position of the respondent within the income distribution.

The second and third arguments, about data quality and respondent burden, are purely pragmatic. They stem from the well-known and documented problems of respondent recall if asked to reconstruct detailed income data for a period as long as 12 months in situations where the respondent has no records available to consult. A more accurate estimate of annual income may be obtained, at least for some components, by taking the most recent receipts and annualising them in the way already described. It may however be possible to ask some questions which establish whether the most recent receipts are in any way atypical for the past year and in what way. It may then be possible to adjust 'annualised income' to take account of this.

There are a number of implications of the modified income concept. Because tax payments are usually made on an annual, tax-year basis, tax paid on modified annual income should as a rule be modelled rather than collected at interview.

There are other more minor considerations. For example, it may no longer be possible to compare survey based estimates of income aggregates with those from other sources, such as tax records or national accounts, as part of the robustness assessment process since the time periods will no longer correspond.

It should also be recognised that the resulting distribution of income may be more unequal than if total annual income were used, since as recognised in this paper, the longer the period over which income is measured, the less the degree of dispersion likely to be observed. This is not an argument either for or against the use of modified income, simply an implication of its use. The impact on income dispersion will in any case be less than if a current income concept were used.

#### Conclusion about the income reference period

Clearly, if the purpose of data collection were solely to produce income distribution statistics, the same fixed reference period used for respondents in all Member States would be preferred as this would ensure maximum comparability. Also, in so far as the calendar year coincides with the tax year and countries wish respondents to refer extensively to tax returns in providing information at interview, the use of the calendar year as reference period will provide better quality data.

However, it is also necessary to recognise two important problems with this choice, which tend to be less serious with the "12 months moving reference period preceding the interview" approach. Firstly, the time lag between the reference period and fieldwork weakens the match between income (which refers to a period in the past) and other related variables (which measure the current situation) such as housing, employment status and social exclusion. If current income is not collected in addition to the fixed period total, it will be impossible to relate current labour market status to income for those households that have experienced a work-related income transition between the reference period and the time of interview. In principle, this problem applies equally whether the information is collected through interview surveys or from registers.

The second problem is the loss in data quality in interview surveys as a result of the longer recall period, compared to the use of a moving reference period of 12 months immediately preceding the interview.

To reduce both these problems, it is desirable to undertake the survey early in the New Year, and to minimise the fieldwork duration – i.e. to make the conditions of data collection as similar as possible to the "12 months moving reference period preceding the interview" approach.

There are circumstances in which the above conditions cannot be met, making the choice of a moving reference period more appropriate:

- If data collection takes place using a continuous survey, i.e. with fieldwork spread out over all 12 months of the year. Clearly, the use of a fixed reference period will not be appropriate in this design unless it can be certain that respondents will continue to have ready access to the necessary records, as the recall periods will become prolonged and, furthermore, greatly variable among respondents in the same survey.
- Some countries have an established tradition of using the moving 12 months reference period in income surveys, and/or do not rely on extensive use of tax records in the collection of information.
- In certain circumstances, it may be impossible to start the survey early in the new year, and a moving 12 months reference period would be desirable to reduce recall problems.

In respect of the second of the two choices – annual versus modified income – the recommendation is for the total annual income concept.

The collection of total annual income presents no problem in register countries, and should be feasible in terms of data quality also in countries where a fixed calendar (tax) year period has been chosen as reference period and most of the income information is available from respondents' tax documents.

However, it has to be recognised that the modified income concept is less demanding, and may be accepted in exceptional cases where full collection of total annual income is not considered feasible and an established national tradition favouring this choice exists. In this case, the extent to which the comparability with other countries may be affected must be assessed. In the UK at least, the effect has been found to be minor in terms of income distribution statistics.

Taking into account the previous discussion EU-SILC framework regulation in its article 4 concludes:

- The income reference period will be a 12-month period. This maybe a fixed 12-month period (such as the previous calendar or tax year) or a moving 12-month period (such as the 12 months preceding the interview) or be based on a comparable measure.
- If a fixed income reference period is used, fieldwork for the survey component shall be carried out over a limited period as close as possible to the income reference period or to the tax declaration period so as to minimise time lag between income and current variables.

#### Income data to be delivered (collected) in EU-SILC

As was discussed above 'total disposable income', 'total gross income' and 'gross income at component level' are required in EU-SILC.

Nevertheless, some of MS can not deliverer, from the beginning of the survey, all of EU-SILC requirements about income.

The EU-SILC Commission Regulation specified the requirements about income as well as the Derogations given to some of Members States:

- 1. A key objective of EU-SILC is to deliver robust and comparable data on total disposable household income, total disposable household income before transfers (except old age and survivor's benefits; including old age and survivor's benefits), total gross income and gross income at component level
- 2. This objective will be reached in two steps, in that Member States will be allowed to postpone the delivery of some of the above data until after the first year of their operations. The only data for which delivery will not be compulsory as from the first year of the operation are as follows:
  - non-monetary components of employee (with the exception of company cars that is to be calculated as from the first year of the operation) and selfemployed income, imputed rent and interest payments that shall be optional from the first year of the operation and compulsory from 2007;
  - gross employers' social insurance contributions shall only be included from 2007 if results of feasibility studies are positive
- 3. By way of exception to paragraph 2, Greece, Spain, France, Italy and Portugal ( at the moment of written this document two other countries Latvia and Poland have asked for a derogation) may be allowed not to deliver any gross income data as from the first year of their operation. These countries will, however, do their utmost best to deliver this data as soon as possible and definitively no later than 2007.

In the meantime, the Commission will carry out in-depth feasibility studies on this topic in cooperation with countries and provide technical assistance to initially help countries meet this gross data requirement.

Countries will report each year on their progress in performing net/gross conversion in their quality reports.

4. In the case that Greece, Spain, France, Italy and Portugal can not deliver a gross income data component as from the first year of their operation, the corresponding net income component shall be required.

In this way, an income component shall always be recorded in the same form (gross, net of tax on income at source and social contributions, net of tax on income at source, net of tax on social contributions) according to the usual specification for this income component in the country.

In case a given income component is collected as the sum of subcomponents, some of them gross and the others net, the total amount will have to be recorded (and imputed where necessary) either in a gross or net form according with the usual specification for this income component in the country and preferably gross.

If an income component is collected, for all households within a country, in both forms gross and net, both should be provided to Eurostat.

# **General Description**

## **DOMAINS and AREAS**

## Households

BASIC DATA (B)	Basic household data including degree of urbanisation		
INCOME (Y)	Total household income (gross and disposable)		
INCOME (1)	Gross income components at household level		
	Housing and non-housing related arrears		
	Non-monetary household deprivation indicators,		
SOCIAL EXCLUSION (S)	including problems in making ends meet, extent of		
	debt and enforced lack of basic necessities		
	Physical and social environment		
LABOUR INFORMATION (L)	Child care		
	Dwelling type, tenure status and housing conditions		
HOUSING (H)	Amenities in dwelling		
	Housing costs		

## Persons

BASIC DATA (B)	Basic personal data	
BASIC DATA (B)	Demographic data	
EDUCATION (E)	Education, including highest ISCED level attained	
	Basic labour information on current activity status and on current main job, including information on last main job for unemployed  Basic information on activity status during income reference period	
LABOUR INFORMATION (L)	Total number of hours worked on current second/third jobs	
	Detailed labour information	
	Activity history	
	Calendar of activities	
HEALTH (H)	Health, including health status and chronic illness or condition	
	Access to health care	
INCOME (Y)	Gross personal income, total and components at personal level	

## **REFERENCE PERIODS**

Reference period: period of time to which a particular item of information relates.

EU-SILC uses following reference periods for different items:

- At selection: this term is usually used with variables related with the sample design and it refers at time that the sample is selected
- Constant
- Current
- <u>Income reference period</u>: the income reference period shall be a twelve-month period. This may be a fixed twelve-month period (such as the previous calendar or tax year) or a moving twelve-month period (such as the twelve months preceding the interview). Limited departures from this definition are allowed for Member States having a different tradition in their national statistics, as long as the impact on comparability is marginal.
- <u>Last twelve months</u>: this refers to the twelve months period preceding the interview.
- <u>Since last year</u>: since last interview.
- Working life: period of time between the time that person started his/her labour activity and now.
- <u>Childcare reference period</u>: the childcare reference period shall be a typical (usual) week around the interview. If the date of the survey is before or during the school summer holidays, the childcare reference period shall be a typical week in the period from January to the date of the survey, so close as possible to the date of interview. A "typical week" should be understood as one which is representative of the period as a whole. If it is difficult to identify a typical week because weeks differ too much between each other, then the information should be given for the first week before the end of the reference period which is not affected by holidays or other special circumstances (e.g. illness).

Other periods of time as <u>reference week</u> (refers the period 'from Monday to Sunday' of the week before the interview date), <u>4 previous weeks</u> (refers to the previous 4 weeks ending with the reference week), etc are used in the data collection and they are defined in each item.

## **UNITS**

#### Household

<u>Private Household</u> is defined as a person living alone or a group of people who live together in the same private dwelling and share expenditures, including the joint provision of the essentials of living.

#### Household member

Subject to the further and specific conditions shown below, the following persons must, if they **share household expenses**, be regarded as household members.

- 1. persons usually resident, related to other members
- 2. persons usually resident, not related to other members
- 3. resident boarders, lodgers, tenants
- 4. visitors
- 5. live-in domestic servants, au-pairs
- 6. persons usually resident, but temporarily absent from dwelling (for reasons of holiday travel, work, education or similar)
- 7. children of household being educated away from home
- 8. persons absent for long periods, but having household ties: persons working away from home
- 9. persons temporarily absent but having household ties: persons in hospital, nursing home, boarding school or other institution

#### Further conditions for inclusion as household members are as follows:

for categories (3) (4) (5)

 currently has no private address elsewhere or their actual or intended duration of stay is 6 months or more

for category (6)

 currently has no private address elsewhere and their actual or intended duration of stay is less than 6 months

for categories (7) and (8), irrespective of the actual or intended duration of absence, the person

 currently has no private address elsewhere, is the partner or child of a household member, and continues to retain close ties with the household and considers this address to be his/her main residence

and for category (9)

 the person has clear financial ties to the household and the actual or expected duration of absence from the household is less than 6 months

<u>Shares in household expenses</u> include benefiting from expenses (e.g. children, persons with no income) as well as contributing to expenses. If expenses are not shared, then the person constitutes a separate household at the same address.

A person will be considered a <u>usually resident</u> member of the household if he/she spends most of his/her daily night-rest there, evaluated over the past six-months. Persons forming new

households or joining existing households will normally be considered members at their new location; similarly, those leaving to live elsewhere will no longer be considered members of the original household. The above mentioned 'past six-month' criteria will be replaced by the intention to stay for a period of 6 months or more at the new place of residence.

Account has to be taken of what may be considered as 'permanent' movements in or out of households. Thus a person who has moved into a household for an indefinite period or with the <u>intention to stay for a period of 6 months or more</u> will be considered a household member, even though the person has not yet stayed in the household for 6 months, and has in fact spent a majority of that time at some other place of residence. Similarly, a persons who has moved out of the household to some other place of residence with the intention to stay away for 6 months or more, will no longer be considered a member of the previous household.

If the person who is <u>temporarily absent is in private accommodation</u>, then whether they are members of this (or their other) household depends on the length of their absence. Exceptionally, certain categories of persons with very close ties to the household may be included as members irrespective of the length of absence, provided they are not considered members of another private household.

In the application of these criteria, the intention would be to minimise the risk that individuals who have two private addresses at which they might potentially be enumerated are not double-counted in the sampling frame. Similarly, the intention would be to minimise the risk of some persons being excluded from membership of any household, even though in reality they belong to the private household sector

#### Former household member

The term <u>former household member</u> refers to a person who is not a current member of the household and was not recorded as a household member in that household in previous wave, but who lived in the household for at least three months during the income reference period.

The former household members will be included only in EU-SILC longitudinal component.

#### Selected respondent

If income information is available from population registers, and a sample of persons (rather than households or addresses) is selected, then one household member aged 16 or over (the person selected into the sample) may be the <u>selected respondent</u>. In this situation, detailed individual-level information on labour situation, health and access to health would be collected on one adult, rather than all adults in the household.

#### Household member 16 and over

In countries where a sample of households or addresses is selected, all persons aged 16 and over at the end of the income reference period will be selected for personal interview.

## MODES OF COLLECTION

The information included in the SILC project can either be extracted from registers or be collected from interviews.

In case of interviews, five modes of data collection are possible:

- 1. Face-to-face personal interview (PAPI)
- 2. Face-to-face personal interview (CAPI)
- 3. Telephone interview (CATI)
- 4. Self-administered by respondent
- 5. Proxy interview

In the EU-SILC legal basis, priority is given to face-to-face personal interviews (PAPI or CAPI) over the other modes of data collection.

For the countries where a sample of persons as opposed to a sample of addresses/households is selected, i.e. in the 'registers' countries, the systematic use of telephone interviews has been allowed on a gentlemen's agreement basis. This has been possible as the interview duration is much shorter in this situation given that part of the information is extracted from registers.

It is only under special circumstances (absence, illness, incapacity, ...) where the individual is unable to directly provide the requested information through personal interview, that a personal interview with another member of the household (proxy), a telephone interview with the individual or a self-administration of the questionnaire by the respondent are the recommended methods.

Proxy interviews are especially to be avoided for both income variables, health and detailed labour information.

If the information is carried out through personal interview with another member of the household or is self-administered by respondent, the interviewer, if possible, should try to arrange a later interview with that person or, if it is not possible, to contact him/her by phone in order to check the information provided in the questionnaire.

In the case that a proxy interview is carried out, the identification number of the person who has provided the information has to be recorded.

## D-, R-, H- and P-FILES

The target variables will be sent to EUROSTAT in 4 different files:

- 1. Household Register (D)
- 2. Personal Register (R)
- 3. Household Data (H)
- 4. Personal Data (P)

The household register file (D) must contain every household (selected + substituted + split off (longitudinal only)), also those where the address could not be contacted or which could not be interviewed. Cross-sectional D-files are intended to contain information on the households which are eligible at the current year of the survey. In particular, over-coverage and non-response occurring the year before and making households not eligible are not to be recorded in there.

In the other files records related to a household will only exist if the household has been contacted (DB120 = 11 (or DB110 = 1)) AND has a completed household interview in the household data file (H) (DB130 = 11) AND at least one member has complete data in the personal data file (P) (RB250 = 11, 12, 13 or  $14 \Rightarrow DB135 = 1$ ). This member must be the selected respondent (RB245 = 2) if this mode of selection is used.

The personal register file (R) must contain a record for every person currently living in the household or temporarily absent. In the <u>longitudinal</u> component (initial household) this file must contain also a record for every person moved out or died since previous wave and for every person who lived in the household at least three months during the income reference period and was not recorded otherwise in the register of this household.

The personal data file (P) must contain a record for every eligible person (RB245 = 1, 2 or 3) for whom the information could be completed from interview and/or registers (RB250 = 11, 12, 13 or 14).

## VARIABLE NAMES

The variable names are composed of 3 parts:

1<sup>st</sup> character: file
2<sup>nd</sup> character: domain
3 digits: sequential number

If there is character at end, the same variable has been split for some reason.

## **FLAGS**

- 1. Variables and flags must be filled in a coherent way.
- 2. The flag value '-2' is in most (but not all) cases dependent on the value of one or more other variables.
- 3. The flag value '-3' (non-selected respondent) is only valid in those countries which use these feature.

#### Rules

In order not to create two sorts of variables (and to have the possibility to add further flags if necessary), all variables except the key variables will be completed by a flag-variable. The flag-variable is <u>always</u> filled with a value.

- All variables will be completed by a flag variable (the flag-variable name is the variable name with the suffix "F").
  - **Exemption**: the key variables (year of survey [xB010], country [xB020] and IDs [xB030, RB040] will NOT have a flag-variable.
- All the flag-variables are filled with a value.
- There are 2 types of flags:
  - 1. <u>negative numbers</u> (special codes)
    - the variable is blank (no value)
    - the flag variable specifies the reason why the main variable is blank (codes are the same for all variables)
  - 2. positive numbers (including zero)
    - the variable is filled with a correct value
    - the flag-variable gives supplementary information to the value of the main variable (codes may be different by variable or group of variables)
- Number of digits:
  - 1. Most variables (except income variables) have a one digit flag
    - Variable is filled: positive flag (= 1) and no supplementary information is necessary/possible
    - Variable is NOT filled: negative flag (= reason why variable is not filled)
  - 2. <u>Income variables (see the next section)</u>

## **INCOME FLAGS**

## **Income flags: Total household income variables**

INCOME FLAG (Total household income variables: HY010, HY020, HY022, HY023)

Cross-sectional and longitudinal

Reference period: -Unit: household

Mode of collection: constructed

#### Values

0 – 99999 : Integer, usually 5 positions

#### Construction

#### Specific values:

0 : No income

-1 : Missing (not allowed for most income component)

-5 : not filled: variable of net series is filled

#### Otherwise

Income flag is the concatenation of various digits:

1<sup>st</sup> digit: collected net or gross

2<sup>nd</sup> digit: imputation method

3<sup>rd</sup> and following digits: imputation factor (collected/recorded)

## Collected net or gross digit

1 : net

2 : gross

3 : net and gross (part of the component collected net, part gross)

4: unknown

## <u>Imputation method digit (refer to the main source of imputation used for the components)</u>

0 : No imputation

Deductive imputation
 Statistical imputation
 Gross/Net Conversion

#### Imputation factor

Imputation factor = collected value / recorded value (in percent with no decimal)

Example: if the collected value =  $912 \in$  and the recorded value after imputation is  $1000 \in$ , then the 3 digits for the imputation factor will be 091.

## **Income flags: Gross income variables**

INCOME FLAG (Gross income components: HY040G, HY050G, HY060G, HY070G, HY080G, HY081G, HY090G, HY100G, HY110G, HY0120G, HY130G, HY131G, HY145G, HY170G, PY010G, PY020G, PY021G, PY050G, PY080G, PY090G, PY100G, PY120G, PY130G, PY140G, PY200G)

Cross-sectional and longitudinal

Reference period: -

Unit: -

Mode of collection: constructed

#### Values

0 – 99999 : Integer, usually 5 positions

#### Construction

## Specific values:

0 : No income

-1 : Missing (not allowed for most income component)

-5 : not filled: variable of net series is filled

#### Otherwise

Income flag is the concatenation of various digits:

1<sup>st</sup> digit: collected net or gross

2<sup>nd</sup> digit: imputation method

3<sup>rd</sup> and following digits: imputation factor (collected/recorded)

## Collected net or gross digit

1 : net of tax on income at source and social contributions

2 : net of tax on income at source

3 : net of tax on social contributions

4 : gross 5 : unknown

6 : mix (parts of the component collected according to different ways)

#### Imputation method digit

0 : No imputation

1 : Deductive imputation2 : Statistical imputation3 : Gross/Net Conversion

#### Imputation factor

Imputation factor = collected value / recorded value (in percent with no decimal)

## **Income flags: Net income variables**

INCOME FLAG (Net income components: HY040N, HY050N, HY060N, HY070N, HY080N, HY081N, HY090N, HY100N, HY110N, HY0120N, HY130N, HY131N, HY145N, HY170N, PY010N, PY020N, PY021N, PY050N, PY080N, PY090N, PY100N, PY110N, PY120N, PY130N, PY140N)

Cross-sectional and longitudinal

Reference period: -

Unit: -

Mode of collection: constructed

#### Values

0 – 99999 : Integer, usually 5 positions

#### Construction

#### Specific values:

0 : No income

-1 : Missing (not allowed for most income component)

-5 : not filled: variable of gross series is filled

#### Otherwise

Income flag is the concatenation of various digits:

1<sup>st</sup> digit: collected net or gross

2<sup>nd</sup> digit: type of net recorded value

3<sup>rd</sup> digit: imputation method

4<sup>th</sup> and following digits: imputation factor (collected/recorded)

#### Collected net or gross digit

1 : net of tax on income at source and social contributions

2 : net of tax on income at source

3 : net of tax on social contributions

4 : gross

5 : unknown

#### *Type of net recorded value digit*

1 : net of tax on income at source and social contributions

2 : net of tax on income at source

3 : net of tax on social contributions

5 : unknown

6: mix (parts of the component collected according to different ways)

#### Imputation method digit

0 : No imputation

Deductive imputation
 Statistical imputation
 Gross/Net Conversion

#### Imputation factor

Imputation factor = collected value / recorded value (in percent with no decimal)

#### **Explanations**

#### Collected net or gross digit

If the amount is the same in gross and net value because the concerned income component is not taxed at all, then the 'collected net or gross' digit should be put to '4', ie 'gross', for the flag of both the net and gross income component variables.

#### Imputation digit

<u>Deductive method</u>: one or a few subcomponents of the income variables is/are obtained by modelling the component using individual/household characteristics, for instance children allowances can be computed on the basis of the age of the child.

<u>Statistical imputation</u>: the recorded value is obtained by a statistical/probabilistic model which parameters are estimated from the data. It includes random hot deck, random model/regression, predictive regression, mean/median imputation, last observation carried forward, distance matching (including sequential hot deck) methods.

<u>Gross/Net conversion</u>: the component is obtained directly from corresponding net/gross component using a taxation model, possibility using iterative algorithm. In this particular case, it is expected that both Gross and Net variables exist in the data base.

The new imputation digit aims to allow distinguishing between uncontrolled item non response and controlled data collection strategies. The former is used for quality assessment of the survey.

## Imputation factor

Imputation factor is non negative. It is expressed in percent without decimal. It is not bounded.

## IDENTIFICATION NUMBERS AND RECORD OF PERSONS

#### **Identification Numbers**

In both, the cross-sectional and the longitudinal survey, every household will receive a household number. This number is the base to construct the Household ID and the Personal ID. It should be a sequential number and not contain other information. It must NOT contain any information that conflicts with confidentiality rules. In the longitudinal survey this number must be unique for all the years of the survey.

#### Construction

- Household number: 1 999999 (maximum 6 digits)
- Household ID (cross-sectional) : = Household number
- Household ID (longitudinal) : = Household number + split number (2 digits)

The split number for the first wave will always take value '00'.

In the case of the household remaining entire, it keeps the Household number and Split number from one wave to the next.

In the case of a split-off, the initial household will keep the Household number and Split number from one wave to the next. The other households, i.e. the split-off households will keep the same Household number, but will be assigned the next available unique Split number in sequence.

In the case of a fusion of two sample households, if the new household is still at a previous address, it shall retain the Household number and Split number of the household that was at that address in the previous wave. If the new household is at a new address, the Household number and Split number of the household of the sample person who now has the lowest person number in 'the household register' will be retained.

Personal ID : = Household ID + personal number (2 digits)

Personal number: for every new person in the household add 1 to highest used persons number (for all the years of the survey and the Household ID)

It refers to the number assigned in 'the household register' to the person the first time he/she is recorded as a household member. In the cross-sectional component, and in new households in the longitudinal component, it should correspond to the person's line position in 'the household register'.

In the longitudinal survey Household ID and Personal ID never change, even not when the person moves to another household.

On the contrary, in the cross-sectional survey, from one year to the other the Household ID and Personal ID may change. No links are needed between the split-off household and the initial household.

#### **Examples:**

#### 1) Cross-sectional

Household number = 123

Household ID = 123

Personal ID (person 1) = 12301

Personal ID (person 2) = 12302

Personal ID (person 3) = 12303

The following year:

The person 2 moved out to another dwelling, while persons 1 and 3 stayed in the same accommodation.

Household number = 234

Household ID = 234

Personal ID (ex-person 1) = 23401

Personal ID (ex-person 3) = 23402

Household number = 345

Household ID = 345

Personal ID (ex-person 2) = 34501

## 2) Longitudinal

	WAVE 1	WAVE 2	WAVE 3	WAVE 4
	Jean Mary Elaine	Jean Mary	Jean Mary Marcus	Jean Mary Marcus
Household	Lucas Peter	Elaine Lucas	Elaine Lucas	Elaine
		Anne	Anne	Lucas Anne
		Peter Sara	Peter Sara	Peter Sara

## Wave 1:

Household number = 123

Split = 00

Household ID (original)= 12300

Lives in Paris, is composed of five members all of them sample persons:

Line	Person number	First name	Personal id
A	01	Jean	123-00-01
В	02	Mary	123-00-02
С	03	Elaine	123-00-03
D	04	Lucas	123-00-04
Е	05	Peter	123-00-05

#### Wave 2:

Jean and Mary stay in the same accommodation.

Elaine and Lucas moved out to Metz. They live with their aunt Anne (a co-resident). Peter moved out to her sister house, Sara (a co-resident). They live in Bordeaux.

Household number = 123 Split = 00 Household ID (original and initial)= 12300

Line	Person number	First name	Personal id
A	01	Jean	123-00-01
В	02	Mary	123-00-02

Household number =123 Split = 01 Household ID (split)= 12301

Line	Person number	First name	Personal id
A	03	Elaine	123-00-03
В	04	Lucas	123-00-04
С	01	Anne	123-01-01

Household number =123 Split = 02 Household ID (split)= 12302

Line	Person number	First name	Personal id
A	05	Peter	123-00-05
В	01	Sara	123-02-01

**Observation**: There are two splits. The household composed of Jean and Mary is the initial household (they live in wave 1 at the same address) and keeps the household number and the split number.

The household composed of Elaine, Lucas and Anne is one split-off household, keeps the same household number but has a different split number '01'. The personal ID assigned to Anne is the Household ID =12301 plus add one to the highest used person number (for all the years of the survey and the Household ID), as the household did not exist in previous wave the person number is 01.

The household composed of Peter and Sara is one split-off household, keeps the same household number but has a different split number '02'(add 1 to the highest split). The personal ID assigned to Sara is the Household ID =12302 plus add one to the highest used person number (for all the years of the survey and the Household ID), as the household did not exist in previous wave the person number is 01.

#### Wave 3:

Jean and Mary divorced. Mary stays at home with a new partner Marcus. Jean moved out to a new household in the same city. Rests of households from wave 2 stay at the same accommodation and with the same composition.

Household number = 123

Split = 00

Household ID (original and initial)= 12300

Line	Person number	First name	Personal id
A	02	Mary	123-00-02
В	06	Marcus	123-00-06

Household number = 123

Split = 03

Household ID (split)= 12303

Line	Person number	First name	Personal id
A	01	Jean	123-00-01

Household number = 123

Split = 01

Household ID = 12301

Line	Person number	First name	Personal id
A	03	Elaine	123-00-03
В	04	Lucas	123-00-04
С	01	Anne	123-01-01

Household number = 123

Split = 02

Household ID = 12302

Line	Person number	First name	Personal id
A	05	Peter	123-00-05
В	01	Sara	123-02-01

**Observation:** There is a split. The household composed of Mary and Marcus is the initial household (she lives at the same address) and keeps the household number and the split number. The personal ID assigned to Marcus is the Household ID =12300 plus add one to the highest used person number (for all the years of the survey and the Household ID). As the

household exited from previous wave and for this household numbers 01-05 person number was already assigned, the person number for Marcus is 06.

The household composed by Jean is the split-off household, keeps the same household number but has a different split number. The split number is formed adding to 1 to the highest used split number (for all the years of the survey), as we had already 2 split the, new one will be 3.

#### Wave 4:

Elaine moved out to Nice.

Lucas and Anne moved out to Nancy.

Rests of households from wave 2 stay at the same accommodation and with the same composition.

Household number = 123

Split = 00

Household ID (original)= 12300

Line	Person number	First name	Personal id
A	02	Mary	123-00-02
В	06	Marcus	123-00-06

Household number = 123

Split = 03

Household ID = 12303

Line	Person number	First name	Personal id
A	01	Jean	123-00-01

Household number =123

Split = 01

Household ID (initial)= 12301

Line	Person number	First name	Personal id
A	03	Elaine	123-00-03

Household number = 123

Split = 04

Household ID (split)= 12304

Line	Person number	First name	Personal id
A	04	Lucas	123-00-04
В	01	Anne	123-01-01

Household number =123

Split = 02

#### Household ID = 12302

Line	Person number	First name	Personal id
A	05	Peter	123-00-05
В	01	Sara	123-02-01

**Observation:** There is a split. The household composed of Elaine is the initial household (she had the smallest line in the register in previous wave) and keeps the household number and the split number. The household composed by Jean and Anne is the split-off household, keeps the same household number but has a different split number. The split number is formed adding to 1 to the highest used split number (for all the years of the survey), as we had already 3 split the new one will be 4.

#### Record of Persons

For determining the household identification numbers, it is necessary in case of household split to distinguish between the *initial household* (household that split remains identical to the parent household) and *split-off households*.

The initial household will be also very useful for the data collection purpose.

When a household split from wave x to wave x+1, it will be in the initial household where all information about the moving of the persons from previous wave will be collected (i.e. in the initial household, the full information required for current household members, the basic information for former household members and the basic information on household members in the previous wave that are no longer household members will be collected).

In the split-off household, only the full information required for current household members will be collected.

In the previous example, in wave 2, the initial household is the household composed of Jean and Mary, because they live at the same address than in wave 1. In this household information about moving of the persons from previous wave will be collected.

The household composed of Elaine, Lucas and Anne is a split household. In this household only information on current households members will be collected.

The household composed of Peter and Sara is also a split household. But only information about these members will be collected.

If nobody was living in the household during the income reference period as former household member.

Household ID = 12300

		RB030	RB070	RB080	RB090	RB100	RB110
#							
Line	Person number	Personal Id	Month of Birth	Year of Birth	Sex	Sample person or co-resident	Member- ship Status
A	01	123-00-01	05	1959	1	1	1
В	02	123-00-02	02	1962	2	1	1
С	03	123-00-03	01	1980	2	1	5
D	04	123-00-04	09	1982	1	1	5
Е	05	123-00-05	12	1930	1	1	5

## Household ID = 12301

		RB030	RB070	RB080	RB090	RB100	RB110
#							
Line	Person number	Personal Id	Month of Birth	Year of Birth	Sex	Sample person or co-resident	Member- ship Status
A	03	123-00-03	01	1980	2	1	2
В	04	123-00-04	09	1982	1	1	2
D	01	123-01-01	05	1963	2	2	3

## Household ID = 12302

		RB030	RB070	RB080	RB090	RB100	RB110
#							
Line	Person number	Personal Id	Month of Birth	Year of Birth	Sex	Sample person or co-resident	Member- ship Status
A	05	123-00-05	12	1930	1	1	2
В	01	123-02-01	03	1926	2	2	3

# **Household Register (D-file)**

## **DB010: Year of the survey**

BASIC DATA (Basic household data including degree of urbanisation)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: interviewer

## Values

year (4 digits)

## DB020: Country

BASIC DATA (Basic household data including degree of urbanisation)

Cross-sectional and longitudinal Reference period: constant

Unit: household

Mode of collection: frame

Values	
BE	Belgique/Belgïe
BG	Bulgaria
CZ	Czech republic
DK	Denmark
DE	Deutschland
EE	Estonia
IE	Ireland
EL	Elláda
ES	España
FR	France
IT	Italia
CY	Cyprus
LV	Latvia
LT	Lithuania
LU	Luxembourg
HU	$\mathcal{C}^{-1}$
MT	Malta
NL	Nederland
AT	Österreich
PL	Poland
PT	Portugal
RO	Romania
SI	Slovenia
SK	Slovak republic
FI	Suomi
SE	Sverige
UK	United Kingdom
СН	
HR	Croatia
IS	Iceland
NO	Norway
TR	Turkey

## DB030: Household ID

BASIC DATA (Basic household data including degree of urbanisation)

Cross-sectional [and longitudinal]

Reference period: current

Unit: household

Mode of collection: frame, register or interviewer

Values

ID number see construction in chapter 'General description'

In both, the cross-sectional and the longitudinal survey, every household will receive a household number. This number is the base to construct the Household ID and the Personal ID. It should be a sequential number and not contain other information. It must NOT contain any information that conflicts with confidentiality rules. In the longitudinal survey this number must be unique for all the years of the survey.

## **DB040: Region**

BASIC DATA (Basic household data including degree of urbanisation)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: frame, register or interviewer

Values	Values					
NUTS	(2 digits / See annex 1)					
Flags						
1	filled according to NUTS-10					
-1	missing					

This variable refers to the region of the residence of the household at the date of interview.

#### Difference with EU-SILC Regulation:

The Regulation refers to the classification NUTS-03. However, COMMISSION REGULATION (EU) No 31/2011 of 17 January 2011 amending annexes to Regulation (EC) No 1059/2003 of the European Parliament and of the Council on the establishment of a common classification of territorial units for statistics (NUTS)<sup>1</sup> states that all data transmission starting from 1/1/2012 should be made according to NUTS-10.

<sup>&</sup>lt;sup>1</sup> http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:013:0003:0054:EN:PDF

## **DB050: Primary strata**

## [Primary strata as used in the selection of the sample]

BASIC DATA (Basic household data including degree of urbanisation)

Cross-sectional and longitudinal Reference period: at selection

*Unit: household* 

Mode of collection: frame, register or sample design

V	Values					
	1 - 99999					
F	lags					
	1	filled				
	-2	not applicable (no stratification)				

DB050 provides an identification code for the strata in case the target population (or a part thereof) is stratified. Stratifying a population means dividing it into non-overlapping subpopulations, called strata. Independent samples are then selected within each stratum.

In order to facilitate the computation of the standard errors for the common EU indicators, for the equivalised disposable income, for the unadjusted gender pay gap and for a list of income components, countries should<sup>1</sup> fill in this variable (in the case of stratification) for ALL waves in the file, and not only the first one of the sub-sample (being the year of the selection of the concerned household). The recorded information, however, always refers to the situation at the time of the selection of the concerned household.

The above definition applies also to the new-entries from the second wave onwards.

-

<sup>&</sup>lt;sup>1</sup> Agreement during the Living Conditions Working Group meeting in June 2009

## **DB060:** Primary sampling units (PSU)

## **DB062: Secondary sampling units (SSU)**

[PSU as used in the selection of the sample]

[SSU as used in the selection of the sample]

BASIC DATA (Basic household data including degree of urbanisation)

Cross-sectional and longitudinal Reference period: at selection

Unit: household

Mode of collection: frame, register or sample design

Values						
1 - 99999						
Flags						
1	filled					
-2	not applicable (no first or second sampling stage)					

If direct-element sampling is either impossible (lack of sampling frame) or its implementation too expensive (the population is widely distributed geographically), multi-stage selections can be done. Firstly, the population is divided into disjoint sub-populations, called **primary sampling units (PSUs)**. A sample of PSUs is then selected (first–stage sampling). Secondly, each sampled PSU is divided itself into disjoint sub-populations, called **secondary sampling units (SSUs)**. SSUs are then independently drawn from each PSU (second-stage sampling) and so on....

DB060 (DB062) provides identification codes for the selected PSUs (SSUs).

In case there is at least a third stage of selection, additional variables DB06i (i≥3) shall be transmitted as identification numbers for the units sampled at stage i.(except for households, which are identified by the variable DB030, and for strata, identified by DB050).

In the particular situation where more than one household can share the same dwelling, dwellings must be regarded as clusters of households and then coded accordingly, as the units that are selected at the ultimate stage.

In order to facilitate the computation of the standard errors for the common EU indicators, for the equivalised disposable income, for the unadjusted gender pay gap and for a list of income components, countries should<sup>1</sup> fill in this (these) variable(s) (in the case of clustering) for ALL waves in the file, and not only the first one of the sub-sample (being the year of the selection of the concerned household). The recorded information, however, always refers to the situation at the time of the selection of the concerned household.

The above definition applies also to the new-entries from the second wave onwards.

<sup>&</sup>lt;sup>1</sup> Agreement during the Living Conditions Working Group meeting in June 2009

## **DB070: Order of selection of PSU**

#### [Order of selection of PSU as used in the selection of the sample]

BASIC DATA (Basic household data including degree of urbanisation)

Cross-sectional and longitudinal Reference period: at selection

Unit: household

Mode of collection: frame, register or sample design

Value	Values				
1 -	1 - 99999				
Flags					
1	filled				
-2	not applicable (no systematic selection)				

If primary sampling units (or households in case of direct-element sampling) are selected systematically, DB070 contains the rank of selection of those units. This information is important for variance estimation purposes as a systematic drawing from a judiciously ordered sampling frame may substantially decrease sampling errors.

If systematic selections have been performed at other sampling stages, additional variables DB07(i-1), that is the order of the selection of the units of stage i (i>1), shall be transmitted too.

In order to facilitate the computation of the standard errors for the common EU indicators, for the equivalised disposable income, for the unadjusted gender pay gap and for a list of income components, countries should<sup>1</sup> fill in this (these) variable(s) (in the case of systematic selection) for ALL waves in the file, and not only the first one of the sub-sample (being the year of the selection of the concerned household). The recorded information, however, always refers to the situation at the time of the selection of the concerned household.

The above definition applies also to the new-entries from the second wave onwards.

<sup>&</sup>lt;sup>1</sup> Agreement during the Living Conditions Working Group meeting in June 2009

## **DB075: Rotation group**

BASIC DATA (Basic household data including degree of urbanisation)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: constructed

V	alues	llues		
	1 - 9			
Flags				
	1	filled		
	-2	not applicable (no rotational design used)		

This variable shall be filled only for the countries using a rotational design.

#### Rotational design

Refers to any sample selection which is based on a fixed number of sub-samples, called replications, each representative of the target population at the time of their selection. Each year, one sub-sample rotates out and a new one is drawn and substituted for.

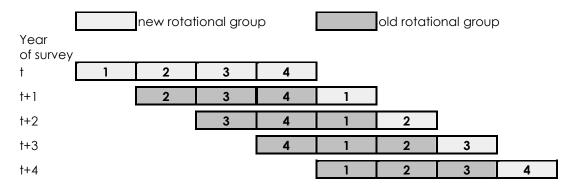
In case of a rotational design based on 4 replications with a rotation of one replication per year, one of the replications shall be dropped immediately after the first year, the second shall be retained for two years, the third for 3 years, and the fourth shall be retained for 4 years. From the second year onwards: each year one new replication shall be introduced and retained for 4 years.

#### Rotation group

Each replication is called a rotational group and the information on the group to which the household belongs is especially useful for controlling the implementation of the sample over time.

About the numbering of the rotation groups across time, it is recommended that each rotation group keeps the same number across years in the longitudinal files and also in the cross-sectional files. In case of a rotational design based on 4 replications with a rotation of one replication per year, it is asked to use the following pattern for the longitudinal and cross-sectional data files (see figure hereafter).

## PATTERN FOR ENUMERATION OF ROTATIONAL GROUPS



## DB080: Household design weight

BASIC DATA (Basic household data including degree of urbanisation)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: constructed

V	Values				
	0 (for	nat 2.5) weight (see below for required format)			
F	Flags (cross-sectional)				
	1	filled			
	-2	not applicable (not first year in the survey)			
F	Flags (longitudinal)				
	1	filled			
	-2	not applicable (not first year in the survey or split off)			

See construction of weights in chapter 'Introduction'

#### First year of each sub-sample

Household design weights are defined for all sampled households, and not only for the responding units. They allow inference from the initial sample to the household population. In general, they are calculated as the inverses of the inclusion probabilities.

#### From second year onwards (case of a rotational panel)

The above definition applies only to the new-entries.

For the households which are not surveyed for the first time, no values are to be given for the design weight and these are to be flagged -2 (not applicable).

#### Required format

In principle, according to the regulation, these weights had to be coded with 2 integers and 5 decimals. But, that cause problems if the weights have at least 3 integers. That's why, in practice, household design weights will be coded with at least one integer and 5 decimals.

## DB090: Household cross-sectional weight

BASIC DATA (Basic household data including degree of urbanisation)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: constructed

V	Values					
	0 (format 2.5)		weight (see below for required format)			
Flags						
-	1	filled		·		

See construction of weights in chapter 'Introduction'

The household cross-sectional weights are the final estimation weights. Only the households which are accepted to the database (DB135 = 1) have a cross-sectional weight, the others receiving a weight of 0.

### Required format

In principle, according to the regulation, these weights had to be coded with 2 integers and 5 decimals. But, that cause problems if the weights have at least 3 integers. That's why, in practice, household cross-sectional weights will be coded with at least one integer and 5 decimals.

## DB100: Degree of urbanisation

BASIC DATA (Basic household data including degree of urbanisation)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: constructed

V	Values		
	1	densely populated area	
	2	intermediate area	
	3	thinly populated area	
Flags			
	-1	missing (allowed only from wave 2 onwards)	
	1	filled	

To fill in this variable, the new DEGURBA classification has to be used starting from 2012 operation. The new classification is based on grid cells and a complete overview of the methodology<sup>1</sup> can be found on Circa under the classifications section. The complete list of municipalities with their corresponding code (A: Densely-populated area, code B: Intermediate area, code C: Thinly-populated area, see below) can also be found into the EU-SILC group of Circa.

This variable has to be filled in for every household in wave 1. From wave 2 onwards, a missing value (flag -1) is allowed for extreme cases (like moving house).

## **Densely populated area**

Contiguous grid cells of 1km2 with a density of at least 1 500 inhabitants per km2 and a minimum population of 50 000

#### **Intermediate area**

Clusters of contiguous grid cells of 1km2 with a density of at least 300 inhabitants per km2 and a minimum population of 5 000

#### Thinly-populated area

Grid cells outside urban clusters

<sup>&</sup>lt;sup>1</sup> A complete documentation, including correspondence tables can be found on <a href="http://ec.europa.eu/eurostat/ramon/miscellaneous/index.cfm?TargetUrl=DSP\_DEGURBA">http://ec.europa.eu/eurostat/ramon/miscellaneous/index.cfm?TargetUrl=DSP\_DEGURBA</a>

## **DB110: Household status**

BASIC DATA (Basic household data including degree of urbanisation)

Longitudinal

Reference period: current

Unit: household

Mode of collection: interviewer

#### Values

Household from previous wave

- 1 At the same address as last interview
- 2 Entire household moved to a private household within the country

Household no longer in-scope

- Entire household moved to a collective household or institution within the country
- 4 Household moved outside the country
- 5 Entire household died
- 6 Household does not contain sample person

Address non-contacted

- 7 Household unable to access (due to for example climatic conditions)
- Lost household (no information on record on what happened to the household)

New household for this wave

- 8 Split-off household
- 9 New address added to the sample this wave or **first wave**

Fusion

10 Fusion

## Flags

1 filled

<u>The household is at the same address as last interview</u>: This situation appears when at least one of the sample persons lives at the same address as in the previous wave.

<u>Entire household moved to a private household within the country</u>: This situation appears when no sample persons lives anymore at the same address as in the previous wave, but when the household moved to a private household within the country.

Entire household moved to a collective household or institution within the country: This situation appears when all the sample persons moved to a collective household or institution within the country.

<u>Household moved outside the country or to territories not covered by the survey</u>: This situation appears when all the sample persons moved outside the country or to territories not covered by the survey.

Entire household deceased: This situation occurs when all the sample persons have died.

<u>Household does not contain sample person</u>: This situation appears when sample persons are no longer in scope for different reasons.

<u>Address non-contacted</u> while distinguishing between unable to access and lost/no information on record on what happened to the household

<u>Split-off households</u>: New household split off from the household since previous wave and not considered as the initial household.

<u>New address added to the sample this wave or first wave</u>: The first time this household is recorded in the survey and is not a split off household (first wave, new household introduced into the sample in order to maintain the sample size because loss due to non-response).

<u>Fusion</u>: This situation appears when sample persons from different sample households from the previous wave join together to form a new household. The household that disappear will be coded as 'fusion'. The household that keeps the identification number will be coded as: '1' (if it stays a the same address than the last interview), as 2 (if entire household moved to a private household within the country), etc.

#### Initial contact with the address

It is recommended that a letter is sent before visiting the household to inform them that they have been selected to participate in the survey, the main characteristics of the survey and to request a visit to undertake an interview.

Where possible, it is recommended to make an appointment by phone in order to reduce noncontacts due to absence of the person from the home, illness etc

If the interviewer has any difficulty in finding an address there are several sources which may be helpful such as the local post office, the City Hall, the police, etc.

Where known, the telephone number of the household should be included in the interviewer instructions.

#### Second, third and so on contacts(longitudinal component)

A major risk of attrition in a longitudinal survey is linked to either individuals or the entire household moving between waves. Special procedures need to be established to trace all moving/split-off households. These procedures can relate to the interviewers organisation or to the central organisation:

- In order to be able to trace people or households who move between waves, several measures can be taken by the interviewer, e.g. (a) asking at each interview about any intention or expectation of a move before the next interview; (b) contacting them by mail or phone in the intervening period between waves; (c) requesting the household to inform the interviewer if a move takes place with appropriate financial incentives; (d) where a move is likely to occur, asking for the name and address of a friend or relative who could inform the interviewer about the new location.
- For those countries using a sample of addresses or households, the first task at each interview is to get all the information for the identification of the household members and on any changes in the household composition. It is important to obtain the date, reason of and the new address of any movers.
- If the interviewer is not able to get the new address, then an attempt has to be made by their supervisor and or by the central team. It is recommended that within each NDU, at least one person is concerned only with finding the new addresses of these households in the population, using the postal system/other sources if feasible.
- In relation to household moves, one proposal is to use specialised or more experienced interviewers who will have a closer relationship with the supervisor.

- The interviewer shall try to contact neighbours, population registers or whatever other source of information in order to know the situation of the sample persons who lived there.

Once the new address has been obtained, the interviewer shall try to locate the household at the new address if within the interviewers area. Where the address is outside of the interviewers area, the interviewer should advise their supervisor of the change of address.

## **DB120: Contact at address**

#### [Record of contact at address]

BASIC DATA (Basic household data including degree of urbanisation)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: interviewer

Va	Values		
	11	address contacted	
	Address	s non-contacted	
	21	address cannot be located	
	22	address unable to access	
	23	address does not exist or is non-residential address or is unoccupied or not	
		principal residence	
Fla	Flags (cross-sectional)		
	1	filled	
	-1	missing	
Fla	Flags (longitudinal)		
	1	filled	
	-1	missing	
	-2	not applicable (DB110 not = $2, 8 \text{ or } 9$ )	

This variable has only to be filled in when DB110 = 2, 8, 9. Otherwise, no values are to be given for this variable and it has to be flagged -2 (not applicable).

#### Address contacted

When a household has its main residence at the sampled address which can be located the status is recorded as 'address contacted' where it is possible to gain access to the address. When an entire or a part of the household (split-off household) has moved to a private household within the country the status is recorded as 'address contacted' where it is possible to gain access to the new address.

#### Address cannot be located

This occurs when, with the available information, it is not possible to locate the address despite special efforts made to locate the sampled address.

#### Address unable to access

This occurs when it is not possible to access the address due to weather factors (like flooding etc.) or geographic factors, for example, there are no access roads. The cause of the lack of access should not be only temporary.

## Address does not exist, is non-residential, is unoccupied or is not a principal residence

An address is <u>non-residential</u> if it is used for different purposes than those of a principal residence (business, shop, vacation home, etc).

An address does not exist if the building has been demolished.

An address is unoccupied or empty if nobody is currently living there.

For those countries selecting a sample of persons, for example from a population register, the goal is to contact the persons wherever they live. The status 'address does not exist, is non-residential, is unoccupied or is not principal residence' should not be relevant. In case of the death of the selected respondent, the household can be classified as 'address is unoccupied'.

## **DB130:** Household questionnaire result

BASIC DATA (Basic household data including degree of urbanisation)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: interviewer

Va	alues		
	11	household questionnaire completed	
	Interv	iew not completed	
	21	refusal to co-operate	
	22	entire household temporarily away for duration of fieldwork	
	23	household unable to respond (illness, incapacity)	
	24	other reasons	
Fl	Flags		
	1	filled	
	-1	missing	
	-2	not applicable (DB120 not = $11$ and DB110 not = $1$ )	

This variable has only to be filled in when DB120 = 11 or when DB110 = 1. Otherwise, no values are to be given for this variable and it has to be flagged -2 (not applicable).

#### Household questionnaire completed

A household questionnaire is considered as completed if most of its variables have been filled in.

#### Interview not completed

As mentioned in the Commission Regulation on Fieldwork aspects and Imputation procedures, in the case of an interview survey, at least three call-backs shall be made before a household is accepted as non-responding (interview not completed), unless there are clear and strong reasons (such as a definite refusal to co-operate, circumstances endangering the safety of the interviewer, etc.) why this cannot be done.

*The interview has not been completed for some of the following reasons:* 

• Refusal to co-operate

The household refuses to give information either from the beginning of the interview or having initially agreed to provide the information, for any reason refuses at a later date.

The interviewers should do their best to obtain co-operation not only by explaining the survey but also by calling back again when an appointment is broken.

• Entire household temporarily away for duration of fieldwork

An entire household is temporarily away when all its household members are temporarily away and will not return during the fieldwork period in the area.

Before declaring a household, as temporarily away, the interviewer shall ensure that all necessary attempts to contact the household have been done (visiting the household at different hours, different days, calling by phone, etc).

• Household unable to respond (illness, incapacity, etc.)

This situation appears when either all household members are unable to respond to the interview or are unable to self-administer the questionnaires due to incapacity, illness and so on.

In case of a one-person household that is unable to respond or to self-administer the questionnaire due to incapacity or illness, the interviewer should, if feasible, try to contact someone outside the household who is able to help or give the information of the incapacitated person

The interviewer shall only assign the code 'household unable to respond' when the illness or incapacity is not temporary; in other case the interviewer should come back to the household during the fieldwork period in the area.

#### • Other reasons

This item refers to whatever situation not referred above, either because all the household members do not know the language or all of them are illiterate and so on, and nobody outside the household can provide the information.

## **DB135: Household interview acceptance**

BASIC DATA (Basic household data including degree of urbanisation)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: interviewer

Valu	nes
1 2	interview accepted for database interview rejected
Flag	· ·
1	filled
-1	missing
-2	not applicable (DB130 not = 11)

The interview shall be accepted for the database if at least one of the personal interviews is completed.

In those countries, in which a selected respondent is chosen for the personal interview, the interview of the selected respondent must be completed.

The household interview shall be rejected for the database if no personal interview is completed.

## Personal Register (R-file)

## **RB010: Year of the survey**

BASIC DATA (Basic personal data)

Cross-sectional and longitudinal

Reference period: current

Unit: all current household members (of any age) and former household members

Mode of collection: interviewer

## Values

year (4 digits)

## **RB020: Country**

BASIC DATA (Basic personal data)

Cross-sectional and longitudinal

Reference period: constant

Unit: all current household members (of any age) and former household members

Mode of collection: frame

BE	Belgique/Belgïe
BG	Bulgaria
CZ	Czech republic
DK	Denmark
DE	Deutschland
EE	Estonia
IE	Ireland
GR	Elláda
ES	España
FR	France
IT	Italia
CY	Cyprus
LV	Latvia
LT	Lithuania
LU	Luxembourg
HU	Hungary
MT	Malta
NL	Nederland
AT	Österreich
PL	Poland
PT	Portugal
RO	Romania
SI	Slovenia
SK	Slovak republic
FI	Suomi
SE	Sverige
UK	United Kingdom
СН	Switzerland
HR	Croatia
IS	Iceland
NO	Norway
TR	Turkey

## **RB030: Personal ID**

BASIC DATA (Basic personal data)

Cross-sectional and longitudinal

Reference period: constant

Unit: all current household members (of any age) and former household members

Mode of collection: frame, register or interviewer

## Values (cross-sectional)

ID number see construction in chapter 'General description'

## **RB030C: Cross-sectional personal ID**

BASIC DATA (Basic personal data)

longitudinal

Reference period: constant

Unit: all current household members (of any age) and former household members

Mode of collection: frame, register or interviewer

Values	Values		
ID no	ID number (cross sectional like)		
	see construction in chapter 'General description'		
Flags			
1	filled		
-2	not applicable (person not in the cross-sectional file		

RB030C contains the cross-sectional personal IDs of the R-file sent to Eurostat for the 4 last cross-sectional operations (i.e. RB030 in the 4 cross-sectional R-files).

## **RB031: Year of immigration**

BASIC DATA (Basic personal data)

Cross-sectional and longitudinal

Reference period: constant

Unit: all current household members (of any age) and former household members

Mode of collection: frame, register or interviewer

V	Values		
	1890-year of the survey		
F	lags		
	1	filled	
	-1	missing	
	-2	not applicable (no immigration for the person)	

Note: If the person immigrated before 1890 the variable will be filled in with the value 1890.

The purpose of this variable is twofold<sup>1</sup>:

- 1) to identify the people who entered the country in the last years (maximum duration = length of the rotational panel) to know if these people were in the sample frame at the time of the sample selection (for longitudinal weighting purposes);
- 2) to study the population of migrants in a broad sense, i.e. to evaluate the size and major characteristics of the people who entered the country when recording the last entry in the country.

The considered period of immigration should be since the person was born. In case of major problems to obtain the information, the considered period can be limited to the panel duration of EU-SILC survey (i.e. last 4 years).

In the case of boundary changed and the person lives at the same address, this is not considered as immigration and the flag -2 should be used.

Reintegration in the country of origin or in the country of birth is considered as immigration for this variable.

Only immigration between countries should be considered, immigration among regions within country should not be taken into account.

<sup>&</sup>lt;sup>1</sup> To collect this variable starting from the 2010 operation onwards was agreed during the 2009 Living Conditions Working Group meeting. Nevertheless, it was kindly asked to countries to already fill in this variable from the 2008 operation onwards as much as possible, knowing that in the majority of cases this information should be available from population registers.

## **RB040: Current household ID**

BASIC DATA (Basic personal data)

Longitudinal

Reference period: current

*Unit: all current household members (of any age) and former household members* 

Mode of collection: frame, register or interviewer

Values

ID number see DB030

#### **RB041: Personal ID**

BASIC DATA (Basic personal data)

Cross-sectional

Reference period: last wave

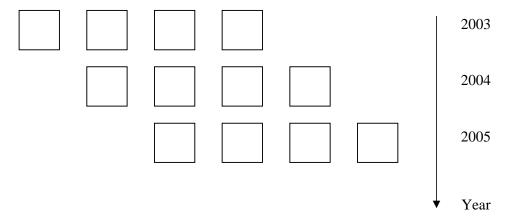
*Unit: all current household members (of any age) Mode of collection: frame, register or interviewer* 

V	Values			
	ID nu	ımber	see identification numbers	
F	lags			
	1	filled		
	-2	not applic	able	

This variable is to be filled by the countries implementing a rotational panel or a pure panel. It is only defined for the persons who have been eligible for follow-up as panel persons. Otherwise, the variable is coded missing and flagged with -2 (not applicable).

RB041 provides for those persons the same identification code as for the year of their last interview so that we can merge the data of these two consecutive years. For each eligible person, RB041 results from concatenating the personal identification code (SILC variable RB030) for the year of the last interview with a digit accounting for the corresponding panel wave of the interview.

The coding of RB041 is illustrated in the next figure.



Let  $S_i$ ,  $i \in \{1,2,3,4\}$ , denote the four sub-sample of « panel » persons in 2005, i.e. persons eligible for follow-up (in 2006). Let RB030(yy) denote the personal identification codes at year yy. Then, we have:

- $RB041(S_1) = RB030(2004)!!2$
- $RB041(S_2) = RB030(2004)!!2$
- $RB041(S_3) = RB030(2004)!!1$
- $RB041(S_4) = missing (RB041\_F=-2)$

(!! means "concatenation")

In fact RB041 = (RB030) of the previous year concatenated with the number of years the person is in the survey.

So, in the 2010 datafile:

- 1) if the person was selected to be interviewed for the first time in the SILC operation 2009, RB041 for this person will be equal to (RB030) from the 2009 datafile concatenated with '1';
- 2) if the person was selected to be interviewed for the first time in the SILC operation 2008, RB041 for this person will be equal to (RB030) from the 2009 datafile concatenated with '2';
- 3) if the person was selected to be interviewed for the first time in the SILC operation 2007, RB041 for this person will be equal to (RB030) from the 2009 datafile concatenated with '3'.

## **RB050:** Personal cross-sectional weight

BASIC DATA (Basic personal data)

Cross-sectional

Reference period: constant

Unit: all current household members (of any age) and all former household members

Mode of collection: constructed

V	Values				
	0+	(format 2.5)	weight (see bellow the required format)		
F	lags				
	1	filled			

See construction of weights in chapter 'Introduction'

#### Required format

In principle, according to the regulation, these weights had to be coded with 2 integers and 5 decimals. But, that cause problems if the weights have at least 3 integers. That's why, in practice, personal cross-sectional weights will be coded with at least one integer and 5 decimals.

## **RB060:** Personal base weight

BASIC DATA (Basic personal data)

Longitudinal

Reference period: constant

Unit: all current household members (of any age) and former household members

Mode of collection: constructed

V	Values				
	0 (fo	rmat 2.5)	weight (see bellow the required format)		
F	lags				
	1	filled			

See construction of weights in chapter 'Introduction'

The personal base weight can have the value 0, namely for non panel persons.

#### Required format

In principle, according to the regulation, these weights had to be coded with 2 integers and 5 decimals. But, that cause problems if the weights have at least 3 integers. That's why, in practice, personal base weights will be coded with at least one integer and 5 decimals.

## **RB062:** Longitudinal weight (two-year duration)

BASIC DATA (Basic personal data)

Longitudinal

Reference period: constant

Unit: all current household members (of any age) and former household members

Mode of collection: constructed

Values	
0 (for	rmat 2.5) weight
Flags	
1	filled
-1	missing
-2	not applicable (no 2-year trajectory for the individual, i.e. individual in first
	wave)

See construction of weights in chapter 'Introduction'

## **RB063:** Longitudinal weight (three-year duration)

BASIC DATA (Basic personal data)

Longitudinal

Reference period: constant

Unit: all current household members (of any age) and former household members

Mode of collection: constructed

Values	
0 (fe	ormat 2.5) weight
Flags	
1	filled
-1	missing
-2	not applicable (no 3-year trajectory for the individual, i.e. individual in first or
	second wave)

See construction of weights in chapter 'Introduction'

## **RB064:** Longitudinal weight (four-year duration)

BASIC DATA (Basic personal data)

Longitudinal

Reference period: constant

Unit: all current household members (of any age) and former household members

Mode of collection: constructed

Values	Values		
0 (for	mat 2.5) weight		
Flags			
1	filled		
-1	missing		
-2	not applicable (no 4-year trajectory for the individual, i.e. individual in first,		
	second or third wave)		

See construction of weights in chapter 'Introduction' 1

<sup>&</sup>lt;sup>1</sup> To construct this variable starting from the 2010 operation onwards was agreed during the 2009 Living Conditions Working Group meeting.

## **RB070: Month of birth**

BASIC DATA (Demographic data)

Cross-sectional and longitudinal

Reference period: constant

Unit: all current household members (of any age) and former household members

Mode of collection: household respondent or register

Va	alues	
	1 - 12	month
Fla	ags	
	1	filled
	-1	missing

## **RB080: Year of birth**

BASIC DATA (Demographic data)

Cross-sectional and longitudinal

Reference period: constant

Unit: all current household members (of any age) and former household members

Mode of collection: household respondent or register

Values	Values		
1890	year of the survey		
Flags			
1	filled		
-1	missing		

Note: If the person is born before 1890 the variable will be filled in with the value 1890

## RB090: Sex

BASIC DATA (Demographic data)

Cross-sectional and longitudinal

Reference period: constant

Unit: all current household members (of any age) and former household members

Mode of collection: household respondent or register

V	alues	
	1	Male
	2	Female
F	lags	
	1	filled

## **RB100: Sample person or co-resident**

BASIC DATA (Basic personal data)

Longitudinal

Reference period: current

*Unit: all current household members (of any age) Mode of collection: household respondent or register* 

V	alues	
	1 2	sample person co-resident
Fl	lags	
	1	filled
	-1	missing

#### Sample persons:

Means all or a subset of the members of the households in the initial sample who are over a certain age.

#### **Initial sample:**

Refers to the sample of households or persons at the time it is selected for inclusion in EU-SILC.

#### Age limit used to define sample persons:

In case of a four-year panel, this age limit shall not be higher than 14 years. In countries with a four-year panel using a sample of addresses or of households, all household members aged 14 and over in the initial sample shall be sample persons.

In countries with a four-year panel using a sample of persons, this shall involve the selection of at least one such person per household. For an initial sample of persons, the term applies only to the individuals selected (normally one per sample household).

The above mentioned minimum age limit shall be lower in case of a longer panel duration. For a panel duration exceeding eight years, members of all ages in the initial sample shall be sample persons, and children born to sample women during the time the mother is in the panel shall be included as sample persons.

<u>Co-residents or non-sample persons:</u> are all current residents of a sample household other than those defined above as sample persons.

#### Sample household:

Means a household containing at least one sample person.

#### Implementation:

For countries selecting a sample of household (address) and using the Eurostat integrated design each sub-sample will be a panel and it will be followed during 4 years.

In the first wave of each 4 year-panel, all household members aged 14 and over will be **sample person**. Household members aged less than 14 will be **co-residents**.

In the second wave and so on , the co-residents will be the household members aged less than 14 (at the moment of the sample selection) plus household members who join a sample households after the first wave.

Note: This variable also will be filled in the cross-sectional component for those countries using a rotational panel or a pure panel and from this design they provide the cross-sectional data.

## **RB110: Membership status**

BASIC DATA (Demographic data)

Longitudinal

Reference period: current

*Unit: all current household members (of any age) and former household members* 

Mode of collection: household respondent or register

#### Values

#### For current household members

- 1 Was in this household in previous waves or current household member
- 2 Moved into this household from another sample household since previous wave
- 3 Move into this household from outside sample since previous wave
- 4 Newly born into this household since last wave

#### Not current household members

- Moved out since previous wave or last interview if not contacted in previous wave
- 6 Died
- 7 Lived in the household at least three months during the income reference period and was not recorded in the register of this household

#### Flags

- 1 filled
- -1 missing

#### First year the initial household is in the survey

1 For current household members

#### Following years

#### Initial household

- For current household members that were household members in previous waves.
- 2 For current household members that were not household members of this household in previous waves but they moved into this household from another **sample** household since previous wave.
- For current household members that were not household members of this household in previous waves but they move into this household from **outside sample** since previous wave.
- 4 For newly born into this household since last wave.
- Not current household members that were household members of this household in previous waves and that moved out since previous wave or last interview if not contacted in previous wave.
- They were household members in previous waves and that died since previous wave or last interview if not contacted in previous wave.
- For former household members that have never been recorded as current household members in previous waves.

#### Split-off households

- For current household members that moved into this household from another sample household since previous wave.
- For current household members that moved into this household from outside sample since previous wave.

The code 7 is **not to be used** for former household members in the case of **split-off households** because it is too difficult to handle in this case.

#### Note:

Why to introduce the former household members? In order to assess the impact of changes in household composition on social exclusion, it is important to have basic information on change of composition. This would allow the classification of changes due to death, marital breakdown, young adults leaving home, birth of children, etc.

The code 7 must however be used only from wave 2 onwards (not to use in wave 1) and only for the initial household (and not in split-off household).

The term former household member refers to a person who is not a current member of the household and was not recorded as a household member in that household in previous wave, but who lived in the household for at least three months during the income reference period.

Persons not having register by mistake at the moment of data collection, they will be coded as 3.

## **RB120: Moved to**

#### [To where did the person move]

BASIC DATA (Demographic data)

Longitudinal

Reference period: current

Unit: all current household members (of any age) Mode of collection: household respondent or register

Values	
1	To a private household in the country
2	To a collective household or institution in the country
3	Abroad
4	Lost
Flags	
1	filled
-2	not applicable (RB110 not = 5)

#### Note:

People moving to a private/collective household or institution within the country but to national territories excluded from EU-SILC will be coded as 3.

## **RB140:** Month moved out or died

## [Month when the person moved out or died]

BASIC DATA (Demographic data)

Longitudinal

Reference period: current

Unit: all current household members (of any age) Mode of collection: household respondent or register

V	Values		
	1 -12	month	
F	lags		
	1	filled	
	-1	missing	
	-2	not applicable (RB110 not = $5$ or $6$ )	

## **RB150: Year moved out or died**

#### [Year when the person moved out or died]

BASIC DATA (Demographic data)

Longitudinal

Reference period: current

Unit: all current household members (of any age) Mode of collection: household respondent or register

Values	Values		
year	(4 digits)		
Flags			
1	filled		
-1	missing		
-2	not applicable (RB110 not $= 5$ or $6$ )		

# **RB160:** Number of months in household during the income reference period

BASIC DATA (Demographic data)

Longitudinal

Reference period: income reference period

Unit: all current household members (of any age) and former household members

Mode of collection: household respondent or register

Valu	Values		
0	- 12	number of months	
Flag	gs		
1	1	filled	
-1	1	missing	
-2	2	not applicable (RB110 not = $5$ or $6$ or $7$ )	

## RB170: Main activity status during the income reference period

BASIC DATA (Demographic data)

Longitudinal

Reference period: income reference period

Unit: all not current household members (of any age) including former household

members

Mode of collection: household respondent or register

Values	
1	At work
2	Unemployed
3	In retirement or early retirement or has given up business
4	Other inactive person
Flags	
1	filled
-1	missing
-2	not applicable (RB110 not = $5$ or $6$ or $7$ )

The status should be self-defined (see explanations given for variable PL031).

#### Work

See explanations given for variable PL031.

#### Unemployed

Early retirement for economic reasons can be included here according to the respondent's feeling, i.e. a person in early retirement for economic reasons will be included here if he/she classifies him/herself as unemployed.

#### Retirement, early retirement

A person is in retirement or early retirement if he/she left his/her work for age. Early retirement due to enough seniority is also to be included.

Early retirement for economic reasons is on the other hand to be classified according to the respondent's feeling, i.e. a person in early retirement for economic reasons will be included here only if he/she classifies him/herself as retired.

#### Other inactive

This category includes the corresponding categories from variables PL031:

- Pupil, student, further training, unpaid work experience
- Permanently disabled or/and unfit to work
- In compulsory military community or service
- Fulfilling domestic tasks and care responsibilities
- Other inactive person

## **RB180: Month moved in**

## [Month when the person moved in]

BASIC DATA (Demographic data)

Longitudinal

Reference period: current

Unit: all current household members (of any age) Mode of collection: household respondent or register

Values	
1 -12	month
Flags	
1	filled
-1	missing
-2	not applicable (RB110 not $= 3$ )

## RB190: Year moved in

## [Year when the person moved in]

BASIC DATA (Demographic data)

Longitudinal

Reference period: current

Unit: all current household members (of any age) Mode of collection: household respondent or register

Va	Values		
	ar (4 digits)		
Fla			
	filled		
	missing		
	not applicable (RB110 not $= 3$ )		

## **RB200: Residential status**

BASIC DATA (Demographic data)

Cross-sectional and longitudinal

Reference period: current

Unit: all current household members (of any age) Mode of collection: household respondent or register

Va	Values		
	1	currently living in the household	
	2	temporarily absent	
Fl	ags (c	cross-sectional)	
	1	filled	
	-1	missing	
Fl	ags (l	ongitudinal)	
	1	filled	
	-1	missing	
	-2	not applicable (RB110 not = $1, 2, 3 \text{ or } 4$ )	

#### Currently living in the household

A household member is currently living in the household if he/she spends at least a night-rest in the household during the interview duration.

#### Temporary absent

A household member is temporarily absent if he/she does not spend at least a night-rest in the household during the interview duration because he/she is:

- in hospital/nursing home
- in full-time educational institute
- military service or equivalent
- other institution (prison etc.)
- working out of town
- on travel
- other reasons

## **RB210:** Basic activity status

BASIC DATA (Demographic data)

Cross-sectional and longitudinal

Reference period: current

Unit: all current household members (of any age) Mode of collection: household respondent or register

V	alues			
-	1	at work		
	2	unemployed		
	3	in retirement or early retirement or has given up business		
	4	other inactive person		
Flags (cross-sectional)				
	1	filled		
	-1	missing		
F	Flags (longitudinal)			
-	1	filled		
	-1	missing		
	-2	not applicable (RB110 not = $1, 2, 3 \text{ or } 4$ )		

The status should be self-defined (see explanations given for variable PL031).

For explanations of categories, see RB170.

## **RB220: Father ID**

BASIC DATA (Demographic data)

Cross-sectional and longitudinal

Reference period: current

Unit: all current household members (of any age) Mode of collection: household respondent or register

Values				
	Perso	onal Id of father		
Flags (cross-sectional)				
	1 -1	filled missing		
	-2	not applicable (father is not a household member)		
Flags (longitudinal)				
	1 -1	filled missing		
	-2	not applicable (father is not a household member) or (RB110 not = 1, 2, 3 or 4)		

#### Note:

The variable RB220 as well as variable RB230 have been included in EU-SILC in order to calculate the household composition. RB220 includes step/adoptive/foster father.

If a person is living in the with his/her step-father, the personal id of his/her step-father will be provided as the personal id of the father.

In the case of same-sex couples the notion of father and mother can be replaced by parent 1 and parent 2 (ignore then the error on the sex in the error lists). Nevertheless the children in these couples we must be treated the same way than in heterosexual couples and therefore the law plays a major role to determine if a partner can be considered as parent.

## **RB230: Mother ID**

BASIC DATA (Demographic data)

Cross-sectional and longitudinal

Reference period: current

Unit: all current household members (of any age) Mode of collection: household respondent or register

Values			
Perso	Personal Id of mother		
Flags (c	Flags (cross-sectional)		
1 -1 -2	filled missing not applicable (mother is not a household member)		
Flags (lo	Flags (longitudinal)		
1 -1 -2	filled missing not applicable (mother is not a household member) or (RB110 not = 1, 2, 3 or 4)		

#### Note:

The variable RB220 as well as variable RB230 have been included in EU-SILC in order to calculate the household composition. RB230 includes step/adoptive/foster mother.

If a person is living in the with his/her step-mother, the personal id of his/her step-mother will be provided as the personal id of the mother.

In the case of same-sex couples the notion of father and mother can be replaced by parent 1 and parent 2 (ignore then the error on the sex in the error lists). Nevertheless the children in these couples we must be treated the same way than in heterosexual couples and therefore the law plays a major role to determine if a partner can be considered as parent.

## **RB240: Spouse/partner ID**

BASIC DATA (Demographic data)

Cross-sectional and longitudinal

Reference period: current

Unit: all current household members (of any age) Mode of collection: household respondent or register

## Values

Personal Id of spouse/partner

## Flags (cross-sectional)

- 1 filled
- -1 missing
- -2 not applicable (spouse/partner is not a household member)

## Flags (longitudinal)

- 1 filled
- -1 missing
- -2 not applicable (spouse/partner is not a household member) or (RB110 not = 1, 2, 3 or 4)

Includes married people and partners in consensual union (with or without a legal basis).

## **RB245: Respondent status**

BASIC DATA (Basic personal data)

Cross-sectional and longitudinal

Reference period: current

*Unit: all current household members (of any age) Mode of collection: household respondent or register* 

#### Values

All household members aged 16 and over are interviewed

1 current household member aged 16 and over

Only selected household member aged 16 and over is interviewed

- 2 selected respondent
- 3 not selected respondent

Households members aged less than 16 at the end of the income reference period

4 not eligible person

#### Flags (cross-sectional)

1 filled

#### Flags (longitudinal)

- 1 filled
- -2 not applicable (RB110 not = 1, 2, 3 or 4)

For countries using a sample of households or address only values 1 and 4 are applicable.

For countries using a sample of persons (selected respondent) only the values 2,3 and 4 are applicable.

The age refers to the age at the end on the income reference period.

Note: The new born will be coded as 4

## **RB250: Data Status**

BASIC DATA (Basic personal data)

Cross-sectional and longitudinal

Reference period: current

Unit: Selected respondent (where applies) or all current household members aged 16 and

ovei

*Mode of collection: interviewer* 

#### Values

Information or interview completed

- information completed only from interview
- information completed only from registers
- information completed from both: interview and registers
- information completed from full-record imputation

Interview not completed, though contact made

- 21 individual unable to respond (illness, incapacity, etc) and no proxy possible
- failed to return self-completed questionnaire
- refusal to co-operate

Individual not contacted because

- person temporarily away and no proxy possible
- 32 no contact for other reasons

Information or interview not completed

information not completed: reason unknown

## Flags

- 1 filled
- -2 not applicable (RB245 not = 1,2 or 3)

## **RB260:** Type of interview

BASIC DATA (Basic personal data)

Cross-sectional and longitudinal

Reference period: current

Unit: selected respondent (where applies) or all current household members aged 16 and

over

Mode of collection: interviewer

Values	
1	face to face interview-PAPI
2	face to face interview-CAPI
3	CATI, telephone interview
4	self-administered by respondent
5	proxy interview
Flags	
1	filled
-1	missing
-2	not applicable (RB250 not = 11 or 13)

Proxy interview, refers to personal interview with another member of the household.

## **RB270: Personal ID of proxy**

## [Personal ID of person who filled in the individual questionnaire]

BASIC DATA (Basic personal data)

Cross-sectional and longitudinal

Reference period: current

Unit: selected respondent (where applies) or all current household members aged 16 and

over

Mode of collection: interviewer

## Values

Personal Id of proxy

## Flags

- 1 filled
- -1 missing
- -2 not applicable (RB260 not = 5)

## **RL010: Education at pre-school**

## RL020: Education at compulsory school

LABOUR INFORMATION (Child care)

Cross-sectional

Reference period: usual week

Unit: all current household members not over 12 years old (age at the date of interview)

Mode of collection: interviewer

V	Values			
	0 - 99 Number of hours of education during an usual week			
F	lags			
	1	filled		
	-1	missing		
	-2	not applicable (RL010: person is not admitted to pre-school because of her		
		age, is at compulsory school or is more than 12 years old ) (RL020: person is		
		not admitted to compulsory school because of her age or is more than 12 years)		

#### Education at pre-school

Pre-school or equivalent (e.g. kindergarten, nursery school ...). The educational classification to be used is ISCED Level 0. Special pre-schools or equivalents for children who have special needs (handicapped, ...) shall be included as far as they are considered as pre-school (level 0). If they are not, they shall not be reported here (reported for example in RL040 for day-care centre).

#### Education at compulsory school

"Compulsory" school shall be understood as a mean to separate school from pre-school, but all the school hours have to be included: primary and eventually secondary schools shall be included (children up to 12 years old at the day of interview).

The meals at (pre-)school shall be included in the number of hours for the usual days the child eats at (pre-)school.

If more than 99 hours: the code used is 99. The hours shall be rounded to the nearest hour. If less than one hour, then code one hour.

(RL010>0 and RL020>0) is not possible; a positive number of hours both at pre-school and at school is incompatible.

#### Children stay over at pre-school and primary school during the lunch time

If during the lunch time children are cared for usually by their mother or father at the school place (or elsewhere), these hours are not counted in the variables of childcare since their parents are present.

If during lunch time they are cared usually by other parents at the school place (or elsewhere), these should be classified in RL060 (if parents not paid).

If during lunch time they are cared usually by somebody belonging to the school organization (e.g. canteen), the hours are classified in RL010/RL020.

If during lunch time they are cared usually by a nanny, grand mother,..., they should be classified in the other variables (RL040-050-060) depending on the usual carer.

#### **School transportation**

The time spent on the "school transportation" should be included in RL010/RL020 if someone belonging to the school organization is taking care of children during the school transportation.

If children are cared usually by a nanny, grand mother,..., during the "school transportation" they should be classified in the other variables (RL040-050-060) depending on the usual carer.

#### **RL030:** Child care at centre-based services

### [Child care at centre-based services outside school hours (before/after)]

LABOUR INFORMATION (Child care)

Cross-sectional

Reference period: usual week

*Unit: all current household members not over 12 years old (age at the date of interview)* 

Mode of collection: interviewer

V	Values			
0 - 99 Number of hours of child care during an usual week				
F	lags			
	1	filled		
	-1	missing		
	-2	not applicable (RL030: person is neither at pre-school nor at school or is more		
		than 12 years old)		

This variable concerns only the children who are at pre-school or at school in the childcare reference period (RL010>0 or RL020>0).

Centre-based services outside (pre-)school hours: should be reported the hours of care only before and after school. For example, a school-going child who doesn't go to school on Wednesday and who is cared for by a day-care centre: these hours of care shall be reported in RL040.

The services can be or not at the school place.

Cultural and sportive activities outside school (here after school hours) such as club, music lessons ... shall not be included as far as they are not used as a childcare service but rather for the child leisure.

The hours shall be rounded to the nearest hour. If less than one hour, then code one hour. Children going to the school in the morning and in a centre in the afternoon, the hours in centre are coded in RL030 (before/after school for school going children).

RL040: Child care at day-care centre

RL050: Child care by a professional child-minder at child's home

or at child-minder's home

RL060: Child care by grand-parents, others household members (outside parents), other relatives, friends or neighbours

LABOUR INFORMATION (Child care)

Cross-sectional

Reference period: usual week

*Unit: all current household members not over 12 years old (age at the date of interview)* 

Mode of collection: interviewer

Values	Values		
0 - 99	Number of hours of child care during an usual week		
Flags			
1	filled		
-1	missing		
-2	not applicable ( <b>RL040</b> , <b>RL050</b> , <b>RL060</b> : person is more than 12 years old)		

#### • RL040

In RL040 are included all kind of <u>care organised/controlled by a structure</u> (public, private). This means that the parents and the carer are not the only persons involved in the care, that there are no direct arrangements between the carer and the parents in the sense that there is an organised structure between them (which is often the carer's employers). For example, a centred-base day care, organised family day care, a crèche, ... The place of the care can be a centre or the carer's home (e.g. organised family care).

Should also be included the qualified childminders organised and controlled by a structure, even if they are directly paid by the parents, like the 'assistante maternelle' in France.

These kinds of care are often delivered within the social welfare system especially for children under 3. RL040 corresponds to the care for children too young to be at school (or at pre school) but also for children going to school (pre school) and cared for a day per week when school is closed.

The care can be full time or part time, even for few hours.

Cultural and sportive activities (such as club) shall not be included as far as they are not used as a childcare service but rather for the child leisure.

Special day-care of children with special needs are included.

#### • RL050

In RL050 there are <u>direct arrangements</u> between the carer and the parents; there are no <u>structure which organises or controls the care</u>. Parents are often employers, pay directly the carer, but furthermore there are no control of the qualification of the childminder by an organised structure. "Professional" childminder shall be understood as a person for whom

looking after the child represents a job of work or paid activity. The term "professional" does not content a notion of qualification or of quality of the care.

Baby sitters and "au pair" are also included here.

The care can be at the child's home or at the childminder's home.

#### • RL060

RL060 refers to <u>unpaid care</u> (free or informal arrangements such as exchange of services).

## • Difference between RL050 and RL060

RL050 globally refers to paid care (with rare exceptions; e.g. "au pair" are not always paid with money but paid in kind, if the parents receive benefits which cover the amount of the care, the care is considered here as a paid care) whereas RL060 refers to unpaid care (free or exchange of services).

Example : if a neighbour or a friend is the carer and if he is paid for that, then the number of hours of care shall be reported in RL050.

The care can be at the child's home or at the relative, friend or neighbour's home.

Children up to 12 years old at the day of interview.

If more than 99 hours: the code used is 99. The hours shall be rounded to the nearest hour. If less than one hour, then code one hour.

Note: See RL010 and RL020 for "lunch time" and "school transportation"

## RL070: Children cross-sectional weight for child care

BASIC DATA (Basic personal data)

Cross-sectional

Reference period: constant

*Unit: all current household members (of any age)* 

Mode of collection: constructed

Values	Values		
0+ (fc	0+ (format 2.5) weight		
Flags	Flags		
1 filled			
-2	not applicable (persons aged more than 12 years old at the date of interview)		

In the EU-SILC, in addition to the four usual types of units involved which are "household", "household member", "household member 16+" and "selected respondent", "child" is another type of unit to be considered for childcare data. This variable is not defined by any regulation.

For the cross-sectional survey, the personal cross-sectional weight (applicable to all household members, of all ages - target variable **RB050**) may be used for the childcare data. However, the calculation of this weight probably does not take into account external control age-distributions for children aged up to 12. In order to ensure a correct distribution for children by age, it might be better to calculate specific children cross-sectional weights<sup>1</sup>.

The proposal IS NOT to scale and calculate new weights for children taking into account non response, household and individual variables, region, children ages...

The proposal is to adjust the distribution of children for each year of age. This involves the adjustment of personal cross-sectional weights so as to make the distribution, according to age characteristics, of the children covered in the sample agree with the same information from some more reliable external source (age distribution of children aged 0 to 12 in private households).

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<sup>&</sup>lt;sup>1</sup> This will also enlarge the possibilities for analysis of the detailed data on childcare (estimate total numbers of children cared for, global proportions among all children ...).

 $D_n$  = children aged n at the day of interview (n=0 to 12)<sup>1</sup>

Children cross-sectional weight for  $D_n$  (n= 0 to 12):  $w_i = w'_i * N_n / N'_n$ 

w'<sub>i</sub>=personal cross-sectional weight for the child i

 $N'_n$  =sum of personal cross-sectional weights for children aged n at the day of interview in the database

 $N_n$ =number of children in the demographic population aged n at the 31/12/N-1 (estimated from external source)

#### Notes:

- The sum of children cross-sectional weights will correspond to the estimation of the number of children in the population.
- The sample size of children will be checked before childcare data are published.

-

<sup>&</sup>lt;sup>1</sup> Note for 0 year old: this includes children born in year N-1. Children born in year N are excluded (aged (-1) at the 31/12/N-1; difficult to take them into account to ensure comparable data between countries because of differences in the dates of the surveys in year N).

## **Household Data (H-file)**

## **HB010:** Year of the survey

BASIC DATA (Basic household data)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: interviewer

## Values

year (4 digits)

## **HB020: Country**

BASIC DATA (Basic household data) Cross-sectional and longitudinal

Reference period: constant

Unit: household

Mode of collection: frame

Values		
BE	Belgique/Belgïe	
BG	Bulgaria	
CZ	Czech republic	
DK	Denmark	
DE	Deutschland	
EE	Estonia	
IE	Ireland	
GR	Elláda	
ES	España	
FR	France	
IT	Italia	
CY	Cyprus	
LV	Latvia	
LT	Lithuania	
LU	Luxembourg	
HU	Hungary	
MT	Malta	
NL	Nederland	
AT	Österreich	
PL	Poland	
PT	Portugal	
RO	Romania	
SI	Slovenia	
SK	Slovak republic	
FI	Suomi	
SE	Sverige	
UK	United Kingdom	
СН	Switzerland	
HR	Croatia	
IS	Iceland	
NO	Norway	
TR	Turkey	

Household Data (H-file)

## **HB030: Household ID**

BASIC DATA (Basic household data)

Cross-sectional and longitudinal

Reference period: constant

Unit: household

Mode of collection: frame or register or interviewer

Values

ID number see DB030

## **HB040: Day of household interview**

BASIC DATA (Basic household data) Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: interviewer

V	alues	
	1 - 31	day
F	lags	
	1	filled
	-1	missing

## HB050: Month of household interview

BASIC DATA (Basic household data) Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: interviewer

V	alues	
	1 - 12	month
Fl	ags	
	1	filled
	-1	missing

## HB060: Year of household interview

BASIC DATA (Basic household data) Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: interviewer

V	Values			
	year	(4 digits)		
F	lags			
	1	filled		

## HB070: Person responding the household questionnaire

BASIC DATA (Basic household data) Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: interviewer

Values	Values				
Pers	sonal ID				
Flags					
1	filled				
-1	missing				

The <u>household respondent</u> is the person from whom household level information is obtained. Given that the household-level response is going to be attributed to all household members, it is essential that the information be collected from someone who can, in some sense, 'speak for' the household.

For instance, if the 'selected respondent' is the 16-year old son or daughter, this person is highly unlikely to be able to provide good quality information on such issues as the mortgage or rent payments, housing costs, income from family and other benefits.

The household respondent will be chosen according to the following priorities:

Priority (1): the person responsible for the accommodation

Priority (2): a household member aged 16 and over who is the best placed to give the information.

For the second and following waves of the longitudinal component of EU-SILC, the household respondent will be chosen according to the following list of priority:

Priority (1): the household respondent in the last wave

Priority (2): a 'sample person' aged 16 and over giving priority to the person responsible for the accommodation or the best placed to give the information.

Priority (3): a 'non-sample person' aged 16 and over.

# **HB080:** Person 1 responsible for the accommodation **HB090:** Person 2 responsible for the accommodation

BASIC DATA (Basic household data)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: interviewer

Values	Values		
Perso	Personal ID		
Flags			
1	filled		
-1	missing		
-2	only HB090: not applicable (no second responsible)		

The person responsible for the accommodation is the person owning or renting the accommodation. If the accommodation is provided free, the person to whom the accommodation is provided is the responsible person.

If two persons share responsibility for the accommodation, the ID of the oldest is registered in HB080 and the other in HB090. If more than two persons share the responsibility, only the IDs of the two oldest persons are registered.

If the person owning the accommodation is a child or if the person owning or renting the accommodation does not belong to the household, then take in these cases the person "financially responsible" for the accommodation.

# HB100: Number of minutes to complete the household questionnaire

BASIC DATA (Basic household data)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: interviewer

4	$\sim$	•
- 1	- 90	minutes
		mmucs

## Flags

- 1 filled
- -1 missing

## HH010: Dwelling type

HOUSING (Dwelling type, tenure status and housing conditions)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: household respondent

V	alues	
	1	detached house
	2	semi-detached or terraced house
	3	apartment or flat in a building with less than 10 dwellings
	4	apartment or flat in a building with 10 or more dwellings
	5	some other kind of accommodation
Fl	ags	
	1	filled
	-1	missing

#### **Building**

A building is defined as any independent structure containing one or more dwellings, rooms or other spaces, covered by a roof and enclosed within external walls or dividing walls which extend from the foundations to the roof. Thus a building may be a detached dwelling, apartment building, etc. National practices differ with respect to the treatment of row houses, in that some countries count each row house in the unit as an individual building whereas other countries count all the row houses in the unit as collectively constituting one building. It is recommended that countries follow the former practice by counting each house in the row house unit as an individual building.

This is generally defined as a room or suite of rooms and its accessories (e.g. lobbies, corridors) in a permanent building or structurally separated part thereof which by the way it has been built, rebuilt or converted is designed for habitation by one private household. It should have separate access to the street, direct or via a garden or grounds, or to a common space within the building (staircase, passage, gallery, etc.), but it need not necessarily have a bathroom or toilet available for the exclusive use of its occupants. Accommodations that are situated in buildings that are for use other than housing (schools,...) and fixed habitation like a hat or a cave are included.

A building with two entrance will be considered as one single building if one can access all apartments from both entrances; otherwise, it will be two separate buildings.

#### House

House means that no internal space or maintenance and other services are normally shared with other dwellings. Sharing of a garden or other exterior areas is not precluded.

#### Detached

Detached means the dwelling has no common walls with another.

#### Semi-detached

Semi-detached refers to two dwellings sharing at least one wall, and 'terraced' refers to a row of (more than two) joined-up dwellings.

## **Apartments or flats**

Apartments or flats in a building normally share some internal space or maintenance and other services with other units in the building.

## Other kind of accommodation

Other kinds of accommodation includes accommodations that are situated in buildings that are for use other than housing (schools, ...) and fixed habitations like a hut or a cave.

## **HH021: Tenure status**

HOUSING (Dwelling type, tenure status and housing conditions)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: household respondent

Va	alues	
	1	Outright owner
	2	Owner paying mortgage
	3	Tenant or subtenant paying rent at prevailing or market rate
	4	Accommodation is rented at a reduced rate (lower price that the market price)
	5 Accommodation is provided free	
Fla	ags	
	1	filled
	-1	missing

This variable replaces, from the 2010 operation onwards, the variable HH020 defined in the EU-SILC Regulation<sup>1</sup>

#### **Ownership**

The owner of the accommodation should be a <u>member of the household</u>. If for instance the accommodation is provided by a relative (such as by parents to their children) who is not a member of the household, then one of the other categories should be ticked, depending on whether or not rent is paid by this household. A person is owner if he/she possesses a title deed independently if the house is fully paid or not. Revessionary owner should be considered as owner.

#### Outright owner

The owner is considered as 'outright owner' when he/she has no more mortgage to pay for buying his/her main dwelling.

An owner who has to pay mortgage only for the second dwelling and/or for repairs, renovation, maintenance, etc. should be treated as 'outright owner'.

#### Owner paying mortgage

An owner is considered as 'owner paying mortgage' when he/she has to pay mortgage for buying the main dwelling.

Mortgage for buying a second dwelling should not be considered here, as well as mortgage to obtain money for housing purposes like repairs, renovations and maintenance, or for non-housing purposes.

#### Difference between outright owner and owner paying mortgage

<sup>&</sup>lt;sup>1</sup> Agreement during the Living Conditions Working Group meeting in June 2009 that the variable HH020 will be replaced by the variable HH021 with 5 answering categories. In 2010, the LC WG agreed from the 2011 operation onwards to suppress HH020 and to keep only HH021.

The selection of the mortgages to take into account in order to make the distinction between 'outright owner' and 'owner paying mortgage' fits the rules for the selection of the mortgages to take into account for the variable HH070 (Housing costs), that is "included only in case of mortgage taken for the purpose of buying the main dwelling".

In first priority reference to the <u>current</u> situation for the mortgage should be taken. Only if this information is not available, it can be referred to the situation during the income reference period, using for instance the variable "Interest paid on mortgage" (HY100).

If the owner already fully paid the principal of the mortgage and only the interests remained to be paid, the risk of eviction most probably remains, and consequently in this case the owner cannot be treated as outright owner and should be considered as a owner paying mortgage.

### Tenant or subtenant paying rent at prevailing or market rate

Tenant/subtenant, paying rent\_at prevailing or market rent\_covers the case even when the rent is wholly recovered from housing benefits or other sources, including public, charitable, or private sources. Also, no distinction is made here when the accommodation is directly rented from a 'landlord', or as a subtenant renting from someone who himself is a tenant.

#### Accommodation is rented at a reduce rate (lower price than the market price)

The key issue is the distinctiveness of the 'prevailing' and 'reduced-rent' sectors.

In some countries, there is a fairly clear distinction between the market or private sector renters and subsidised or public sector renters. Reduced-rate renters would include those (a) renting social housing, (b) renting at a reduced rate from an employer and (c) those in accommodation where the actual rent is fixed by law. All tenants in this situation would be included in category 4 (Accommodation rented at below market price).

If there is a clear, nationally meaningful distinction between the market or prevailing rent and 'reduced-rent' sectors, along these lines, it should be used to distinguish between categories 3 and 4.

At other extreme, there is no clear distinction between a 'prevailing rent' and 'reduced-rent' sector in rental accommodation: there is no (or almost no) market sector in rents, either because virtually every household owns their home, because all tenants live in social housing, all (or most tenancies) are long-term with restrictions on rent increases, or all rents are fixed. If this is the case, the concept of market rent does not have a real empirical meaning in the country: at least in terms of trying to usefully distinguish a group paying market rents from a group paying rents below that value.

In a situation where there is no clear distinction between a 'prevailing rent' rent sector and a 'reduced rent' sector, all renters would be classified as 'Tenant or subtenant paying rent at prevailing or market rate'.

#### Empirical importance of length of tenure is a separate issue

At one extreme, duration of tenure is empirically ignorable: either all tenancies are short or there is no/little association between length of tenancy and rent paid beyond what might be expected from market forces (i.e. reduced turnover costs to the landlord). At the other end of the spectrum is the Belgian situation where there is a strong (and legally binding) association between duration of tenancy and level of rent.

In effect, there may be a continuum between categories 3 and 4 on the tenure variable, rather than a clear cut distinction, based on the length of time the household has rented the accommodation.

Length of tenure is a separate dimension from the nature of the tenancy, and should be handled by adding a separate item. The proposed handling of the housing tenure item in this context is as follows:

If the national situation is one where *all* tenants benefit from lower rents based on length of tenancy (or there is no readily distinguishable group who benefits more than another), all renting households (other than those belonging to a clearly distinct 'reduced-rent' sector) should be coded in category 3 (prevailing rent) on the tenure variable, and length of tenure collected as a separate item. If there is a clearly distinct 'reduced-rent' sector, of course, these should be coded as category 4 on the tenure variable.

If the national situation is one where only some tenants (in fixed-rent accommodation, for instance) benefit from lower rents based on length of tenancy, these tenants should be coded as category 4 on the tenure variable (reduced rent).

Length of tenancy refers to the length of time the household has been renting the accommodation. It is different from the length of the lease.

#### Accommodation provided rent free

Accommodation is provided rent-free applies only when there is no rent to be paid, such as when the accommodation comes with the job<sup>1</sup>, or is provided rent-free from a private source.

The situation when rent is recovered from housing benefit or other sources is covered in the previous category.

Note: Households who pay part rent and part mortgage for their accommodation should be classified as 'owners' if they possess a title deed.

<sup>&</sup>lt;sup>1</sup> If the accommodation is provided free to a 'civil servant' the variable HH021 will take value 5 when the government is owner of the dwelling as well as when the government has rented the dwelling and they provide it rent-free.

## HH030: Number of rooms available to the household

HOUSING (Dwelling type, tenure status and housing conditions)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: household respondent

V	Values		
	1 - 9.9 $10$	number of rooms 10 or more rooms	
F	lags	10 01 11010 1001110	
	1	filled	
	-1 missing		

#### Room

A room is defined as a space of a housing unit of at least 4 square meters such as normal bedrooms, dining rooms, living rooms and habitable cellars, attics, kitchens and other separated spaces used or intended for dwelling purposes with a high over 2 meters and accessible from inside the unit.

Kitchens are not counted unless the cooking facilities are in a room used for other purposes; Kitchens are only excluded if the space is used <u>only</u> for cooking. A single room used as kitchen-cum-dining room is included as one room in the count of rooms.

The following space of a housing unit does not count as rooms: bathrooms, toilets, corridors, utility rooms, lobbies and verandas. lounges and conservatories do count only if they are used all year round.

A room used solely for business use is excluded, but is included if shared between private and business use.

If the dwelling is shared by more than 1 household and some rooms are shared with other households (within the same dwelling), the number of shared rooms should be divided by the number of households and the equal share should be added to each household. all rooms are counted for the owner/tenant except those exclusively used by the other households. This variable can consequently be coded with one decimal. In case of several households sharing a unique room, the variable is coded to 1 (zero is difficulty interpretable and fractional numbers are not allowed by the format).

## HH031: Year of contract or purchasing or installation

HOUSING (Dwelling type, tenure status and housing conditions)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: household respondent

Va	alues		
	year (4 digits)		
Fla	ags		
	1	filled	
	-1	missing	
	-2	not applicable (MS using objective national methods to calculate imputed rent)	

The idea is to collect through variable HH031 the "seniority" i.e. the number of years of occupation of the dwelling. As an approximate measure of the seniority the variable 'year of contract or purchase or installation' is proposed. This variable is defined as follows:

- the year of signing the contract for tenants or subtenants paying rent at market price or at lower price than the market price. If the tenant/subtenant renews the contract under new conditions, the variable refers to the renewal date.
- the year of purchasing for the owners<sup>1</sup>. If a person bought the house after living there as tenant the year of purchasing will be considered. If the person inherits the accommodation the question refers to the year of inheritance.
- the year of installation is required if the accommodation is provided rent-free or no year of contract or purchasing can be given. If accommodation is provided free the information required refers to the year of installation of the person who has been living longer than the others have, this person is the person who has the right of enjoying the accommodation free.

-

<sup>&</sup>lt;sup>1</sup> A person is owner if he/she possesses a title deed no matter if the house is fully paid or not.

## HH040: Leaking roof, damp walls/floors/foundation, or rot in window frames or floor

HOUSING (Dwelling type, tenure status and housing conditions)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: household respondent

## Format of the question:

Do you have any of the following problems with your dwelling / accommodation?

- a leaking roof
- damp walls/floors/foundation
- rot in window frames or floor

V	alues		
	1	yes	
	2	no	
F	lags		
	1	filled	
	-1	missing	

The aim of the question is to get an objective measure of the condition of the dwelling; whether the dwelling has a problem with a leaking roof and/or damp ceilings, dampness in the walls, floors or foundation and/or rot in window frames and doors.

## HH050: Ability to keep home adequately warm

HOUSING (Dwelling type, tenure status and housing conditions))

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: household respondent

## Format of the question:

Can your household afford to keep its home adequately warm?

V	alues				
	1	yes			
	2	no			
F	lags				
	1	filled			
	-1	missing			

This question is about affordability (ability to pay) to keep the home adequately warm, regardless of whether the household actually needs to keep it adequately warm.

## HH060: Current rent related to occupied dwelling

HOUSING (Housing costs)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: household respondent

Values			
1 - 99	1 - 999999.99 rent		
Flags			
1	filled		
-1	missing		
-2	not applicable (HH021 not = $3$ or $4$ )		

The variable refers to the **total monthly** current rent paid on the main residence of the household.

The rent refers to the monthly amount paid for the use of an unfurnished dwelling. Rentals also include payments for the use of a garage to provide parking in connection with the dwelling.

Other payments which are made at the same time as the rent (such as for electricity, heating etc.), should be excluded. Also the regular repairs and maintenance and other services related to the dwelling should be excluded.

Only rent related to the principal residence is taken into account

In cases where part of the rent may be paid through a housing benefit (either paid to the tenant or paid directly to the landlord), the rent paid refers to the total rent payable: that is to the amount paid by the tenant from his or her own income plus the amount paid by housing benefit.

For example, if:

- the owner wants a rent for the dwelling: 700 €
- the household pays to the owner (from their own resources): 500 €
- the housing allowances (paid directly to the owner **or** through the household): 200 €

then: HH060 =  $700 \in (= 500 \in +200 \in)$ 

The amount provided should be in national currency.

## HH061: Subjective rent

## [Subjective rent related to non-tenant paying rent at market price]

HOUSING (Housing costs) Cross-sectional and longitudinal Reference period: current

Unit: household

Mode of collection: household respondent

Values	
1 - 99	99999.99 rent
Flags	
1	filled
-1	missing
-2	not applicable (HH021 = 3) or (MS do not use subjective method to calculate
	imputed rent)

Information is collected from owner-occupiers (accommodation is provided rent free or accommodation is rented at a reduce rate) on what the estimate the potential **monthly** market rent of their dwelling. The amount refers to the value of the rental of unfurnished dwelling, it also includes payments for the use of a garage to provide parking in connection with the dwelling.

Payments such as for electricity, heating etc., should be excluded. Also the regular repairs and maintenance and other services related to the dwelling should be excluded.

The amount provided will be in national currency.

## HH070: Total housing cost

[Total housing cost (including electricity, water, gas and heating)]

HOUSING (Housing costs)

Cross-sectional

Reference period: current

*Unit: household* 

Mode of collection: household respondent

V	Values		
	0 - 9	99999.99	housing cost
F	lags		
	1	filled	
	-1	missing	

The term housing cost refers to **monthly** costs connected with the households right to live in the accommodation. The costs of utilities (water, electricity, gas and heating) resulting from the actual use of the accommodation are also included.

Only really paid housing costs have to be taken into account.

Components that have to be included in housing costs:

**OWNERS:** Mortgage interest payments<sup>1</sup> (net of any tax relief), gross of housing benefits (i.e. housing benefits should not be deducted from the total housing cost), structural insurance, mandatory services and charges (sewage removal, refuse removal, etc.), regular maintenance and repairs<sup>2</sup>, taxes, and the cost of utilities (water, electricity, gas and heating).

**TENANTS** (at market price): **Rent payments**, gross of housing benefits (i.e. housing benefits should not be deducted from the total housing cost), **structural insurance** (if paid by the tenants), **services and charges** (sewage removal, refuse removal, etc.) (if paid by the tenants), **taxes on dwelling** (if applicable), **regular maintenance and repairs**<sup>1</sup> and the **cost of utilities** (water, electricity, gas and heating).

**TENANTS** (at reduced price): **Rent payments**, gross of housing benefits (i.e. housing benefits should not be deducted from the total housing cost), **structural insurance** (if paid by the tenants), **services and charges** (sewage removal, refuse removal, etc.) (if paid by the tenants), **taxes on dwelling** (if applicable), **regular maintenance and repairs**<sup>1</sup> and the **cost of utilities** (water, electricity, gas and heating).

**RENT FREE**: gross of housing benefits (i.e. housing benefits should not be deducted from the total housing cost), **structural insurance** (if paid by the rent free tenant), **services and charges** (sewage removal, refuse removal, etc.) (if paid by the rent free tenant), **taxes on dwelling** (if applicable), **regular maintenance and repairs**<sup>1</sup> and the **cost of utilities** (water, electricity, gas and heating).

<sup>1</sup> Included only in case of mortgage taken for the purpose of buying the main dwelling

Only the regular maintenance and repairs should be included. According to the COICOP/HBS: 'regular maintenance or repairs of the dwelling are distinguished by two features: first, they are activities that have to be undertaken regularly in order to maintain the dwelling in good working order; second, they do not change the dwelling's performance, capacity or expected service life.

For example, in the case of tenants at reduced price, if:

- the household has to pay for the charges (electricity, water, etc): 300 €
- the owner wants a rent for the dwelling: 700 €
- the household pays to the owner (from their own resources): 500 €
- the housing allowances (paid directly to the owner or through the household): 200 €

then:

- $HH060 = 700 \in (= 500 \in +200 \in)$
- HH070 =  $500 \in +200 \in +300 \in$

The total housing cost (HH070) should be greater than the current rent related to occupied dwelling (HH060).

It is necessary to impute a value of housing cost items not included in the rent but paid like cost of the utilities, sewage removal, structural insurance, etc. This imputation may be possible using a cell average from an external source, such as HBS.

It is necessary to spread over the 12 months of the year those expenses that are seasonal (for example 'heating') or those for which the payment is different for different months of the year.

See EU-SILC DOC 105 (How to separate interest mortgage from capital)

## HH071: Mortgage principal repayment

## [Monthly principal repayment of mortgage)]

HOUSING (Housing costs)

Cross-sectional

Reference period: current

Unit: household

Mode of collection: household respondent

Values	
1 - 99 0	99999.99 mortgage principal repayment (national currency) no mortgage principal repayment
Flags	
1	filled
-1	missing
-2	not applicable (HH021 ne 2)

The term mortgage principal repayment (net of any tax relief) refers to **monthly** payments connected with the households' total housing cost.

The same definition applies for inclusion or not of the mortgage than for variable HH070. The repayments will be included only in case of mortgage taken for the purpose of <u>buying the main dwelling</u>. Mortgages for the main dwelling taken to obtain money for other purposes than buying it should be excluded. Mortgages taken for the purpose of buying a second dwelling should also be excluded.

Mortgage interest payments as well as other mortgage payments such as mortgage protection insurance should be excluded.

Only really paid amounts have to be taken into account.

#### HH081: Bath or shower in dwelling

HOUSING (Amenities in dwelling) Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: household respondent

#### Format of the question:

Is there a shower unit or a bathtub in your dwelling?

V	Values		
	1 2 3	yes, for sole use of the household yes, shared no	
F	Flags		
	1	filled	
	-1	missing	

This variable replaces, from the 2008 operation onwards, the variable HH080 defined in the EU-SILC Regulation<sup>1</sup>

A shower unit or bathtub outside the dwelling are not to be considered in this item. On the other hand, it is not required that the shower unit or the bath occupy a separate room.

<sup>&</sup>lt;sup>1</sup> The Living conditions Working Group agreed during its 2010 meeting to suppress HH080 and to keep only HH081 starting from the 2011 operation.

#### HH091: Indoor flushing toilet for sole use of household

HOUSING (Amenities in dwelling) Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: household respondent

#### Format of the question:

Is there an indoor flushing toilet in your dwelling?

Va	alues	
	1 2 3	yes, for sole use of the household yes, shared no
Fl	Flags	
	1	filled
	-1	missing

This variable replaces, from the 2008 operation onwards, the variable HH090 defined in the EU-SILC Regulation<sup>1</sup>

Flushing toilets outside the dwelling are not to be considered in this item. On the other hand, flushing toilets in a room where is also a shower unit or a bath should be counted.

<sup>&</sup>lt;sup>1</sup> The Living conditions Working Group agreed during its 2010 meeting to suppress HH090 and to keep only HH091 starting from the 2011 operation.

#### **HS011:** Arrears on mortgage or rent payments

[Whether the household has been in arrears on mortgage or rent payments in last 12 months]

SOCIAL EXCLUSION (Housing and non-housing related arrears)

Cross-sectional and longitudinal Reference period: last 12 months

Unit: household

Mode of collection: household respondent

This variable replaces, from the 2008 operation onwards, the variable HS010 defined in the EU-SILC Regulation<sup>1</sup>

#### Format of the question:

In the last twelve months, has the household been in arrears, i.e. has been unable to pay on time due to financial difficulties for:

- (a) rent
- (b) mortgage repayment

#### for the main dwelling?

Values	
1	yes, once
2	yes, twice or more
3	no
Flags	
Flags 1	filled
Flags 1 -1	filled missing

Whether the household has been in arrears in the last 12 months that is, unable to pay on time (as scheduled) the rent and/or the mortgage payment for the main dwelling.

If the household was unable to pay on time once/twice or more as result of lack of money, HS010 = 1/2, otherwise(illness,...) HS010 = 3.

If the household manages to pay through borrowing (from bank, relatives or friends) it is considered in the same way as if the household manages to pay through own resources.

Loans for decoration, maintenance, refurbishment,... are excluded

However cases of loans concerning major repairs or other expenses in relation to the main dwelling which cannot be separated from the loan that was used to purchase or to build the main dwelling could be included in variable HS010. In these particular cases the focus is put on the risk for the household of losing its main dwelling (being evicted).

Any other type of housing loan (e.g. related to the second dwelling), which is not included in the variable HS010, will be included in variable HS030.

<sup>&</sup>lt;sup>1</sup> The Living conditions Working Group agreed during its 2010 meeting to suppress HS010 and to keep only HS011 starting from the 2011 operation.

#### **HS021:** Arrears on utility bills

[Whether the household has been in arrears on utility bills in last 12 months]

SOCIAL EXCLUSION (Housing and non-housing related arrears)

Cross-sectional and longitudinal Reference period: last 12 months

Unit: household

Mode of collection: household respondent

This variable replaces, from the 2008 operation onwards, the variable HS020 defined in the EU-SILC Regulation<sup>1</sup>

#### Format of the question

In the last twelve months, has the household been in arrears, i.e. has been unable to pay on time due to financial difficulties for utility bills (heating, electricity, gas, water, etc.) for the main dwelling?

Values	
1 2 3	yes, once yes, twice or more no
Flags	
1	filled
-1	missing
-2	not applicable (no utility bills)

Whether the household has been in arrears in the last 12 months that is, unable to pay on time (as scheduled) utility bills (heating, electricity, gas, water, etc..) for the main dwelling.

Telephone bills should <u>not</u> be considered as utility bills in this item. However sewage and rubbish bills are taken into account in this item.

If the household was unable to pay on time once/twice or more as result of lack of money, HS020 = 1/2, otherwise (illness,...) HS020 = 3.

If the household manages to pay through borrowing (from bank, relatives or friends), it is considered in the same way as if the household manages to pay through own resources.

<sup>&</sup>lt;sup>1</sup> The Living conditions Working Group agreed during its 2010 meeting to suppress HS020 and to keep only HS021 starting from the 2011 operation.

## HS031: Arrears on hire purchase instalments or other loan payments

[Whether the household has been in arrears on hire purchase instalments or other loan payments (non housing-related debts) in last 12 months]

SOCIAL EXCLUSION (Housing and non-housing related arrears)

Cross-sectional and longitudinal Reference period: last 12 months

*Unit: household* 

Mode of collection: household respondent

This variable replaces, from the 2008 operation onwards, the variable HS030 defined in the EU-SILC Regulation<sup>1</sup>

#### Format of the question

In the last twelve months, has the household been in arrears on hire purchase instalments or other loan payments, i.e. has been unable to pay on time due to financial difficulties?

\* Please note that mortgage instalments for main dwelling are excluded.

Values	
1 2	yes, once yes, twice or more
3	no
Flags	
1	filled
-1	missing
-2	not applicable (no hire purchase instalments and no other loan payments)

Whether the household has been in arrears in the last 12 months that is, unable to pay on time (as scheduled) repayments for hire purchase or other non-housing loans.

"Other loans" include all type of commercial credits, for instance for decoration, maintenance, refurbishment, credit cards/ store cards, catalogue mail order, loans of any kind of for technical equipment (i.e. cars, motorcycles), housing equipment, education loans, holidays (holiday packages plus time sharing holidays).

If the household was unable to pay on time once/twice or more as result of lack of money, HS030 = 1/2, otherwise(illness,...) HS030 = 3.

If the household manages to pay through borrowing (from bank, relatives or friends) it is considered in the same way as if the household manages to pay through own resources.

For further information or required technical details, bank overdraft and negative balance at the "end of the month statement" should not, normally, enter in consideration when estimating the arrears status of the household except if not paying has direct consequence for the

<sup>&</sup>lt;sup>1</sup> The Living conditions Working Group agreed during its 2010 meeting to suppress HS030 and to keep only HS031 starting from the 2011 operation.

household situation (fine, disruption of service in case the household does not ensure minimum/full repayment).

Mortgage instalments for main dwelling are excluded.

## HS040: Capacity to afford paying for one week annual holiday away from home

SOCIAL EXCLUSION (Non-monetary household deprivation indicators)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: household respondent

#### Format of the question

Can your whole household afford to go for a week's annual holiday, away from home, including stays in second dwelling or with friends/relatives?

Values				
1	yes			
2	no			
Flags				
1	filled			
-1	missing			

This question focuses mainly on affordability of some aspects of living standards. The wording of the question refers to the affordability and to the actual meaning "ability to pay" i.e. "the household has the resources to afford..." regardless if the household wants it. The answer is 'YES' if, according to the household respondent, the whole household can afford to go for a week's annual holiday away from home. If the household can (only) afford holidays by using its "social network" (friends, etc.) or can afford subsidized holidays (government schemes), or its second dwelling the answer should be 'YES'. These cases are included in this particular variable as it is not possible to specify the amount that is needed for a household to have a week's holiday per year, in many cases, where the household makes use of its 2<sup>nd</sup> dwelling for holidays or staying with friends, it could still generate cost and also, the case of subsidized holidays is in fact considered as an "invisible" part of the household's income. The cases where the household cannot go e.g. because of "shortage of time" are not included (answer should be 'YES').

If at least one household member cannot afford to go for holidays the answer should be 'NO' (e.g. in cases where parents can afford to send children to a summer camp but cannot afford to go for a holiday for themselves, or where a grown-up son or daughter can afford a holiday but other household members cannot).

Please note that in cases where in the household there are elderly members or members with health problems who have the resources to afford a week's annual holiday but for other reasons they cannot go or follow the other members of the household the answer should be 'YES'.

"Whole household" <u>does not mean</u> that the members of the household have to go all together and at the same time for holidays.

If the household finances its holidays through borrowing (from bank, relatives or friends) it is considered in the same way as if the household manages to pay through own resources.

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		P 1. O O		

Household Data (H-file)

"One week" means 7 days.

## HS050: Capacity to afford a meal with meat, chicken, fish (or vegetarian equivalent) every second day

SOCIAL EXCLUSION (Non-monetary household deprivation indicators)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: household respondent

#### Format of the question

### Can your household afford a meal with meat, chicken, fish (or vegetarian equivalent) every second day?

V	alues			
	1	yes		
	2	no		
Fl	ags			
	1	filled		
	-1	missing		

Whether, according to the household respondent, the household can afford a meal with meat, chicken or fish (or equivalent vegetarian) every second day, regardless if the household wants it.

If the household manages to pay through borrowing (from bank, relatives or friends) it is considered in the same way as if the household manages to pay through own resources.

#### HS060: Capacity to face unexpected financial expenses

SOCIAL EXCLUSION (Non-monetary household deprivation indicators)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: household respondent

#### Format of the question

Can your household afford an unexpected required expense (amount to be filled) and pay through its own resources?

Values					
1	yes				
2	no				
Flags					
1	filled				
-1	missing				

The variable records whether, according to the household respondent, the household can face itself unexpected financial expenses.

#### "Own resources" means:

- Your household does not ask for financial help from anybody
- Your account has to be debited within the required period
- Your situation regarding potential debts is not deteriorated.

You do not pay through own resources if you pay in instalments (or by taking a loan) expenses that you previously used to pay in cash.

#### **Required expenses**

A required expense could be different across countries but examples are surgery, funeral, major repair in the house, replacement of durables like washing machine, car.

For the calculation of the <u>amount that should be filled</u> in the questionnaire the national at-risk-of-poverty threshold has to be used per one consumption unit, that means it has to be used independently of the size and structure of the household. A ratio of 1/12 of the above value is used in the questionnaire. This value can be rounded but the difference between calculated value and rounded value cannot exceed 5% (for example; a calculated value of 136 can be rounded to 140 but not to 150).

The calculation for year "n" comes from year "n-2" EU-SILC data.

For year 1 and 2, appropriate national data has to be used.

#### A general guideline for interviewers on overdraft and credit cards should be added.

#### HS070: Do you have a telephone (including mobile phone)?

SOCIAL EXCLUSION (Non-monetary household deprivation indicators)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: household respondent

#### Format of the question

Does your household have a telephone (fixed landline or mobile)? If you do not have a telephone,

- (a) would you like to have it but cannot afford it, or
- (b) do you not have one for other reasons e.g. you do not want or need it.

Va	Values		
	1 2 3	yes no - cannot afford no - other reason	
Fla	ags		
	1	filled	
	-1	missing	

Whether the household have a telephone(including mobile phone) or whether the household does not have a telephone because it cannot afford it (enforced lack) or for other reasons. 'Enforced lack' implies that the item is something that the household would like to have, but cannot afford.

Possession of the item does not necessarily imply ownership: the item may be rented, leased or provided on loan.

In the case of mobile telephones, the household should be considered to possess the item if any member possesses it.

#### HS080: Do you have a colour TV?

SOCIAL EXCLUSION (Non-monetary household deprivation indicators)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: household respondent

#### Format of the question

Does your household have a colour TV?

If you do not have a colour TV, you:

- (a) would you like to have it but cannot afford it, or
- (b) do you not have one for other reasons e.g. you do not want or need it.

Va	Values		
	1 2 3	yes no - cannot afford no - other reason	
Fla	ags		
	1	filled	
	-1	missing	

Whether the household have a colour TV or whether the household does not have a colour TV because it cannot afford it (enforced lack) or for other reasons. 'Enforced lack' implies that the item is something that the household would like to have, but cannot afford.

Possessing the item does not necessarily imply ownership: the item may be rented, leased, provided on loan or shared with other households in (e.g.) a complex apartment and not necessarily owned. If the item is shared between households, the answer is "Yes" if there is adequate/easy access (i.e. household can use the durable whenever it wants) and "No" otherwise.

In the case of a colour television, the household is considered to possess it if any member possesses it.

#### HS090: Do you have a computer?

SOCIAL EXCLUSION (Non-monetary household deprivation indicators)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: household respondent

#### Format of the question:

#### Does your household have a computer?

If you do not have a computer, you:

- (a) would you like to have it but cannot afford it, or
- (b) do you not have one for other reasons e.g. you do not want or need it.

Va	Values		
	1 2 3	yes no - cannot afford no - other reason	
Fla	ags		
	1	filled	
	-1	missing	

Whether the household have a computer or whether the household does not have a computer because it cannot afford it (enforced lack) or for other reasons. 'Enforced lack' implies that the item is something that the household would like to have, but cannot afford.

Possessing the item does not necessarily imply ownership: the item may be rented, leased, provided on loan or shared with other households in (e.g.) a complex apartment and not necessarily owned. If the item is shared between households, the answer is "Yes" if there is adequate/easy access (i.e. household can use the durable whenever it wants) and "No" otherwise.

In the case of a computer, the household is considered to possess it if any member possesses it.

A computer includes a portable computer or a desktop computer, but does not include machines dedicated to video games but without any broader functionality.

If a computer is provided ONLY for work purpose, this does not count as possessing the item.

#### HS100: Do you have a washing machine?

SOCIAL EXCLUSION (Non-monetary household deprivation indicators)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: household respondent

#### Format of the question:

Does the household have a washing machine<sup>1</sup>? If you do not have a washing machine, you:

- (a) would you like to have it but cannot afford it, or
- (b) do you not have one for other reasons e.g. you do not want or need it.

Va	alues	
	1 2 3	yes no - cannot afford no - other reason
Fla	ags	
	1 -1	filled missing

Whether the household have a washing machine or whether the household does not have a washing machine because it cannot afford it (enforced lack) or for other reasons. 'Enforced lack' implies that the item is something that the household would like to have, but cannot afford.

Possessing the item does not necessarily imply ownership: the item may be rented, leased, provided on loan, or shared with other households in (e.g.) a complex apartment. If the item is shared between households, the answer is "Yes" if there is adequate/easy access (i.e. household can use the durable whenever it wants) and "No" otherwise.

In the case of a washing machine, the household is considered to possess it if any member possesses it.

<sup>&</sup>lt;sup>1</sup> An automatic washing machine or a washer-dryer or a non-automatic 'twin-tub'.

#### HS110: Do you have a car?

SOCIAL EXCLUSION (Non-monetary household deprivation indicators)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: household respondent

#### Format of the question:

Does your household have a car/van for private use? If you do not have a car/van, you:

- (a) would you like to have it but cannot afford it, or
- (b) do you not have one for other reasons e.g. you do not want or need it.

Values	
1 2 3	yes no - cannot afford no - other reason
Flags	
1	filled
-1	missing

Whether the household have a car or whether the household does not have a car because it cannot afford it (enforced lack) or for other reasons. 'Enforced lack' implies that the item is something that the household would like to have, but cannot afford.

Possessing the item does not necessarily imply ownership: the item may be rented, leased, provided on loan, or shared with other households. If the item is shared between households, the answer is "Yes" if there is adequate/easy access (i.e. household can use the durable whenever it wants) and "No" otherwise.

In the case of a car, the household is considered to possess it if any member possesses it.

A company car or van which is available to the household for private use counts as possessing the item. A car or van provided ONLY for professional purpose, should not be considered as possessing the item.

Motorcycles are excluded.

#### HS120: Ability to make ends meet

SOCIAL EXCLUSION (Non-monetary household deprivation indicators)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: household respondent

#### Format of the question:

A household may have different sources of income and more than one household member may contribute to it.

Thinking of your household's total income, is your household able to make ends meet, namely, to pay for its usual necessary expenses?

V	alues	
	1	with great difficulty
	2	with difficulty
	3	with some difficulty
	4	fairly easily
	5	easily
	6	very easily
F	lags	
	1	filled
	-1	missing

The objective is to assess the respondent feeling about the level of difficulty experienced by the household in making ends meet.

The respondent's assessment should be based on the <u>household's total income</u>. There should be a reference in the national questionnaires as well as in the interviewers' guidelines that <u>all income sources are to be taken into account</u> (possibly irregular) and that "<u>more than one household member may contribute to it</u>". It is however acceptable that this reference is dropped if this question follows other questions on the household total income and the concept is clear to respondents.

Additionally, in the guidelines for interviewers, it can be specified that income refers to 'net' income i.e. to income after the deduction of tax and social insurance.

As <u>making ends meet</u> does not exist in some languages, it is to be defined as <u>paying usual necessary expenses</u> and should be included both in the national questionnaires and in the guidelines for interviewers.

The usual necessary expenses of the household should include housing related costs but exclude business and farm work costs. This clarification is to be given in the interviewers' guidelines.

Ideally Member States will use the same scale proposed in the given order in order to guarantee the maximum comparability.

#### HS130: Lowest monthly income to make ends meet

SOCIAL EXCLUSION (Non-monetary household deprivation indicators)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: household respondent

#### Format of the question:

In your opinion, what is the very lowest net monthly income that your household would have to have in order to make ends meet, that is to pay its usual necessary expenses? Please answer in relation to the present circumstances of your household, and what you consider as usual necessary expenses (to make ends meet).

V	Values					
	1- 999999.	99 lowest income				
F	lags					
	1 fil	lled				
	-1 m	issing				

The objective is that the respondent provides its own assessed indication of the lowest net monthly income (in national currency) the household would need to 'make ends meet' and that should be clearly indicated/specified both in the national questionnaires and in the related interviewers' guidelines.

This question is to be included in the questionnaire after questions corresponding to variables HS140, HS150 and HS120.

Both aspects of present composition and usual necessary expenses of the household should be clearly indicated/specified in the national questionnaires and in the interviewer guidelines.

The answer of the respondent to this question should refer to the <u>household's total net monthly income</u>. In the guidelines for interviewers a definition of net income should be given, 'net' income referring to income after the deduction of tax and social insurance.

The usual necessary expenses of the household should include housing related costs but exclude business and farm work costs. This clarification is to be given in the interviewer guidelines.

#### HS140: Financial burden of the total housing cost

#### [Total housing cost is a financial burden to the household]

SOCIAL EXCLUSION (Non-monetary household deprivation indicators)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: household respondent

#### Format of the question:

Please think your total housing costs including mortgage repayment (instalment and interest) or rent, insurance and service charges (sewage removal, refuse removal, regular maintenance, repairs and other charges). To what extent are these costs a financial burden to you?

Please note: Only actual paid housing costs have to be taken into account

Would you say they are:

V	alues	
	1	A heavy burden
	2	A slight burden
	3	not burden at all
F	lags	
	1	filled
	-1	missing
	-2	not applicable (no housing costs )

The <u>objective</u> is to assess the respondent feeling about the extent to which housing costs are a financial burden to the household. That should be clearly indicated/specified both in the national questionnaires and in the related interviewers' guidelines.

<u>Total mortgage repayment</u> including instalment and interest is to be taken into account for owners and actual <u>rent</u> for renters. In addition, <u>service charges</u> (sewage removal, refuse removal, regular maintenance, repairs and other charges) are to be considered.

Only really paid housing costs have to be taken into account, i.e. the variable should cover what the household should actually pay and should not take into account the accumulation of arrears over past periods.

As regards the definition of Housing costs, please refer to explanations given for variable HH070.

## HS150: Financial burden of the repayment of debts from hire purchases or loans

[Repayment of debts from hire purchases or loans other than mortgage or loan connected with the house are a financial burden to the household]

SOCIAL EXCLUSION (Non-monetary household deprivation indicators)

Cross-sectional and longitudinal

Reference period: current

*Unit: household* 

Mode of collection: household respondent

#### Format of the question:

Do you or anyone in your household have to repay debts from any credit card, hire purchase or other loans (that is, excluding mortgage repayments or other loans connected with the purchase of main dwelling)? Codes 1/2 (Yes/No)

#### If Yes:

To what extent is the repayment of such loans a financial burden for your household? Would you say it is:

Values	
1	Repayment is a heavy burden
2	Repayment is somewhat a burden
3	Repayment is not a burden at all
Flags	
1	filled
-1	missing
-2	not applicable (no repayment of debts)

The <u>objective is to assess the respondent feeling</u> about the extent to which the repayment of non-housing related debts are a financial burden to the household. That should be clearly indicated/specified both in the national questionnaires and in the related interviewers' guidelines.

'Non-housing related debts' include any loans for consumer items or services (car, holiday, furniture, durable etc.) and credit card debt.

Mortgage repayments or loans connected with the purchase of main dwelling are excluded.

'<u>Do you or anyone in your household</u>' should be explicitly mentioned in the questionnaire and the interviewers' explanatory notes.

#### HS160: Problems with the dwelling: too dark, not enough light

SOCIAL EXCLUSION (Physical and social environment)

Cross-sectional

Reference period: current

Unit: household

Mode of collection: household respondent

#### Format of the question

### Is your dwelling too dark, meaning is there not enough day-light coming through the windows?

V	alues					
	1	yes				
	2	no				
F	lags					
	1	filled				
	-1	missing				

The objective is to assess whether the respondent feels 'the dwelling being too dark, not enough day-light' to be a problem for the household. No common objective standards as to what a 'problem' refers to are implied. The questions asks whether the household feels that there is a problem with most of the rooms being too dark (not necessarily all of the rooms).

It is recommended to consider the dwelling as 'too dark, without enough day-light' in the situation of a sunny day that means that artificial lighting is not to be taken into account.

#### HS170: Noise from neighbours or from the street

[Noise from neighbours or noise from the street (traffic, business, factories, etc.]

SOCIAL EXCLUSION (Physical and social environment)

Cross-sectional

Reference period: current

Unit: household

Mode of collection: household respondent

#### Format of the question

Do you have any of the following problems related to the place where you live? Too much noise in your dwelling from neighbours or from outside (traffic, business, factory, etc.)?

Val	lues				
	1	yes			
	2	no			
Fla	ıgs				
	1	filled			
	-1	missing			

The <u>objective</u> is to assess whether the respondent feels 'noise from neighbours or from outside' to be a problem for the household (not on the fact to be bothered by the problem). No common standards of what is a problem are defined.

<u>A reference to the dwelling</u> should be clearly indicated both in the national questionnaires and in the national interviewer guidelines.

<u>Both aspects of noise from neighbours and outside</u> are to be covered and specified in the question as well as in the interviewers' guidelines.

<u>In relation to the 'noise from neighbours'</u>, no details are to be included in the question itself; in the interviewers' guidelines, noise from neighbours could be described as noise from neighbouring apartments, staircase or water pipe.

Reference is to be made to noise from outside and not to noise from the street:

- 'Noise from outside' should be made explicit in the question;
- In the national questionnaires, traffic, businesses, factories, etc. should be specified in brackets;
- In the interviewers' guidelines, 'noise from outside' should be described as noise linked to traffic (street or road, plane, railway), linked to business, factories, agricultural activities, clubs and yard.

This question should be included as an item under a <u>single question</u>.

#### HS180: Pollution, grime or other environmental problems

[Pollution, grime or other environmental problems in area caused by traffic or industry]

SOCIAL EXCLUSION (Physical and social environment)

Cross-sectional

Reference period: current

*Unit: household* 

Mode of collection: household respondent

#### Format of the question

Do you have any of the following problems related to the place where you live?

- Pollution, grime or other environmental problems in the local area such as: smoke, dust, unpleasant smells or polluted water?

V	alues				
	1	yes			
	2	no			
Fl	lags				
	1	filled			
	-1	missing			

The <u>objective is to assess whether the respondent feels</u> 'pollution, grime,...' to be a problem for the household (not on the fact to be bothered by the problem). No common standards what is a problem are defined.

A reference to the area (place situated close to the place where you live) should be clearly indicated both in the national questionnaires and in the national interviewers' guidelines.

<u>The question is asked as follows</u>: Pollution, grime or other environmental problems in the local area such as smoke, dust, unpleasant smells or polluted water.

<u>Examples</u>: A detailed list of examples (road dust, exhaust gases of vehicles; smoke, dust or unpleasant smells from factories; unpleasant smells of wastes or sewerage; polluted water from water pipe as well as polluted river) is proposed for inclusion only in the interviewers' guidelines, not in national questionnaires.

An explicit reference to the specific problem caused by traffic or industry is not to be included in the national questionnaires, but is to be included as in the interviewers' guidelines.

This question should be included as an item under a single question.

#### HS190: Crime violence or vandalism in the area

SOCIAL EXCLUSION (Physical and social environment)

Cross-sectional

Reference period: current

Unit: household

Mode of collection: household respondent

#### Format of the question

Do you have any of the following problems related to the place where you live?

- Crime, violence and vandalism in the local area?

Va	alues				
	1	yes			
	2	no			
Fl	ags				
	1	filled			

<u>The objective is to assess whether the respondent feels</u> 'crime, violence or vandalism' to be a problem for the household (not on the fact to be bothered by the problem). No common standards what is a problem are defined.

A reference to the area (situated close to the place where you live) should be clearly indicated both in the national questionnaires and in the national interviewers' guidelines.

A clear definition is to be provided for defining 'Crime': Translation of the word 'crime' is to be carefully checked as it has a different meaning in different languages.

A clear footnote will be provided for defining 'crime'. Crime is to be defined as a deviant behaviour that violates prevailing norms, specifically, cultural standards prescribing how humans ought to behave normally. A legalistic approach is not to be used (this is not defined as any blameworthy act or oversight banned by law and penalized by the State).

<u>Examples</u> are only to be given in the interviewers' guidelines and can include thefts, illegal activities.

This question should be included as an item under a <u>single question</u>.

#### HY010: Total household gross income

INCOME (Total household income (gross and disposable))

Cross-sectional and longitudinal

Reference period: income reference period

*Unit: household* 

Mode of collection: constructed

Values

-999999.99 - 999999.99 income (national currency) without inflation factor

Flags

See chapter 'Income flags'

#### <u>Difference with the EU-SILC Regulations:</u>

Pensions received from individual private plans (other than those covered under ESSPROS) (PY080G)/(PY080N) are treated as a component of property income, and should be included in the total household gross income (HY010).<sup>1</sup>

Inclusion of PY080 in HY010 should be implemented by countries from the 2011 operation onwards.

#### Total gross household income (HY010) is computed as:

the sum for all household members of gross personal income components

- gross employee cash or near cash income (PY010G),
- gross non-cash employee income (PY020G),
- company car (PY021G),
- employers' social insurance contributions (PY030G),
- gross cash benefits or losses from self-employment (including royalties) (PY050G),
- value of goods produced for own consumption (HY170G),
- pensions received from individual private plans (other than those covered under ESSPROS) (PY080G),
- unemployment benefits (PY090G),
- old-age benefits (PY100G),
- survivor' benefits (PY110G),
- sickness benefits (PY120G),
- disability benefits (PY130G),
- education-related allowances (PY140G);

> plus gross income components at household level

- imputed rent (HY030G),
- income from rental of a property or land (HY040G),
- family/children related allowances (HY050G),

<sup>&</sup>lt;sup>1</sup> This follows a recommendation from the TF on methodological issues. The Indicator Sub Group (ISG) agreed in 2010 to include PY080 in the income definition and consequently in the computation of OMC indicators.

- social exclusion not elsewhere classified (HY060G),
- housing allowances (HY070G),
- regular inter-household cash transfers received (HY080G),
- interests, dividends, profit from capital investments in unincorporated business (HY090G),
- income received by people aged under 16 (HY110G));
- less interest paid on mortgage (HY100G).

#### That means:

 $HY010 = HY040G + HY050G + HY060G + HY070G + HY080G + HY090G + HY110G + \\ [for all household members](PY010G + PY021G + PY050G + PY080G + PY090G + PY100G + PY110G + PY120G + PY130G + PY140G).$ 

Note: The new income components mandatory from 2007 operation onwards, i.e. the non-monetary income components, as well as interest paid on mortgage and employers social insurance contributions, with the exception of the company car and the pensions received from individual private plans (other than those covered under ESSPROS), are not included in the computation of the aggregate income variables and in the computation of the common cross-sectional EU indicators (OMC indicators) until a final decision of the ISG concerning the inclusion of these components has been taken. However, these components have to be recorded at component level in their respective codes, i.e. PY020G, PY030G, HY170G, HY030G, HY100G.

HY020: Total disposable household income

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

HY023: Total disposable household income before social transfers including old-age and survivor's benefits

INCOME (Total household income (gross and disposable))

Cross-sectional and longitudinal

Reference period: income reference period

Unit: household

Mode of collection: constructed

Values

-999999.99 - 999999.99 income (national currency) without inflation factor

Flags

See chapter 'Income flags'

#### Difference with the EU-SILC Regulations:

Pensions received from individual private plans (other than those covered under ESSPROS) (PY080G)/(PY080N) are treated as a component of property income, and should be included in the total disposable household income (HY020).<sup>1</sup>

Inclusion of PY080 in HY020, HY022 and HY023 should be implemented by countries from the 2011 operation onwards.

#### Total disposable household income (HY020) can be computed as:

> the sum for all household members of gross personal income components

- gross employee cash or near cash income (PY010G),
- gross non-cash employee income (PY020G),
- company car (PY021G),
- employers' social insurance contributions (PY030G),
- gross cash benefits or losses from self-employment (including royalties) (PY050G),
- value of goods produced for own consumption (HY170G),
- pensions received from individual private plans (other than those covered under ESSPROS) (PY080G),
- unemployment benefits (PY090G),
- old-age benefits (PY100G),
- survivor' benefits (PY110G),
- sickness benefits (PY120G),
- disability benefits (PY130G),

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<sup>&</sup>lt;sup>1</sup> This follows a recommendation from the TF on methodological issues. The Indicator Sub Group (ISG) agreed in 2010 to include PY080 in the income definition and consequently in the computation of OMC indicators.

- education-related allowances (PY140G);
- > plus gross income components at household level
  - imputed rent (HY030G),
  - income from rental of a property or land (HY040G),
  - family/children related allowances (HY050G),
  - social exclusion not elsewhere classified (HY060G),
  - housing allowances (HY070G),
  - regular inter-household cash transfers received (HY080G),
  - interests, dividends, profit from capital investments in unincorporated business (HY090G),
  - income received by people aged under 16 (HY110G));

#### > minus

- employer's social insurance contributions (PY030G),
- interest paid on mortgage (HY100G),
- regular taxes on wealth (HY120G),
- regular inter-household cash transfer paid (HY130G),
- tax on income and social insurance contributions (HY140G).

The variable HY140G includes the income taxes paid during the income reference period, the tax adjustments-repayment/receipt received or paid during the income reference period and the social insurance contributions paid during the income reference period.<sup>1</sup>

#### That means:

HY020 = HY010 - HY120G - HY130G - HY140G.

### <u>Total disposable household income before social transfers except old-age and survivor' benefits (HY022) is defined as:</u>

- > the total disposable income (HY020);
- > minus total transfers
- > plus old age benefits (PY100G) and survivor' benefits (PY110G).

#### Or as:

> the total disposable income (HY020);

#### > minus:

- unemployment benefits (PY090G),
- sickness benefits (PY120G),
- disability benefits (PY130G),
- education-related allowances (PY140G);
- family/children related allowances (HY050G),
- social exclusion not elsewhere classified (HY060G),

<sup>&</sup>lt;sup>1</sup> For more details, see guidelines for variable HY140

housing allowances (HY070G).

#### That means:

 $HY022 = HY040G + HY080G + HY090G + HY110G - HY120G - HY130G - HY140G + \\ [for all household members](PY010G + PY021G + PY050G + PY080G + PY100G + PY110G)$ 

### <u>Total disposable household income before social transfers including old-age and survivor'</u> benefits (HY023) is defined as:

- > the total disposable income (HY020);
- > minus total transfers:
  - unemployment benefits (PY090G),
  - old-age benefits (PY100G),
  - survivor' benefits (PY110G),
  - sickness benefits (PY120G),
  - disability benefits (PY130G),
  - education-related allowances (PY140G);
  - family/children related allowances (HY050G),
  - social exclusion not elsewhere classified (HY060G),
  - housing allowances (HY070G).

#### That means:

HY023 = HY040G + HY080G + HY090G + HY110G - HY120G - HY130G - HY140G + [for all household members](PY010G + PY021G + PY050G + PY080G)

Note: The new income components mandatory from 2007 operation onwards, i.e. the non-monetary income components, as well as interest paid on mortgage and employers social insurance contributions, with the exception of the company car and the pensions received from individual private plans (other than those covered under ESSPROS), are not included in the computation of the aggregate income variables and in the computation of the common cross-sectional EU indicators (OMC indicators) until a final decision of the ISG concerning the inclusion of these components has been taken. However, these components have to be recorded at component level in their respective codes, i.e. PY020G, PY030G, HY170G, HY030G, HY100G.

#### HY025: Within-household non-response inflation factor

INCOME (Total household income (gross and disposable))

Cross-sectional and longitudinal

Reference period: income reference period

Unit: household

Mode of collection: constructed

V	alues		
	-100	.00000 - 100.00000	factor
F	lags		
	1	filled	
	-1	missing	

Factor by which it is necessary to multiply the total gross income, the total disposable income or the total disposable income before social transfers to compensate the non-response in individual questionnaires. It is necessary to correct the effect of non-responding individuals within a household otherwise, income of individuals not interviewed is not added up into the total household income.

Eurostat recommends that the inflation factor method approach is not used to compensate for individual non response. Rather, it is recommended to have missing individuals record completely imputed (as regard income components) (see discussion below).

The inflation factor should be used only when no other imputation is performed. In all other cases it should be equal to 1

#### Partial unit/individual non response

It is necessary to correct the data for the effect of non-responding individuals within a household in aggregating personal level income variables to construct the corresponding variables at the household level. Otherwise, the effect of not adding up the contribution of individuals not interviewed in the total household income would deteriorate the micro level consistency between household composition and income variable and thus equivalized disposable income.

The importance of within household non-response varies remarkably between countries: in 2004, from 0% up to 15.63%. However the average is of about 3% and the extent of the problem is thus globally limited.

The partial unit non-response affects to all of total household income derived variables, i.e. HY010, HY020, HY022 and HY023. In principle, different corrections should be applied to the different total household income variables. Nevertheless, due that for the majority of poverty indicators the total household income variable used "total household disposable income" (HY020) only a within-household non-response inflation factor "HY025" has been proposed in EU-SILC<sup>1</sup>.

<sup>&</sup>lt;sup>1</sup> For countries where individual non-response rate is high, it should be considered to calculate more than one within-household non-response inflation factor.

HY025, the within household non-response inflation factor is the factor by which it is necessary to multiply the total disposable income obtained by summing collected individual and household components to compensate for missing individual questionnaire and income information.

HY025 can be defined as: HY025=(collected amounts + imputed missing amounts)/(collected amounts). Imputed amounts stands for the contribution to total disposable income of individual income components. Various imputation methods can be used to obtain the missing amounts and thus corresponding value of HY025.

The usefulness of HY025 can be criticised:

- 1) Abuse use if the same inflation factor is used for HY010, HY020, HY022 and HY023.
- 2) It computation might be very complex and thus obscure because missing net components have to be estimated taking into account the situation of the household
- 3) In case of income distribution analysis, summing income over households, the total disposable income will not be equal to the sum of the total of the different components leading to further adjustment before carrying out analysis.
- 4) HY025 is not bounded and can be negative in case of, respectively, no income is collected for the respondent individuals or the collected income is negative.

Eurostat therefore recommends to not anymore use HY025 to correct for individual non response and to opt for one of the following approaches. HY025 will used to indicate the extend of the imputation.

Different approaches recommended for dealing with the partial unit non-response problem can be applied:

- Full imputation of missing personal income records. The new record will be "flagged" RB250 (data status) = 14 "information completed from record imputation". HY025 is equal to 1.
- Removal from the sample households with partial unit non-response (adjustment of the estimation weights should be necessary).
- Direct imputation of the total personal income (gross, disposable after and before transfers) on the basis of selected regression models of the total personal income on age class, sex, household composition and incorporating the corresponding value in HY010, HY020, HY022 and HY023. For traceability HY025 will put to:

 $HY025 = 1 + Q_i / HY020_c$ 

where HY020\_c is the collected household disposable income as obtained by aggregating all the collected income components and QI = sum(imputed total personal income).

• HY025 will not be used anymore for indicators calculation.

#### **Discussion**

#### 1. Full imputation of missing personal interviews

Personal questionnaire will be totally imputed. Standard donor imputation methods could be used to impute the questionnaire, i.e. stratified (random) or sequential

(deterministic) hot deck. The strata or sorting criteria could be based on sex, range of ages, household type and other available information on file R.

Eurostat recommendation: This method is likely to ensure the maximum internal consistency of the data files and is thus recommended. However, it acceptable when the partial non response extend is limited, say below 5%, because, the power of the implicit model for all the variables imputed might be difficulty controllable.

#### 2. Removal from the sample households with partial unit non-response

In this case the household will be treated as a "household rejected for the data base" (DB135 = 2). The weights should be corrected taking into account the new case of non-response.

Eurostat recommendation: this method implies a loss of efficiency of the survey and the non response bias is difficulty controllable. The method is acceptable when the number of households with partial unit non-response is very low (say 1-2%) and the methodological investment for developing imputation methods is too high. It can be envisaged for cross sectional files only.

## 3. Imputation of the total personal income on the basis of a regression model of personal income on age class, sex, etc and derivation of the corresponding HY025.

The method is based on a regression model of total personal income on various available explanatory variable like age class, sex, and household type. If explanatory variables are categorical, the method will consist in imputing missing aggregated income by combination of means of corresponding classes. If a factorial design is used to construct the regression variables (complete cross combination of different classes), it will consist in imputation by class means.

The method allow for the used of lagged variables (variable for the same individual/household in the previous years. This is expected to improve the quality of the regression.

If regression variable depends on the income distribution such as quintile income classes, iterative procedure needs to be used to estimate consistently the regression parameter.

Imputation can also be made stochastic by simulation the law of the regression errors term.

Finally robust regression methods can advantageously be used in order to avoid corruption from outliers. Alternatively, specific editing rules can also be imposed to the results to prevent strange behaviour when dealing with negative income and so on.

Eurostat recommendation: the main disadvantage of this method is that the internal consistency between total income and income components recorded for the whole household. It is not clear at the moment what is the relative advantage of this kind of imputation in comparison with full income record imputation. If regression model proved to supersede income record imputation, then this method is likely to be more appropriate when partial non response is high.

#### HY030G/HY030N: Imputed rent

INCOME (Gross income components at household level)

Cross-sectional and longitudinal

Reference period: income reference period

Unit: household

Mode of collection: estimated

Values	
1 - 99	9999.99 income (national currency)
0	no income
Flags	
0	no income
1	income (variable is filled)
-1	missing (As missing values are imputed this code is only acceptable if
	imputation is not possible)
-5	not filled: variable of net (G) / gross (N) series is filled

Mandatory only from 2007 on.

#### Imputed rent

The imputed rent refers to the value that shall be imputed for all households that do not report paying full rent, either because they are owner-occupiers or they live in accommodation rented at a lower price than the market price, or because the accommodation is provided rent free.

The imputed rent shall be estimated only for those dwellings (and any associated buildings such a garage) used as a main residence by the households.

The value to impute shall be the equivalent market rent that shall be paid for a similar dwelling as that occupied, less any rent actually paid (in the case where the accommodation is rented at a lower price than the market price), less any minor repair or refurbishment expenditure which the owner-occupier households make on the property of the type that would normally be carried out by landlords. Costs for heating, water electricity, etc. are excluded. Repair leading to improvements or fixing major problems of the dwelling are also excluded.

Depreciation (consumption of fixed capital) shall neither be taken into account because they are likely to be offset or superseded by variation of market value of the dwelling. These latter are not covered in EU-SILC.

The market rent is the rent due for the right to use an unfurnished dwelling on the private market, excluding charges for heating, water, electricity, etc. By extension, private market also includes market which is regulated by government regulations.

Several methods for estimating "gross" imputed rent are available:

- 1. the regression/stratification method based on actual rents
- 2. the user cost method based on the estimation of cost incurred for homeownership by foregoing the opportunity to invest in financial assets from which real income flows are created in the form of income from interest and dividends.
- 3. the self assessment method
- 4. the administrative assessment method, generally for fiscal purposes

For the sake of comparability among countries, a regression/stratification method should be applied except for duly justified cases, in particular when the private rental market represents less then 10% of the market or when regression method is statistically unreliable. The self assessed value used as direct estimate of the market price value of the dwelling is not acceptable. Method used for fiscal purpose is usually not adapted.

The use of the regression method requires furthermore development in order to ensure minimum comparability with EU-SILC recommended method, in particular the determination capital to be taken into account when the owner has a mortgage.

The regression/stratification method is based on the estimation of market rent using a appropriate econometric model / stratification criteria using the available data on the private market rent. The source can be the EU-SILC sub-sample of full rent tenants or any other reliable external source.

Variables to be taken into account are likely to be country specific however some variables like localisation and urbanisation, size of dwelling (in square meter and in number of rooms), amenities (bathroom, balcony, garden, ...) are likely to be common to all models.

The estimated model should seek to predict the average market rent taking into account the physical characteristics of the dwelling but not the market of new contract for such a dwelling. Therefore, the age of the contract does not seem to be a interesting predictor for such a model. The quality of the model will be evaluated at the light of its ability to fit the actual distribution of the market rent of similar dwelling. The use of the subjective rent as a latent of hidden variable is not excluded a priori. In this case, the model would appear as a model for correcting subjective rent.

If there is strong deviation between the rental market sample and the owner occupied sample, it is likely that Heckmann correction should be tested for reducing selection bias.

Different models used by countries will be made available on circa for information.

<sup>&</sup>lt;sup>1</sup> i.e. before deduction of owner cost for maintenance and minor repairs

#### <u>Difference with the EU-SILC Regulations:</u>

Accommodation provided free or at reduced rent by the employer to the employees as the main residence of the household should be included in the non-cash employee income (PY020), and consequently not included under the variable imputed rent (HY030). When employee occupies an employer owned dwelling free or at reduced cost, the corresponding part of the imputed rent not paid by the employee should be recorded in employment income in kind (PY020) and not taken into account in imputed rent (HY030).

On the other hand, cash subsidies received from the employer for dwelling cost should be accounted as employment income (PY010).

The housing subsidies received from the government or from a non-profit institution should not be deducted from the imputed rent. These subsidies should be accounted for in housing allowances (HY070).

Housing subsidies and reduced rent based on employment contract should not interfere with computation of imputed rent.

# HY040G/HY040N: Income from rental of a property or land HY090G/HY090N: Interest, dividends, profit from capital investments in unincorporated business

INCOME (Gross income components at household level)

Cross-sectional and longitudinal

Reference period: income reference period

*Unit: household* 

Mode of collection: household respondent or register

Values		
	1 - 999999.99 0	income (national currency) no income
Flags		
	See chapter 'Income flags'	

Gross means that neither taxes nor social contributions have been deducted at source.

#### Property income

Property income is defined as the income received less expenses occurring **during the income reference period** by the owner of a financial asset or a tangible non-produced asset (land) in return for providing funds to, or putting the tangible non-produced asset at the disposal of, another institutional unit.

The property income is broken down into:

- (1) Interest, dividends, profits from capital investment in an unincorporated business (HY090);
- (2) Income from rental of a property or land (HY040);
- (3) Pensions received from individual private plans (other than those covered under ESSPROS) (PY080).

### <u>Interest, dividends, profits from capital investment in an unincorporated business</u> (HY090G)

Interest (not included in the profit/loss of an unincorporated enterprise), dividends, profits from capital investment in an unincorporated business refer to the amount of interest from assets such as bank accounts, certificates of deposit, bonds, etc, dividends and profits from capital investment in an unincorporated business, in which the person does not work, received during the income reference period less expenses incurred.

#### Recommendations:

The respondents should not be given only the possibility to give the exact amount but also to choose among ranges of values.<sup>1</sup>

#### Income from rental of a property or land (HY040G)

Income from rental of a property or land refers to the income received, **during the income reference period**, from renting a property (for example renting a dwelling - not included in the profit/loss of unincorporated enterprises-, receipts from boarders or lodgers, or rent from land) after deducting costs such as mortgage interest repayments, minor repairs, maintenance, insurance and other charges.

The net income series correspond to the gross income components but the tax at source or the social insurance contributions or both are deducted.

#### Difference with the EU-SILC Regulations:

Contributions to individual pension plans (PY035G)/ (PY035N) should not be deducted from the total household disposable income.

Pensions received from individual private plans (other than those covered under ESSPROS) (PY080G) are treated as a component of property income, and should be included in the total household gross income (HY010) and in the total disposal household income (HY020).

Pensions received from individual private plans (other than those covered under ESSPROS) (PY080G)/(PY080N) are treated as a component of property income, and should be included in the total household gross income (HY010) and in the total disposable household income (HY020).<sup>2</sup> Inclusion of PY080 in HY020, HY022 and HY023 should be implemented by countries from the 2011 operation onwards.

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<sup>&</sup>lt;sup>1</sup> The aim is to improve the data collection (given that pilot surveys showed the difficulty to collect interest from accounts).

<sup>&</sup>lt;sup>2</sup> This follows a recommendation from the TF on methodological issues. The Indicator Sub Group (ISG) agreed in 2010 to include PY080 in the income definition and consequently in the computation of OMC indicators.

HY050G/HY050N: Family/Children related allowances

HY060G/HY060N: Social exclusion not elsewhere classified

**HY070G/HY070N:** Housing allowances

INCOME (Gross income components at household level)

Cross-sectional and longitudinal

Reference period: income reference period

Unit: household

Mode of collection: household respondent or register

Values			
1 - 999999.99 0	income (national currency) no income		
Flags			
See chapter 'It	See chapter 'Income flags'		

#### Social benefits

Social benefits<sup>1</sup> are defined as current transfers received during the **income reference period**<sup>2</sup> by households intended to relieve them from the financial burden of a number of risk or needs, made through collectively organised schemes, or outside such schemes by government units and NPISHs.

It includes the value of any social contributions and income tax payable on the benefits by the beneficiary to social insurance schemes or to tax authorities.

In order to be included as a social benefit, the transfer must meet one of two criteria:

- Coverage is compulsory (under law, regulation or a collective bargaining agreement) for the group in question;
- It is based on the principle of social solidarity (i.e. if it is an insurance-based pension, the premium and entitlements are not proportional to the individual exposure to risk of the people protected).

The Social benefits collected a household level are the following:

- Family/children related allowance (HY050G)/ (HY050N)
- Housing allowances (HY070G)/ (HY070N)
- Social exclusion not elsewhere classified (HY060G)/ (HY060N)

#### Social benefits exclude:

 Benefits paid from schemes into which the recipient has made voluntary payments only, independently of his/her employer or government (which are included under

<sup>&</sup>lt;sup>1</sup> The social benefits included in EU-SILC, with the exception of housing benefits, are restricted to cash benefits.

<sup>&</sup>lt;sup>2</sup> In order to get a closer measure to the well-being of the household, the lump-sum benefits received during the income reference period shall be treated according to Eurostat technical recommendations. In the same way, lump-sum received before the income reference period could be taken into account and imputed according to Eurostat recommendations.

'Pensions from individual private plans (other than those covered under ESSPROS)' (PY080G)).

#### Family/children related allowance (HY050G)

The Family/children Function refers to benefits that:

- provide financial support to households for bringing up children<sup>1</sup>;
- provide financial assistance to people who support relatives other than children

#### It includes:

- Income maintenance benefit in the event of childbirth: flat-rate or earnings-related payments intended to compensate the parent for loss of earnings due to absence from work in connection with childbirth for the period before and/or after confinement or in connection with adoption;
- Birth grant: benefits normally paid as a lump sum or by instalments in case of childbirth or adoption;
- Parental leave benefit: benefit paid to either mother or father in case of interruption of work or reduction of working time in order to bring up a child, normally of a young age;
- Family or child allowance: periodical payments to a member of a household with dependent children to help with the costs of raising children;
- Alimonies or supports paid by government (central or local) if the spouse for some reason does not pay the alimony/child support. The amount paid by the government should not be recorded in variables HY080 and HY081:
- Other cash benefits: benefits paid independently of family allowances to support households and help them meet specific costs, such as costs arising from the specific needs of lone parent families or families with handicapped children. These benefits may be paid periodically or as a lump-sum.

#### It excludes:

- Payments made by employers to an employee in lieu of wages and salaries through a
  social insurance scheme when unable to work through maternity leave where such
  payment can not be separately and clearly identified as social benefits (These
  payments are included under 'gross employee cash or near cash income' (PY010G)).
- Additional payments made by employers to an employee to supplement the maternity leave pay entitlement from a social insurance schemes, where such payments cannot be separately and clearly identified as social benefits (These payments are included under 'gross employee cash or near cash income' (PY010G)).

#### Social exclusion not elsewhere classified (HY060G)

Social benefits in the function 'social exclusion not elsewhere classified' refer to the "socially excluded" or to "those at risk of social exclusion". General as this is, target groups may be

 $<sup>^{\</sup>rm 1}$  The benefits received with the salary for bringing up children are included under HY050

identified (among others) as destitute people, migrants, refugees, drug addicts, alcoholics, victims of criminal violence.

#### It includes:

- Income support: periodic payments to people with insufficient resources. Conditions for entitlement may be related not only to the personal resources but also to nationality, residence, age, availability for work and family status. The benefits may have a limited or an unlimited duration; they may be paid to the individual or to the family, and provided by central or local government;
- Other cash benefits: support for destitute and vulnerable persons to help alleviate poverty or assist in difficult situations. These benefits may be paid by private nonprofit organisations.

#### It excludes:

 Pensions for persons who participated in National Resistance. These pensions should be classified under 'old age function'. Any one who is old enough to have been in the resistance must be over 70.

#### **Housing allowances (HY070G)**

The Housing Function refers to interventions by public authorities to help households meet the cost of housing. An essential criterion for defining the scope of a Housing allowance is the existence of a qualifying means-test for the benefit.

#### It includes:

- Rent benefit: a current means-tested transfer granted by a public authority to tenants, temporarily or on a long-term basis, to help with rent costs.
- Benefit to owner-occupiers: a means-tested transfer by a public authority to owner-occupiers to alleviate their current housing costs: in practice often help with paying mortgages and/or interest.

#### It excludes:

- Social housing policy organised through the fiscal system (that is, tax benefits).
- All capital transfers (in particular investment grants).

The net income series correspond to the gross income components but the tax at source or the social insurance contributions or both are deducted.

# HY080G/HY080N: Regular inter-household cash transfer received

INCOME (Gross income components at household level)

Cross-sectional and longitudinal

Reference period: income reference period

Unit: household

Mode of collection: household respondent or register

V	Values		
	1 - 999999.99 0	income (national currency) no income	
Flags			
	See chapter 'Income flags'		

This item is classified under current transfer received.

#### Regular inter-household cash transfers received (HY080G)

Regular inter-household cash transfers received refer to regular monetary amounts received, during the income reference period, from other households or persons. They should refer to regular payment received, even if once a year, available to finance (regular) consumption expenditure.

Inter-household transfers should be:

- Regular, i.e. transfer receipts must be to some extent be anticipated or relied on;
- Current, i.e. available for consumption during the income reference period.

#### **Regular** can correspond to two different time scales:

- 1) it could be an annual amount received every year (longitudinal dimension) or over several years;
- 2) it could be periodic receipts (e.g. monthly) over a short period embedded in the income reference period (e.g. a semester).

The definition of regular does not refer to precise timing and do not require strong periodicity.

#### It includes:

- Compulsory alimony and child support;
- Voluntary alimony and child support received on a regular basis;
- Regular cash support from persons other than household members;
- Regular cash support from households in other countries.

#### It excludes:

- Free or subsidised housing provided by another household (which is included under 'Imputed rent' (HY030G));
- Inheritances and other capital transfers, i.e. transfers received from other households which the household does not consider as being wholly available for consumption within the income reference period;
- Gifts and other large, one-time and unexpected cash flows, like "lump sums" to buy a car, a house, ... or to be saved for long term consumption (more than one year ahead);
- Alimonies or supports paid by government (central or local) if the spouse for some reason does not pay the alimony/child support. The amount paid by the government should be recorded in the family allowances (variable HY050).

Editing should be used to limit measurement error (for both alimonies and others) and avoid capital transfer. If meaningful, it can be based on a maximal threshold expressed as a fraction of disposable income. A good practice could be to collect capital transfer in parallel so as to avoid to collect them in regular transfers.

The net income series correspond to the gross income components but the tax at source or the social insurance contributions or both are deducted.

#### Difference with the EU-SILC Regulations

The inter-household transfers should be measured using the following standard approach: to separate data collection of alimonies from other transfers (cash support from relatives, cash support from the rest of the world).

In line with the Regulation, the variable HY080G/HY080N collects the sum of both components. For analysis purpose, a new variable is created collecting only alimonies:

## HY081G/HY081N: Alimonies received (compulsory + voluntary)

INCOME (Gross income components at household level)

Cross-sectional and longitudinal

Reference period: income reference period

Unit: household

Mode of collection: household respondent or register

Values		
	1 - 999999.99	income (national currency)
F	lags	no income
See chapter 'Income flags'		

#### Alimonies received (HY081G)

As inter-household transfers, alimonies should be regular and current (see explanations for HY080).

Alimonies includes:

- Compulsory alimony and child support;
- Voluntary alimony and child support received on a regular basis.

Alimonies concern receipts for children and former spouse/husband which can be national or come from abroad.

#### Alimonies excludes:

- Regular cash support (other than alimonies) from persons other than household members;
- Regular cash support (other than alimonies) from households in other countries;
- Free or subsidised housing provided by another household (which is included under 'Imputed rent' (HY030G));
- Inheritances and other capital transfers, i.e. transfers received from other households which the household does not consider as being wholly available for consumption within the income reference period;
- Gifts and other large, one-time and unexpected cash flows, like "lump sums" to buy a car, a house, ... or to be saved for long term consumption (more than one year ahead);
- Alimonies or supports paid by government (central or local) if the spouse for some reason does not pay the alimony/child support. The amount paid by the government should be recorded in the family allowances (variable HY050).

By construction HY080G >= HY081G

### HY100G/HY100N: Interest repayments on mortgage

INCOME (Gross income components at household level)

Cross-sectional and longitudinal

Reference period: income reference period

Unit: household

Mode of collection: household respondent or register

Values			
	1 - 999999.99 0	income (national currency) no income	
Flags			
	See chapter 'Income flags'		
	1st digit: collected net or gross is always '1'		

#### Interest paid on mortgage (HY100G)

Interest paid on mortgage refers to the total gross amount, before deducting any tax credit or tax allowance, of mortgage interest on the main residence of the household during the income reference period.

#### It excludes:

- Any other mortgage payments, either interest or principal, made at the same time, such as mortgage protection insurance or home and contents insurance;
- Payments on mortgages to obtain money for housing purposes (e.g. repairs, renovations, maintenance etc.) or for non-housing purposes.
- Repayments of the principal or capital sum.

The net income series correspond to the gross income components but the tax at source or the social insurance contributions or both are deducted.

See EU-SILC Doc 105 (How to separate interest from principal)

# HY110G/HY110N: Income received by people aged under 16

INCOME (Gross income components at household level)

Cross-sectional and longitudinal

Reference period: income reference period

Unit: household

Mode of collection: household respondent or register

Values		
	1 - 999999.99	income (national currency)
F	lags	no income
See chapter 'Income flags'		

#### Income received by people aged under 16 (HY110G)

Income received by people aged under 16 is defined as the gross income received by all household members aged under sixteen **during the income reference period**.

#### It excludes:

- Transfers between household members;
- Income collected at household level (i.e. variables HY040G, HY050G, HY060G, HY070G, HY080G, and HY090G).

The net income series correspond to the gross income components but the tax at source or the social insurance contributions or both are deducted.

## HY120G/HY120N: Regular taxes on wealth

INCOME (Gross income components at household level)

Cross-sectional and longitudinal

Reference period: income reference period

Unit: household

Mode of collection: household respondent or register

V	Values		
	1 - 999999.99 income (national currency)		
	0 no income		
F	Flags		
	See chapter 'Income flags'		
	1st digit: collected net or gross is always '1'		
	other value allowed:		
	-4 Amount included in another income component		

#### Regular taxes on wealth (HY120G)/ (HY120N)

Regular taxes on wealth refers to taxes that are payable periodically on the ownership or use of land or buildings by owners, and current taxes on net wealth and on other assets (jewellery, other external signs of wealth) The regular taxes on wealth provided will be those paid during the income reference period.

It includes any interest charged on arrears of taxes due and any fines imposed by taxation authorities, paid **during the income reference period and** property taxes paid directly to the taxation authority by tenants during the income reference period.

#### It excludes:

- Intermittent taxes such as inheritance taxes, death duties or taxes on gifts inter vivo.
- Taxes assessed on holdings of property, land or real estate when these holdings are used as a basis for estimating the income of their owners (these taxes are included under 'Tax on income and social insurance contributions' (HY140G)).
- Taxes on land, buildings or other assets owned or rented by enterprises and used by them for production (these taxes are considered as taxes on production and they are deducted from the market output of self-employment income to build the component 'Gross cash benefits or losses from self-employment' (including royalties) (PY050G).

## HY130G/HY130N: Regular inter-household cash transfer paid

INCOME (Gross income components at household level)

Cross-sectional and longitudinal

Reference period: income reference period

Unit: household

Mode of collection: household respondent or register

Values		
	1 - 999999.99	income (national currency)
F	lags	no income
See chapter 'Income flags'		

#### Regular inter-household cash transfers paid (HY130G)

Regular inter-household transfers paid refer to regular monetary amount paid, **during the income reference period**, to other households. They should refer to regular payments, even once a year, out of income.

Inter-household transfers should be:

- Regular, i.e. transfer payments must be to some extent be anticipated or relied on;
- Current, i.e. out of the income from the income reference period.

**Regular** can correspond to two different time scales:

- 1) it could be an annual amount paid every year (longitudinal dimension) or over several years;
- 2) it could be periodic payments (e.g. monthly) over a short period embedded in the income reference period (e.g. a semester).

The definition of regular does not refer to precise timing and do not require strong periodicity.

Regular inter-household transfers paid include:

- Compulsory alimony and child support
- Voluntary alimony and child support paid on a regular basis
- Regular cash support to persons other than household members
- Regular cash support to households in other countries.

Regular inter-household transfers paid exclude:

Capital transfers and money drawn from saving.

Editing should be used to limit measurement error (for both alimonies and others) and avoid capital transfer. If meaningful, it can be based on a maximal threshold expressed as a fraction of disposable income. A good practice could be to collect capital transfer in parallel so as to avoid to collect them in regular transfers.

The net income series correspond to the gross income components but the tax at source or the social insurance contributions or both are deducted.

In case of tax deductions, the paid amount of the regular cash transfer should be recorded in HY130G while HY130N should take into account the tax deductions and repayments.

#### Difference with the EU-SILC Regulations

The inter-household transfers should be measured using the following standard approach: to separate data collection of alimonies from other transfers (cash support from relatives, cash support from the rest of the world).

In line with the Regulation, the variable HY130G/HY130N collects the sum of both components. For analysis purpose, a new variable is created collecting only alimonies:

# **HY131G/HY131N:** Alimonies paid (compulsory + voluntary)

INCOME (Gross income components at household level)

Cross-sectional and longitudinal

Reference period: income reference period

Unit: household

Mode of collection: household respondent or register

Values		
	1 - 999999.99	income (national currency)
F	lags	no income
See chapter 'Income flags'		

#### Alimonies paid (HY131G)

As inter-household transfers, alimonies should be regular and current (see explanations for HY130).

Alimonies includes:

- Compulsory alimony and child support;
- Voluntary alimony and child support paid on a regular basis.

Alimonies concern payments for children and former spouse/husband which can be national or abroad.

Alimonies excludes:

- Regular cash support (other than alimonies) to persons other than household members;
- Regular cash support (other than alimonies) to households in other countries;
- Capital transfers and money drawn from saving.

By construction HY130G >= HY131G

As for HY130, in case of tax deductions, the paid amount of the regular cash transfer should be recorded in HY131G while HY131N should take into account the tax deductions and repayments.

#### HY140G/HY140N: Tax on income and social contributions

INCOME (Gross income components at household level)

Cross-sectional and longitudinal

Reference period: income reference period

Unit: household

Mode of collection: household respondent or register

V	Values			
	-99999	9.99 - 999999.99 tax (national currency)		
	0	no income		
Fl	lags			
	0	no income		
	1+if	variable is filled		
		To value 1 must be concatenated the imputation factor (if)		
	if = collected value / recorded value			
	-1	missing (As missing values are imputed this code is only acceptable if not		
		imputation is possible)		
	-5	Not filled: variable of the net/gross series is filled		

#### Tax on income and social insurance contributions (HY140G) / (HY140N)

**Tax on income** refers to taxes on income, profits and capital gains. They are assessed on the actual or presumed income of individuals, households or tax-unit. They include taxes assessed on holdings of property, land or real estate when these holdings are used as a basis for estimating the income of their owners. Taxes related to pensions received from individual private plans (other than those covered under ESSPROS) should also be taken into account.

#### Taxes on income include:

- Taxes on individual, household or tax-unit income (income from employment, property, entrepreneurship, pensions, etc.), including taxes deducted by employers (pay-as-you earn taxes), other taxes at source and taxes on the income of owners of unincorporated enterprise paid during the income reference period.
- By way of exception, Member States using data from registers and other Member States, for which this is the most suitable way, can report taxes on 'income received' in the income reference year, if it only marginally affects comparability.
- Tax reimbursement received during the income reference period related to tax paid
  for the income received during the income reference period or for income received in
  previous years. This value will be taken into account as a reduction of taxes paid.
- Any interest charged on arrears of taxes due and any fines imposed by taxation authorities

#### Taxes on income exclude:

- Fees paid for hunting, shooting and fishing

**Social insurance contributions** refers to employees', self-employed and if applicable unemployed, retirement and so on contributions paid **during the income reference period** to either mandatory government or employer-based social insurance schemes (pension, health, etc.).

## HY145N: Repayments/receipts for tax adjustment

INCOME (Gross income components at household level)

Cross-sectional and longitudinal

Reference period: income reference period

Unit: household

Mode of collection: household respondent or register

```
Values

-999999.99 - -1 receipts (national currency)
1 - 999999.99 repayments (national currency)
0 no income

Flags

See chapter 'Income flags'
1st digit: collected net or gross is always '1'
```

Repayments/receipts for tax adjustments refer to the money paid to/received from Taxes Authorities related to the income received.

This applies only in the cases when taxes at source were deducted from income received and the Tax Authorities compare the amount of taxes of income paid at source with the taxes which corresponded be paid over the total income received for the 'tax unit'. If the 'tax unit' has paid in advance more taxes than those that correspond to the income received, the Tax Authorities reimburse money to the tax unit. These reimbursements can refer to tax paid for the income received during the income reference period or for income received in previous years .

If the 'tax unit' has paid in advance less taxes than those that correspond to the income received, in this case the 'tax unit' will have to paid more taxes ( tax adjustments) to the Tax Authorities.

This variable will be filling when the country has recorded only net income at component level. If the income at component level is reported gross or some of the components are gross and some nets the tax adjustments will be included, in general, under the variable HY140G.

## HY170G/HY170N: Value of goods produced for own consumption

INCOME (Gross income components at household level)

Cross-sectional and longitudinal

Reference period: income reference period

Unit: household

Mode of collection: household respondent or registers

V	Values			
	1 - 999999.99 0	income no income		
F	lags			
	See chapter 'Income flags'			

This variable was introduced from the 2010 operation onwards. It replaces the variable PY070 (with the same guidelines).<sup>1</sup>

In the longitudinal file, the new variable name "HY170" should be used for all waves, even those preceding 2010.

This variable is mandatory only from 2007 on.

#### Gross value of goods produced for own consumption (HY170G)

The value of goods produced for own consumption refers to the value of food and beverages produced and also consumed within the same household.

The value of goods produced for own consumption shall be calculated as the market value of goods produced deducting any expenses incurred in the production.

The value of food and beverages shall be included when they are a significant component of the income at national level or they constitute a significant component of the income of particular groups of households.

#### It excludes:

- Value of household services,

 Any production for sale and any withdrawals from a business by a self-employed person (these values are included under 'Gross income benefits or losses from selfemployment' (including royalties) (PY050G)).

This variable "value of goods produced for own consumption (HY170)" only refers to **alimentation** products (food and beverages). Other products which can be used for own consumption, like wood, should be according to the EU-SILC Regulations excluded from this variable.

<sup>&</sup>lt;sup>1</sup> In order to avoid data collection problems, namely double reporting, the TF on Methodological issues recommended to change the collection level of the value of goods produced for own consumption. This should not be anymore collected at individual but at **household** level. The proposal was agreed by the Living Conditions Working Group.

#### Net value of goods produced for own consumption (HY170N)

The net income component correspond to the gross income components but the tax at source, the social insurance contributions or both (if applicable) are deducted.

#### **Comments**

This income component includes the value of all goods produced and also consumed within the same household. Any households may engage in such production without being categorised as an unincorporated enterprise but any production for sale (and any withdrawals from a business by a self-employed person) have already been included in PY050(G)/(PY050N).

Thus this item should include, e.g. the value of potatoes produced in the family garden and then consumed by the household, but not the value of any potatoes which are sold (or given) to a neighbour. The value of any sales should be classified as (monetary) self-employment income (any gifts are inter-household transfers in kind and therefore excluded from the EU-SILC). In fact any remunerative hobbies – for example, pigeon keeping, water-colour painting – should be regarded as a form of casual self-employment and any profits should be recorded as such.

There are very few goods other than fruit and vegetables which EU households produce and consume themselves. Some hobbies, for example weaving cloth, painting pictures, may result in additional goods for the household to consume which otherwise they might have bought, but the income element is likely to be very small once all costs have been deducted. Indeed, there is a fine line between regarding such activities purely as leisure or as productive. This may also be true of fruit and vegetable growing.

Although for some households in some countries, the ability to produce and consume their own garden produce may appear to make a real contribution to their economic well-being, even then it is debatable whether the level of profit is significant once the cost of all inputs has been deducted. Note that if the household is in fact running a farm or small-holding then the value of any of their own produce which they consume themselves will already have been taken into account in the measurement of their (monetary) income from self-employment.

In principle the valuation of goods produced for own consumption is relatively straightforward. Respondents are usually asked to provide information on the quantities of each type of good consumed and a market price is then applied. However, this involves additional data collection and office editing.

For some EU Member States and for some categories of households, the value of goods produced for own consumption doesn't constitute a significant component of the income. In this case, related information does not need to be collected for this categories of households and reported in EU-SILC variable. The importance of this component should be assessed on objective and empirical basis using for instance HBS results or National Accounts. This should be documented in the Quality Report.

Personal Data (P-file)

# Personal Data (P-file)

# PB010: Year of the survey

BASIC DATA (Basic personal data) Cross-sectional and longitudinal

Reference period: current

Unit: all current household members aged 16 and over

Mode of collection: interviewer

### Values

year (4 digits)

# PB020: Country

BASIC DATA (Basic personal data) Cross-sectional and longitudinal

Reference period: constant

Unit: all current household members aged 16 and over

Mode of collection: frame

Va	alues	
	BE	Belgique/Belgïe
	BG	Bulgaria
	CZ	Czech republic
	DK	Denmark
	DE	Deutschland
	EE	Estonia
	IE	Ireland
	GR	Elláda
	ES	España
	FR	France
	IT	Italia
	CY	Cyprus
	LV	Latvia
	LT	Lithuania
	LU	Luxembourg
	HU	Hungary
	MT	Malta
	NL	Nederland
	AT	Österreich
	PL	Poland
	PT	Portugal
	RO	Romania
	SI	Slovenia
	SK	Slovak republic
	FI	Suomi
	SE	Sverige
	UK	United Kingdom
	СН	Switzerland
	HR	Croatia
	IS	Iceland
	NO	Norway
	TR	Turkey

# **PB030: Personal ID**

BASIC DATA (Basic personal data)

Cross-sectional and longitudinal

Reference period: constant

Unit: all current household members aged 16 and over Mode of collection: frame, register or interviewer

$V_{a}$	lue	c
va	HIE	`

ID number

See construction in chapter 'General description'

# PB040: Personal cross-sectional weight

[Personal cross-sectional weight (all household members aged 16 and over)]

BASIC DATA (Basic personal data)

Cross-sectional

Reference period: constant

Unit: all current household members aged 16 and over

Mode of collection: constructed

1	Values							
	0+	(format 2.5)	weight (see bellow the required format)					
F	lags							
	1	filled						

See construction of weights in chapter 'Introduction'

#### Required format

In principle, according to the regulation, these weights had to be coded with 2 integers and 5 decimals. But, that cause problems if the weights have at least 3 integers. That's why, in practice, personal cross-sectional weights will be coded with at least one integer and 5 decimals.

# PB050: Personal base weight

#### [Personal base weight (all household members aged 16 and over)]

BASIC DATA (Basic personal data)

Longitudinal

Reference period: constant

Unit: all current household members aged 16 and over

Mode of collection: constructed

V	Values							
	0 (fo	rmat 2.5)	weight (see the bellow required format)					
F	lags							
	1	filled						

See construction of weights in chapter 'Introduction'

The personal base weight can have the value 0, namely for non panel persons.

#### Required format

In principle, according to the regulation, these weights had to be coded with 2 integers and 5 decimals. But, that cause problems if the weights have at least 3 integers. That's why, in practice, personal base weights will be coded with at least one integer and 5 decimals.

# PB060: Personal cross-sectional weight for selected respondent

BASIC DATA (Basic personal data)

Cross-sectional

Reference period: constant

Unit: all current household members aged 16 and over

Mode of collection: constructed

V	Values							
	0+ (f	format 2.5) weight (see below the required format)						
F	lags							
	1	filled						
	-3	not selected respondent						

See construction of weights in chapter 'Introduction'

#### Required format

In principle, according to the regulation, these weights had to be coded with 2 integers and 5 decimals. But, that cause problems if the weights have at least 3 integers. That's why, in practice, personal cross-sectional weights will be coded with at least one integer and 5 decimals.

# PB070: Personal design weight for selected respondent

BASIC DATA (Basic personal data) Cross-sectional and longitudinal

Reference period: constant

Unit: all current household members aged 16 and over

Mode of collection: constructed

Values	Values						
0+ (fo	0+ (format 2.5) weight						
Flags							
1	filled						
-3	not selected respondent						

See construction of weights in chapter 'Introduction'

#### Required format

In principle, according to the regulation, these weights had to be coded with 2 integers and 5 decimals. But, that cause problems if the weights have at least 3 integers. That's why, in practice, personal design weights will be coded with at least one integer and 5 decimals.

# PB080: Personal base weight for selected respondent

BASIC DATA (Basic personal data)

Longitudinal

Reference period: constant

Unit: all current household members aged 16 and over

Mode of collection: constructed

Values	Values							
0 (fo	ormat 2.5) weight (see bellow the required format)							
Flags								
1	filled							
-2	not applicable (country does not use the selected respondent model)							
-3	not selected respondent (if country uses the selected respondent model)							

See construction of weights in chapter 'Introduction'

The personal base weight can have the value 0, namely for non panel persons.

#### Required format

In principle, according to the regulation, these weights had to be coded with 2 integers and 5 decimals. But, that cause problems if the weights have at least 3 integers. That's why, in practice, personal base weights will be coded with at least one integer and 5 decimals.

# PB090: Day of the personal interview

BASIC DATA (Basic personal data) Cross-sectional and longitudinal

Reference period: current

Unit: all current household members aged 16 and over

Mode of collection: interviewer

Values					
	1 - 31	day			
Fla	ags				
	1	filled			
	-1	missing			

If the data is extracted from registers the date corresponds to the date of the extraction.

# **PB100:** Month of the personal interview

BASIC DATA (Basic personal data) Cross-sectional and longitudinal

Reference period: current

Unit: all current household members aged 16 and over

Mode of collection: interviewer

Values					
	1 - 12	month			
Fla	ags				
	1	filled			
	-1	missing			

If the data is extracted from registers the date corresponds to the date of the extraction.

# PB110: Year of the personal interview

BASIC DATA (Basic personal data) Cross-sectional and longitudinal

Reference period: current

Unit: all current household members aged 16 and over

Mode of collection: interviewer

Values	Values							
year	year (4 digits)							
Flags								
1	filled							
-1	missing							

If the data is extracted from registers the date corresponds to the date of the extraction.

# PB120: Minutes to complete the personal questionnaire

#### [Number of minutes to complete the personal questionnaire]

BASIC DATA (Basic personal data) Cross-sectional and longitudinal

Reference period: current

Unit: selected respondent (where applies) or all current household members aged 16 and

over

*Mode of collection: interviewer* 

Values					
	1 – 90	minutes			
F	lags				
	1	filled			
	-1	missing			
	-2	not applicable (information only extracted from registers)			

# PB130: Month of birth

BASIC DATA (Basic personal data)

Cross-sectional and longitudinal

Reference period: constant

Unit: all current household members aged 16 and over Mode of collection: personal interview, proxy or register

Values				
	1 - 12	month		
F	lags			
	1	filled		
	-1	missing		

# PB140: Year of birth

BASIC DATA (Demographic data)

Cross-sectional and longitudinal

Reference period: constant

Unit: all current household members aged 16 and over Mode of collection: personal interview, proxy or register

Va	Values								
	year (4 digits)								
Fla	ags								
	1	filled							
	-1	missing							

Note: If the person is born before 1890 the variable will be filled in with the value 1890

# **PB150: Sex**

BASIC DATA (Demographic data) Cross-sectional and longitudinal

Reference period: constant

Unit: all current household members aged 16 and over Mode of collection: personal interview, proxy or register

Values					
	1	Male			
	2	Female			
F	lags				
	1	filled			
	-1	missing			

### PB160: Father ID

 $BASIC\ DATA\ (Demographic\ data)$ 

Cross-sectional and longitudinal

Reference period: current

Unit: all current household members aged 16 and over Mode of collection: personal interview, proxy or registers

#### Values

Personal Id of father

# Flags

- 1 filled
- -1 missing
- -2 not applicable (father is not a household member)

See RB220

### PB170: Mother ID

 $BASIC\ DATA\ (Demographic\ data)$ 

Cross-sectional and longitudinal

Reference period: current

Unit: all current household members aged 16 and over Mode of collection: personal interview, proxy or registers

#### Values

Personal Id of mother

# Flags

- 1 filled
- -1 missing
- -2 not applicable (mother is not a household member)

See RB230

# PB180: Spouse/partner ID

BASIC DATA (Demographic data)

Cross-sectional and longitudinal

Reference period: current

Unit: all current household members aged 16 and over Mode of collection: personal interview, proxy or registers

### Values

Personal Id of spouse/partner

#### Flags

- 1 filled
- -1 missing
- -2 not applicable (person has no spouse/partner or spouse/partner is not a household member)

See RB240

#### PB190: Marital status

BASIC DATA (Demographic data)

Cross-sectional and longitudinal

Reference period: current

Unit: all current household members aged 16 and over Mode of collection: personal interview, proxy or registers

Values		
	1	Never married
	2	Married
	3	Separated
	4	Widowed
	5	Divorced
F	Flags	
	1	filled
	-1	missing

Marital status is the conjugal status of each individual in relation to the marriage laws of the country (i.e. de jure status). It therefore does not necessarily correspond with the actual situation of the household in terms of co-habitation, arrangements, etc.

Some countries have a legal framework for registering partnerships (in most countries these are same-sex partnership and they have a legal status parallel to married couples). Such information has also to be treated in a harmonised way and it is proposed to treat them as married and classified them under code 2 when the relation still exists, else as 3-5 as appropriated (legal separation or death of one of partners or so on).

## **PB200: Consensual Union**

BASIC DATA (Demographic data)

Cross-sectional and longitudinal

Reference period: current

Unit: all current household members aged 16 and over Mode of collection: personal interview, proxy or registers

Values	
1	yes, on a legal basis
2	yes, without a legal basis
3	no
Flags	
1	filled
-1	missing

This variable takes into account the consensual unions with or without a legal basis, where the consensual union with a legal basis <u>includes both the married couples and the registered partners.</u>

For answer modalities 1 "yes, on a legal basis" and 2 "yes, without a legal basis", both partners have to live in the same household. Modality 1 corresponds to married, legal spouse or registered partner, while modality 2 corresponds to "de facto" partner.

# PB210: Country of birth

BASIC DATA (Demographic data)

Cross-sectional

Reference period: constant

Unit: all current household members aged 16 and over Mode of collection: personal interview, proxy or registers

Values	Values		
Coun	Country code (See annex 2)		
Flags			
1	filled		
-1	missing		

Country of birth is defined as the country of residence of the mother at the time of birth.

To be in line with the guidelines for the implementation of the core variables in EU social surveys, this variable country of birth shall refer to the <u>current (at the time of survey) national boundaries</u> and not to the boundaries in place at the time of birth.

To apply this definition, information only on the 'country' of birth may be insufficient. More detailed information on the locality could be needed if the boundaries of the country have changed. When data are collected by interview, additional questions can be asked to the respondent. When data are derived from administrative registers, it is more difficult to ensure that the recommendation is followed. If detailed information on the place of birth exists in the register, country of birth should be re-coded so that the place of birth is coded according to the current national borders.

In the case of countries that no longer exist (such as parts of the former Soviet Union or others), the present-day borders of the country should be used.

If a person was born in a place that currently belongs to a country different from the country that the place belonged to at the time of birth, the 'country' which the place belonged to currently (at the time of the survey) should be recorded.

An important exception concerns people born in a place which is now outside the national territory but who feel that they have always been a national citizen, the country of birth should be recorded as according to this citizenship. For instance, concerning Finnish citizens born in former Finnish territories before the end of the 2nd World War, which currently belong to Russia, the country of birth should be recorded as Finland.

# PB220A: Citizenship 1 PB220B: Citizenship 2

BASIC DATA (Demographic data)

Cross-sectional

Reference period: current

*Unit: all current household members aged 16 and over Mode of collection: personal interview, proxy or registers* 

V	Values		
	Country code (See annex 2)		
F	lags		
	1	filled	
	-1	missing	
	-2	only PB220B: not applicable (no second citizenship)	

Citizenship is defined as the particular legal bond between the individual and his/her State acquired by birth or naturalisation, whether by declaration, choice, option, marriage or other means according to the national legislation. It generally corresponds to the country issuing the passport.

When a person has multiple citizenship, the two main citizenships should be collected. For persons with multiple citizenship and where one of the citizenship is the one of the country of residence, that citizenship should be coded.

People that do have only one citizenship will be coded as -2 for PB220B.

Citizenship shall refer to the <u>current</u> (at the time of survey) national boundaries and not the boundaries at the time of the reference period. To apply this definition, information only on the citizenship may be insufficient. More detailed information on the current country is needed if the boundaries of the country have been changed. In the case of citizenships that no longer exist, the present-day borders of the country should be used.

# PE010: Current education activity

EDUCATION (Current education and highest ISCED level attained)

Cross-sectional

Reference period: current

*Unit: all current household members aged 16 and over Mode of collection: personal interview, proxy or registers* 

Values		
	1	in education
T.1	2	not in education
F	lags	
	1	filled
	-1	missing

The concept is whether the person is currently participating in an educational program. An educational program, as defined under ISCED-97, is "an array or sequence of educational activities, which are organised to accomplish a pre-determined objective or a specified set of educational tasks" (UNESCO, 1999, p. 5).

The person's participation in this programme may be on a full-time attendance basis, a part-time attendance basis or by correspondence course.

This variable only covers the regular education system (formal education, including schools, colleges and universities).

Formal education is defined as education and training with the following characteristics:

- purpose and format are predetermined.
- provided in the system of schools, colleges, universities and other educational institutions
- it normally constitutes a continuous ladder of education.
- it is structured in terms of learning objectives, learning time and learning support
- it is normally intended to lead to a certification recognised by national authorities qualifying for a specific education/programme).
- corresponds to the programmes covered by the UOE-questionnaires.

In the interviewee is enrolled as a student or an apprentice in a programme within the regular education system the answer will be 1.

This includes modules (short programmes/courses) which may be part of a longer regular education programme and are taken and completed, giving to their graduates the corresponding academic credit, independent of whether the person continues to complete the full programme or not. The level of the short programmes/courses will be the same as the programme of which they form part.

For apprentices who are in a period of only 'on-the-job training' or alternate 'on-the-job' and 'in-school learning' within the framework of an alternate (e.g. dual) programme, the answer is code 1, since the person is enrolled in a qualifying programme.

Persons who have begun a program of study, who are not taking part at present because of a semester or summer break, but who are intending to return to education after a semester or summer break should be coded as 'in education'.

The following adult programmes can not be classified using ISCED-97:

- vocational education organized by a firm without leading to an official award or certification
- any non-formal education without leading to an official award or certification
- individual cultural activities for leisure

# PE020: ISCED level currently attended

EDUCATION (Current education and highest ISCED level attained)

Cross-sectional

Reference period: current

Unit: all current household members aged 16 and over Mode of collection: personal interview, proxy or registers

Values	
0	pre-primary education
1	primary education
2	lower secondary education
3	(upper) secondary education
4	post-secondary non tertiary education
5	first stage of tertiary education (not leading directly to an advanced research qualification)
6	second stage of tertiary education (leading to an advanced research qualification)
Flags	
1	filled
-1	missing
-2	not applicable (PE010 not $= 1$ )

This variable is to be recorded for any person currently in education. The education could be full-time or part-time attendance or by correspondence course and the person needs not necessarily see their main activity as 'in education'.

Level is recorded according to the International Standard Classification of Education 1997 and consists of only levels without destination or orientation.

If the respondent is enrolled in several educational programmes, he or she should only give information on the most higher educational programme.

# PE030: Year when highest level of education was attained

EDUCATION (Current education and highest ISCED level attained)

Cross-sectional

Reference period: current

Unit: all current household members aged 16 and over Mode of collection: personal interview, proxy or registers

Values			
year (	year (4 digits)		
Flags			
1	filled		
-1	missing		
-2	not applicable (the person has never been in education)		

The year when the highest level of education was attained will be specified.

See guidelines for PE040.

For a person who has never been in education (and/or is illiterate), the variable should remain empty with the flag -2.

# PE040: Highest ISCED level attained

EDUCATION (Current education and highest ISCED level attained)

Cross-sectional and longitudinal

Reference period: current

Unit: all current household members aged 16 and over Mode of collection: personal interview, proxy or registers

Values	
0	pre-primary education
1	primary education
2	lower secondary education
3	(upper) secondary education
4	post-secondary non tertiary education
5	first stage of tertiary education (not leading directly to an advanced research qualification)
6	second stage of tertiary education (leading to an advanced research qualification)
Flags	
1	filled
-1	missing
-2	not applicable (the person has never been in education)

Educational attainment of a person is the highest level of an educational programme the person has successfully completed and the study field of this programme. The educational classification to be used is the International Standard Classification of Education (ISCED 1997) coded according to the seven ISCED-97 categories. The basic unit of classification in ISCED-1997 is the educational programme. Educational programmes are defined "on the basis of their educational content as an array or sequence of educational activities, which are organised to accomplish a pre-determined objective or a specified set of educational tasks". ISCED-1997 provides an improved set of criteria for assigning individual programmes to 'levels' of education. The more practical steps for the coding according to ISCED-97 will be found in the ISCED-97 manual published by UNESCO in November 1997.

The expression 'level successfully completed' must be associated with obtaining a certificate or a diploma when there is a certification. In cases where there is no certification, successful completion must be associated with full attendance or acquired competences to access the upper level.

When determining the highest level, both general and vocational education/training should be taken into consideration.

Persons who have not completed their studies should be coded according to the highest level they have completed.

A person who attended primary school but has never finished it (and did not acquire the competences to access the upper level) should be coded 0 with the flag 1.

For a person who has never been in education (and/or is illiterate), the variable should remain empty with the flag -2.

#### PH010: General health

HEALTH (Health, including health status and chronic illness or condition)

Cross-sectional and longitudinal

Reference period: current

Unit: selected respondent (where applies) or all current household members aged 16 and

over

Mode of collection: personal interview (proxy as an exception) or registers

Val	lues	
	1	very good
4	2	good
3	3	fair
4	4	bad
4	5	very bad
Fla	gs	
	1	filled
-	-1	missing
-	-3	not selected respondent

The measurement of self-perceived health (SPH) is, by its very nature, subjective. The notion is restricted to an assessment coming from the individual and not from anyone outside that individual, whether an interviewer, health care worker or relative. SPH is influenced by impressions or opinions from others, but is the result after these impressions have been processed by the individual relative to their own beliefs and attitudes.

The reference is to health in general rather than the present state of health, as the question is not intended to measure temporary health problems. It is expected to include the different dimensions of health, i.e. physical, social and emotional function and biomedical signs and symptoms. It omits any reference to an age as respondents are not specifically asked to compare their health with others of the same age or with their own previous or future health state. It is not time limited.

Five answers categories are proposed. Two (very good and good) are at the upper end of the scale and two (bad and very bad) are at the lower. It is also important to note that the intermediate category 'fair' should be translated into an appropriately neutral term (nor good, nor bad), as far as possible keeping in mind cultural interpretations, in the various languages.

For this question a proxy is not allowed.

It is recommended to implement the question as in the EHIS:

HS.1 How is your health in general? Is it...

#### **RUNNING PROMPT**

•	very good	$\Box$ 1
•	good	$\square$ 2
•	fair	$\square$ 3
•	bad	□ 4
•	very bad	□ 5
(and po	•	
•	don't know	□ 8
•	refusal	□ 9)

# PH020: Suffer from any a chronic (long-standing) illness or condition

HEALTH (Health, including health status and chronic illness or condition)

Cross-sectional and longitudinal

Reference period: current

Unit: selected respondent (where applies) or all current household members aged 16 and over

Mode of collection: personal interview (proxy as an exception) or registers

Va	alues	
	1	yes
	2	no
Fla	ags	
	1	filled
	-1	missing
	-3	not selected respondent

It is necessary to keep in mind that the recommended wording contains 'alternatives'. For instance:

- 'chronic' or 'longstanding' should be chosen according to what is 'best understood' in a country/language.
- it is intended to ask if people 'have' a chronic condition, not if they really suffer from it. But it seems that in some countries/languages it would be strange to use the word 'have' and that they 'suffer' means the same as 'have'.
- 'health problem' seems not to be understood in some countries/languages and therefore 'illness or condition' is the alternative; in any case, only problems of ill-health shall be considered but not solely diseases (e.g., pain).

The main characteristics of a chronic condition are that it is permanent and may be expected to require a long period of supervision, observation or care; temporary problems are not of interest.

Rather than adding further details to the question wording, interviewers should be instructed to be as inclusive as possible in answering to PH020. This means that the following would all be included:

- problems that are seasonal or intermittent, even where they 'flare up' for less than six months at a time;
- problems not seem by the respondent as very serious (hay fever again); in particular in case the chronic diseases involves limitations in activities the item on severity or limitation would 'screen out' less serious problems at the second stage;
- problems that have not been diagnosed by a doctor ( to exclude these would mean permitting those with better access to medical services to declare more problems);
- problems that the respondent treats him self or herself (e.g. with over-the-counter drugs);
- problems that have lasted (or recurred), or are expected to last (recur) over a six-month-period or longer.
- consequences of injuries/accidents, consequences of congenital conditions, birth defects etc.; if necessary this inclusion can be explained to the interviewee, e.g. on his

request; however, The words "disability, handicap, impairment" should not be included in the question as that it is being asked about in PH030 (as "limitations") and it might on the opposite result in catching in PH020 already only these persons with disability and handicap (people with only "light" chronic diseases would then not report their illness).

For this question a proxy should be limited as much as possible but is allowed.

It is recommended to implement the question as in the EHIS:

HS.2 Do you have any longstanding illness or [longstanding]<sup>1</sup> health problem? [By longstanding I mean illnesses or health problems which have lasted, or are expected to last, for 6 months or more]<sup>1</sup>.

• Yes	□ 1
• No	$\Box$ 2
(and possibly:	
<ul> <li>don't know</li> </ul>	□ 8
<ul> <li>refusal</li> </ul>	□ 9)

\_

<sup>&</sup>lt;sup>1</sup> This word / sentence is not part of the MEHM and shall not be considered as included in this question. However, according to the remarks that were received, in some languages it may be necessary to include them. In these languages, it would be useful to test first the effect of this addition to the question. Depending on results, the word / sentence may be added to the national question or only included in the instructions for the interviewers, etc. However, this has to be done very soon, as the coordination with SILC shall be ensured within a very short time.

## PH030: Limitation in activities because of health problems

[Limitation in activities people usually do because of health problems for at least the last 6 months]

HEALTH (Health, including health status and chronic illness or condition)

Cross-sectional and longitudinal

Reference period: current

Unit: selected respondent (where applies) or all current household members aged 16 and

Mode of collection: personal interview (proxy as an exception) or registers

Va	alues	
	1 2	yes, strongly limited yes, limited
	3	no, not limited
Fla	ags	
	1	filled
	-1	missing
	-3	not selected respondent

The person's self-assessment of whether they are hampered in their usual activity, as "activities people usually do", by any ongoing physical or mental health problem, illness or disability (as for PH020 consequences of injuries/accidents, congenital conditions and birth defects, etc., shall be covered).

An activity is defined as: 'the performance of a task or action by an individual' and thus activity limitations are defined as 'the difficulties the individual experience in performing an activity'. Limitations should be due to a health-related cause and it is not meant to measure limitations due to financial, cultural or other none health-related causes. People with longstanding limitations due to health problems have passed through a process of adaptation which may have resulted in a reduction of their activities. To identify existing limitations a reference is necessary and therefore the activity limitations are assessed against a generally accepted population standard, relative to cultural and social expectations by referring only to activities people usually do. This is a self-perceived health question and gives no restrictions by culture, age, gender or the subjects own ambition.

Specification of health concepts (e.g. physical and mental health) should be avoided.

The purpose of the instrument is to measure the presence of long-standing limitations, as the consequences of these limitations (e.g. care, dependency) are more serious.

The period of at least the last 6 months is relating to the duration of the activity limitation and not of the health problem. The answer to this question is yes (1 or 2) if the person is currently limited and has been limited in activities for at least the last 6 months. New limitations which have not yet lasted 6 months but are expected to continue for more than 6 months shall not be taken into consideration (opposite to PH020). The reason is that for long-standing diseases or health problems it is in general established from medical knowledge about diseases/illness whether they are longstanding or not. If you are diagnosed having, e.g., diabetes, you know from the first day that it is not curable, so long-standing. At this stage you also know that it may be controlled or not so it might have consequences or not but you don't know yet about it. Consequently for the consequences it is a matter of experience from the individual, whether

his or her diabetes will have disabling consequences. Only past experience can provide the answer.

In the response categories, a distinction is made in three levels of severity (yes strongly limited, yes limited, no not limited).

If the problem is seasonal or recurring the interviewee has to think in general over the at least the last six months (or coming six months if condition has just developed), would you say it has limited you strongly, somewhat or not at all.

For this question a proxy should be limited as much as possible but is allowed.

It is recommended to implement the question as in the EHIS:

HS.3 For at least the past 6 months, to what extent have you been limited because of a health problem in activities people usually do?

Would you say you have been ...

RI	IN	IN	ING	PR	ON	ЛРТ

•	severely limited	$\Box$ 1
•	limited but not severely or	$\square$ 2
•	not limited at all?	□ 3
((and po	ossibly:	
•	don't know	□ 8
•	refusal	□ 9)

This supposes to adapt the terms of the SILC questions by changing "strongly" into "severely".

#### PH040: Unmet need for medical examination or treatment

[Unmet need for medical examination or treatment during the last 12 months]

HEALTH (Access to health care)

Cross-sectional

Reference period: last twelve months

Unit: selected respondent (where applies) or all current household members aged 16 and

over

Mode of collection: personal interview (proxy as an exception) or registers

Values	
1	yes, there was at least one occasion when the person really needed examination or treatment but did not
2	no, there was no occasion when the person really needed examination or treatment but did not
Flags	
1	filled
-1	missing
-3	not selected respondent

There were very large differences between the EU countries in terms of the proportion of people with free access to health care or medically. In countries where all or nearly all persons are covered, access to health care may still be limited by the existence of waiting lists and other forms of rationing.

Concerning medical examination, the aim of the variable is to capture the person's own assessment of whether he or she needed to consult a medical doctor, but was not able to. In principle, there is no need to explicitly exclude General Practitioners (GP). Actually, the question is not aimed at assessing the access to specialists only for which there is a specific question in the every 5 years European Health Interview Survey (EHIS question HC.14) but in general to examination by medical doctors (GPs, specialists, etc.). Otherwise, the magnitude of the problem of access to medical examination, which concerns potentially any type of medical examination, would be underestimated. In addition the problems listed in PH050 refer to any doctor in numerous Member States. On the other hand, it should be clear that only real needs of medical examination are taken into account.

As a summary, the question aims at covering "core" need as regard to medical care.

Regarding the inclusion of other types of treatment, one strategy is to use a form of wording to make clear that we want to include what is regarded as mainstream medicine in the country, i.e. the kinds of things covered by medical insurance. The key concern is with restrictions in access to what would generally be regarded in the society as appropriate treatment for a health condition. Countries will differ in terms of the extent to which specialists such as chiropractors, specialists in acupuncture and so on, have become 'mainstream'. This may be best accomplished by using an interviewer prompt.

In order to ensure that only serious needs are taken into account, it is suggested adding in the question the term "when you really needed ...".

It also suggested to add the word 'on your own behalf' to make sure that the consultation/treatment was on the person's own behalf rather than on behalf of children,

spouse, etc. If this is not clarified, any comparison between men and women or between parents and non-parents might be confounded.

As a model to be adapted to the current PH040, the question on unmet need for specialist consultation in the EHIS is as follows (the terms in italics refers to specialists and should be deleted or adapted):

HC.14 Was there any time during the past 12 months when you really needed to consult a *specialist* but did not?

<ul> <li>Ye</li> </ul>	s, there was at least one occasion	$\Box$ 1
• No	, there was no occasion	$\square$ 2 $\rightarrow$ GO TO HC.16/PH060
(and possibl	ly:	
• doi	n't know	$\square$ 8 $\rightarrow$ GO TO HC.16/PH060
<ul> <li>ref</li> </ul>	usal	$\square$ 9 $\rightarrow$ GO TO HC.16/PH060)

# PH050: Main reason for unmet need for medical examination or treatment

HEALTH (Access to health care)

Cross-sectional

Reference period: last twelve months

Unit: selected respondent (where applies) or all current household members aged 16 and

Mode of collection: personal interview (proxy as an exception) or registers

Values	
1	Could not afford to (too expensive)
2	Waiting list
3	Could not take time because of work, care for children or for others
4	Too far to travel/no means of transportation
5	Fear of doctor/hospitals/examination/ treatment
6	Wanted to wait and see if problem got better on its own
7	Didn't know any good doctor or specialist
8	Other reasons
Flags	
1	filled
-1	missing
-2	not applicable (PH040 not = 1)
-3	not selected respondent

This is a follow-up question to the previous one. It aims capture the dimension of restricted access to health care by including not only formal health care coverage (by insurance or universal coverage), but also restrictions due to rationing, waiting lists, the ability to afford care, and other reasons.

In the proposed classification for this item, option 2 (length of the waiting list) should be used for people who were actually on a waiting list and were not helped, for respondents who were discouraged from seeking care because of perceptions of the long waiting lists, as well as people who have 'applied' and are still waiting to see a medical specialist.

'Not covered by insurance' should be coded as 'could not afford to' if the respondent could not afford to pay for the treatment/examination himself or herself.

The issue on the perception of "Could not afford to (too expensive)" should be tackled in order to not include reaction about "too expensive" which are relative (more expensive than before, etc.) but relate only to the fact that the person could not pay the price, not having money enough for this. The fact that the price is not covered by an insurance fund is in particular an important element to be taken into account.

As a model to be adapted to the current PH050, the question on unmet need for specialist consultation in the EHIS is as follows (the terms in italics refers to specialists and should be deleted or adapted):

HC.15 What was the main reason for not consulting a <i>specialist</i> ?	
• Could not afford to (too expensive or not covered by the insurance fund)	□ 01
Waiting list, don't have the referral letter	$\square$ 02
<ul> <li>Could not take time because of work, care for children or for others</li> </ul>	$\square$ 03
<ul> <li>Too far to travel / no means of transportation</li> </ul>	□ 04
<ul> <li>Fear of doctor / hospitals / examination / treatment</li> </ul>	□ 05
<ul> <li>Wanted to wait and see if problem got better on its own</li> </ul>	□ 06
<ul> <li>Didn't know any good specialist</li> </ul>	□ 07
Other reason	$\square$ 08
(and possibly:	
• don't know	□ 98
<ul> <li>refusal</li> </ul>	□ 99)

#### PH060: Unmet need for dental examination or treatment

#### [Unmet need for dental examination or treatment during the last 12 months]

HEALTH (Access to health care)

Cross-sectional

Reference period: last twelve months

Unit: selected respondent (where applies) or all current household members aged 16 and

over

Mode of collection: personal interview (proxy as an exception) or registers

Values	
1 2	yes, there was at least one occasion when the person really needed dental examination or treatment but did not no, there was no occasion when the person really needed dental examination or treatment but did not
Flags	
1	filled
-1	missing
-3	not selected respondent

There were very large differences between the EU countries in terms of the proportion of people with free access to dental care. In countries where all or nearly all persons are covered, access to health care may still be limited by the existence of waiting lists and other forms of rationing.

The aim of the variable is to capture the person's own assessment of whether he or she needed to consult a dentist, but was not able to.

We would suggest adding the word 'personally' to make sure that the consultation/treatment was on the person's own behalf rather than on behalf of children. If this is not clarified, any comparison between men and women or between parents and non-parents might be confounded.

The same comments as for PH040 shall be considered.

# PH070: Main reason for unmet need for dental examination or treatment

HEALTH (Access to health care)

Cross-sectional

Reference period: last twelve months

Unit: selected respondent (where applies) or all current household members aged 16 and

Mode of collection: personal interview (proxy as an exception) or registers

Values	
1	Could not afford to (too expensive)
2	Waiting list
3	Could not take time because of work, care for children or for others
4	Too far to travel/no means of transportation
5	Fear of doctor(dentist)/hospitals/examination/ treatment
6	Wanted to wait and see if problem got better on its own
7	Didn't know any good dentist
8	Other reasons
Flags	
1	filled
-1	missing
-2	not applicable (PH060 not = 1)
-3	not selected respondent

This is a follow-up question to the previous one. It aims capture the dimension of restricted access to health care by including not only formal health care coverage (by insurance or universal coverage), but also restrictions due to rationing, waiting lists, the ability to afford care, and other reasons.

In the proposed classification for this item, option 4 (length of the waiting list) should be used for people who are discouraged from seeking care because of perceptions of the length of wait, as well as people who have 'applied' and are still waiting to see a dentist.

The same comments as for PH050 shall be considered.

## PL015: Person has ever worked

LABOUR INFORMATION (Basic labour information on current and past activity status)

Cross-sectional

Reference period: current

Unit: all current household members aged 16 and over Mode of collection: personal interview, proxy or registers

V	alues	
	1	yes
	2	no
F	lags	
	1	filled
	-1	missing
	-2	not applicable ( $PL031 = 1, 2, 3 \text{ or } 4$ )

Vacation jobs taken by students, from which they return to studies or to other non-work situations are disregarded, as well as any other casual job undertaken from time to time. Part-time jobs the person may have engaged in while still in school or university are not included. But if the person works or worked in a formal regular work, during his/her studies, this work should be considered.

Normally, having ever worked refers to persons who worked on full or partial time basis for at least 6 months.

# PL020: Actively looking for a job

#### [Actively looking for a job in previous 4 weeks]

LABOUR INFORMATION (Basic labour information on current activity status)

Cross-sectional and longitudinal

Reference period: previous 4 weeks

Unit: all current household members aged between 16 and the standard retirement age

Mode of collection: personal interview, proxy or registers

Value	es
1	yes
2	no
Flags	
1	filled
-1	missing
-2	not applicable (PL031 = $1, 2, 3$ or $4$ or older than the standard retirement age)

This variable only applies to persons not currently working, where "working" refers to the self-defined status as recorded in PL031.

However, people aged more than the standard retirement age are not concerned by this variable. In this case, the variable is coded as -2.

The period of reference for this variable is the last four weeks ending with the reference week. The answer will be 'yes' if the person is actively looking for a job in previous four weeks.

The answer 'yes' should be recorded only if the person has used an active method for looking for a job. Passive methods should be coded 'no'.

Education and training are considered as ways of improving employability but not as methods of seeking work.

Persons who found a job to start later, i.e. within a period of at least 3 months should be coded 'yes'.

#### Active methods for looking for a job:

- having been in contact with a public employment office to find work, whoever took the initiative (renewing registration for administrative reasons only is not an active step),
- having been in contact with a private agency (temporary work agency, firm specialising in recruitment, etc.) to find work,
- applying to employers directly,
- asking among friends, relatives, unions, etc., to find work,
- placing or answering job advertisements,
- studying job advertisements,
- taking a recruitment test or examination or being interviewed,
- looking for land, premises or equipment,
- applying for permits, licences or financial resources.

#### PL025: Available for work

#### [Are you available for work in the next 2 weeks]

LABOUR INFORMATION (Basic labour information on current activity status)

Cross-sectional and longitudinal

Reference period: current

Unit: all current household members aged 16 and over Mode of collection: personal interview, proxy or registers

Values	
1	yes
2	no
Flags	
1	filled
-1	missing
-2	not applicable (PL020 not equal 1)

If the person is currently available for work, i.e. were available for paid employment or selfemployment before the end of the two weeks following the reference week.

'Currently available' means that if a job were found at the time of the interview, the person would be able to start working within two weeks. Testing for availability in the two weeks after the interview is considered more appropriate than testing during the reference week, because some persons may be unavailable for work during the reference week due to obstacles that might have been overcome had they known that a job was available to them.

Persons who found a job to start later, i.e. within a period of at least 3 months should be coded 'yes'.

#### PL031: Self-defined current economic status

LABOUR INFORMATION (Basic labour information on current activity status and on current job)

Cross-sectional and longitudinal

Reference period: current

Unit: all current household members aged 16 and over Mode of collection: personal interview, proxy or registers

Values	
1	Employee working full-time
2	Employee working part-time
3	Self-employed working full-time (including family worker)
4	Self-employed working part-time (including family worker)
5	Unemployed
6	Pupil, student, further training, unpaid work experience
7	In retirement or in early retirement or has given up business
8	Permanently disabled or/and unfit to work
9	In compulsory military community or service
10	Fulfilling domestic tasks and care responsibilities
11	Other inactive person
Flags	
1	filled
-1	missing

This variable replaces, from the 2009 operation onwards, the variable PL030 defined in the EU-SILC Regulation<sup>1</sup>

#### The self-declared current 'main activity status'

The concept of 'current' implies that any definitive changes in the activity situation are taken into account. For instance, if a person has lost a job or has retired recently, or the activity status has changed otherwise in a definitive manner, then the situation as of the time of the interview should be reported. In this sense, 'current' overrides any concept of averaging over any specific reference period.

The target variable captures **the person's own perception** of their main activity at present. It differs from the ILO concept to the extent that people's own perception of their main status differs from the strict definitions used in the ILO definitions. For instance, many people who would regard themselves as full-time students or homemakers may be classified as ILO-employed if they have a part-time job. Similarly, some people who consider themselves 'unemployed' may not meet the strict ILO criteria of taking active steps to find work and being immediately available.

<sup>&</sup>lt;sup>1</sup> Agreement during the Living Conditions Working Group meeting in June 2008 that the variable PL030 will be replaced by the variable PL031 with slightly different answering categories in order to harmonise labour variables. In 2010, the LC WG agreed from the 2011 operation onwards to suppress PL030 and to keep only PL031.

The self-declared main activity status is, in principle, determined on the basis of the most time spent, but no criteria have been specified explicitly.

If the person combines different part-time jobs as employee leading to an equivalent full-time work, the person should consider his/herself as employee working full time (modality 1). The same holds if the person has a main job as employee and an additional "small" (in terms of hours) second job as self-employed, both jobs being remunerated and leading together to a full-time equivalent.

#### Work

"Work" means any work for pay or profit. Pay includes cash payments or "payment in kind" (payment in goods or services rather than money).

Self-employed persons with a business, farm or professional practice are also considered to be working if one of the following applies:

- A person works in his own business, professional practice or farm for the purpose of earning a profit, even if the enterprise is failing to make a profit.
- A person spends time on the operation of a business, professional practice or farm even if no sales were made, no professional services were rendered, or nothing was actually produced (for example, a farmer who engages in farm maintenance activities; an architect who spends time waiting for clients in his/her office; a fisherman who repairs his boat or nets for future operations; a person who attends a convention or seminar).
- A person is in the process of setting up a business, farm or professional practice; this
  includes the buying or installing of equipment, and ordering of supplies in preparation for
  opening a new business.
- An unpaid family worker is said to be working if the work contributes directly to a business, farm or professional practice owned or operated by a related member of the same household.

#### Seasonal workers

During the off-season, seasonal workers cannot be considered as having a formal attachment to their high-season job— because they do not continue to receive a wage or salary from their employer although they may have an assurance of return to work.

#### Maternity and paternity leave

Maternity leave is first given to the mother (but may include the leave of the father in the case of a transfer of the entitlements) and corresponds to the compulsory period of the leave stipulated by national legislation to ensure that mothers before and after childbirth have sufficient rest, or for a period to be specified according to national circumstances.

People in maternity leave should always be considered as working.

The idea of having an additional category in the national questionnaire is seen as a good practice.

#### Parental leave

Parental leave can be taken either by the mother or the father and is the interruption of work in case of childbirth or to bring up a child of young age. It corresponds to the period when parents receive "parental leave benefit". People in full-time parental leave should be treated as not working.

#### Layoffs

A person on lay-off is one whose written or unwritten contract of employment, or activity, has been suspended by the employer for a specified or unspecified period at the end of which the person concerned has a recognised right or recognised expectation to recover employment with that employer.

Lay-offs are classified as working if they receive  $\geq 50\%$  of their wage or salary from their employer or have an assurance of return to work within a period of 3 months.

#### **Employee**

Employees are defined as persons who work for a public or private employer and who receive compensation in the form of wages, salaries, fees, gratuities, payment by results or payment in kind; non-conscripted members of the armed forces are also included.

An employee is usually working for an outside employer, but a son or daughter, for example, who is working in a parent's firm and receives a regular monetary wage is classified here as an employee.

- A woman looking after children in her own home is classified as an employee if she is paid to do this by the local authority (or any other public administration) and if she doesn't take any decision affecting the enterprise (e.g. schedules or number of children) but as an self employed if she does it privately.
- Apprentices, or trainees receiving remuneration should be considered as employees.
- Priests (of any kind of religion) are considered employees
- Persons who are simultaneously working in their own professional practice and for a public or private employer (e.g. doctors with their own cabinet and working in an hospital) should be classified according to the status where they work a more important number of hours.

#### Self-employed

*Self-employed* persons are defined as persons who work in their own business, professional practice or farm for the purpose of earning a profit.

Members of producers' co-operatives should be considered as self-employed if in the co-operative, each member takes part on an equal footing with other members in determining the organisation of production, sales and /or other work of the establishment, the investments and the distribution of the proceeds of the establishment amongst their members.

#### Family worker

Family workers are persons who help another member of the family to run an agricultural holding or other business, provided they are not considered as employees.

Persons working in a family business or on a family farm without pay should be living in the same household as the owner of the business or farm, or in a slightly broader interpretation, in a house located on the same plot of land and with common household interests. Such people frequently receive remuneration in the form of fringe benefits and payments in kind. However, this applies only when the business is owned or operated by the individual

themselves or by a relative. Thus, unpaid voluntary work done for charity should not be included.

This category includes:

- A son or daughter working in the parents' business or on the parents' farm without pay.
- A wife who assists her husband in his business, e.g. a haulage contractor, without receiving any formal pay.

#### Full-time/part-time

The distinction between full-time and part-time work should be made on the basis of a spontaneous answer given by the respondent. It is impossible to establish a more exact distinction between part-time and full-time work, due to variations in working hours between Member States and also between branches of industry. By checking the answer with the number of hours usually worked, it should be possible to detect and even to correct implausible answers, since part-time work will hardly ever exceed 35 hours, while full-time work will usually start at about 30 hours.

As mentioned here above, if the person combines different part-time jobs as employee leading to an equivalent full-time work, the person should consider his/herself as employee working full-time.

#### Retirement, early retirement

See RB170

## PL035: Worked at least 1 hour during the previous week

LABOUR INFORMATION (Basic labour information on current activity status and on current job)

Cross-sectional

Reference period: previous week

Unit: selected respondent (where applies) or all current household members aged 16 and over

Mode of collection: personal interview, proxy or registers

Value	es ·
1	Yes
2	No
Flags	
1	filled
-1	missing
-2	not applicable (person is not employee or MS has other source to calculate the gender pay gap)
-3	not selected respondent

A person is considered as **working** if he/she did any work for pay or profit during the reference week or if he/she was not working but had a job or business from which he/she was absent during the reference week.

#### Did any work for pay or profit during the reference week(LFS definition)

"Work" means any work for pay or profit during the reference week, even for as little as one hour. Pay includes cash payments or "payment in kind" (payment in goods or services rather than money), whether payment was received in the week the work was done or not. Also counted as working is anyone who receives wages for on-the-job training which involves the production of goods or services. Self-employed persons with a business, farm or professional practice are also considered to be working if one of the following applies:

- A person works in his own business, professional practice or farm for the purpose of earning a profit, even if the enterprise is failing to make a profit.
- A person spends time on the operation of a business, professional practice or farm even if no sales were made, no professional services were rendered, or nothing was actually produced (for example, a farmer who engages in farm maintenance activities; an architect who spends time waiting for clients in his/her office; a fisherman who repairs his boat or nets for future operations; a person who attends a convention or seminar).
- A person is in the process of setting up a business, farm or professional practice; this includes the buying or installing of equipment, and ordering of supplies in preparation for opening a new business. An unpaid family worker is said to be working if the work contributes directly to a business, farm or professional practice owned or operated by a related member of the same household. Unpaid family work is any task directly contributing to the operation of the family farm or business.

Conscripts performing some work for pay or profit during the reference week or not should always be coded 2.

Persons who works on their own small agriculture farm, who do not sell their products, but produce only for their own consumption

The classification as employment, and then code 1 should be ticked, depends on whether it falls within the production boundaries. When this production is included in national accounts, underlying employment must be identified. This depends on the relative quantitative importance of the production of agricultural products for own consumption in relation to the total supply of these products in a country (ESA 3.08)

# Was not working but had a job or business from which he/she was absent during the reference week (LFS definition)

(all the cases below are considered as "working")

#### **Employees**

A job exists if there is a definite and pre-scheduled arrangement between an employer and employee for regular work (that is, every week or every month), whether the work is full-time or part-time. The number of hours of work done each week or each month may vary considerably, but as long as some work is done on a regular and scheduled basis, a job is considered to exist.

#### Long-term absence from work.

If the total absence from work (measured from the last day of work to the day on which the paid worker will return) has exceeded three months then a person is considered to have a job only if he/she continues to receive (50% of the wage or salary from their employer. If this is not the case, they should be coded 2 in PL035.

#### Seasonal workers

During the off-season, seasonal workers cannot be considered as having a formal attachment to their high-season job— because they do not continue to receive a wage or salary from their employer although they may have an assurance of return to work. If they are not at work during the off-season, they should be coded 2 in PL035.

#### Maternity and paternity leave

Maternity leave is first given to the mother (but may include the leave of the father in the case of a transfer of the entitlements) and corresponds to the compulsory period of the leave stipulated by national legislation to ensure that mothers before and after childbirth have sufficient rest, or for a period to be specified according to national circumstances.

Parental leave can be taken either by the mother or the father and is the interruption of work in case of childbirth or to bring up a child of young age. It should correspond to the period when parents receive "parental leave benefit".

People in maternity leave should always be coded 1 in PL035.

People in full-time parental leave should be treated as a case of long term absence from work.

#### For unpaid family workers

The unpaid family worker can be said to have a job (code 1 in PL035) but not be at work if there is a definite commitment by the employer (a related household member) to accept his/her return to work and the total absence do not exceed a period of 3 months. In this point Eurostat diverges from the ILO recommendation. If the period of absence exceeds 3 months they should be coded 2 in PL035.

#### For self-employed persons

If self-employed persons are classified as being absent from work, then they are regarded as in employment (code 1 in PL035) only if they can be said to have a business, farm or professional practice. This is the case if one or more of the following conditions are met:

- Machinery or equipment of significant value, in which the person has invested money, is used by him or his employees in conducting his business.
- An office, store, farm or other place of business is maintained.
- There has been some advertisement of the business or profession by listing the business in the telephone book, displaying a sign, distributing cards or leaflets, etc.

If none of these conditions is met, then the person is regarded as not being in employment and therefore should be coded 2 in PL035.

#### Was not working because on lay-off

A person on lay-off is one whose written or unwritten contract of employment, or activity, has been suspended by the employer for a specified or unspecified period at the end of which the person concerned has a recognised right or recognised expectation to recover employment with that employer.

Lay-offs are classified as employed (code 1 in PL035) if they receive (50% of their wage or salary from their employer or have an assurance of return to work within a period of 3 months.

Lay-offs are classified as unemployed (code 2 in PL035) if they receive less than 50% of their wage or salary from their employer, don't have assurance of return to work or have an agreed date but this date falls after a period of 3 months and if they are "available to start work in 2 weeks" and have "search for a job in the last 4 weeks".

Persons who find a job to start in the future should always be coded 2 in PL035.

#### Slack work for technical or economic reasons

A person in slack work for technical or economic reasons should have a formal attachment to his/her job and should be coded 1 in PL035 .

# PL040: Status in employment

LABOUR INFORMATION (Basic labour information on current activity status and on current main job, including information on last main job for previously active people)

Cross-sectional and longitudinal

Reference period: current/last situation

*Unit: all current household members aged 16 and over Mode of collection: personal interview, proxy or registers* 

Values	
1	self-employed with employees
2	self-employed without employees
3	employee
4	family worker
Flags	
1	filled
-1	missing
-2	not applicable (PL015 not $= 1$ ) cross-sectional
	not applicable (person never worked) longitudinal

This variable refers to the main job, namely the current main job for people at work (PL031 = 1, 2, 3 or 4) or the last main job for people who do not have a job (PL031 not = 1, 2, 3 or 4 and PL015 = 1).

If multiple jobs are held or were held, the main job should be the one with the greatest number of hours usually worked.

#### **Self-employed with employees**

Self-employed persons with employees are defined as persons who work in their own business, professional practice or farm for the purpose of earning a profit, and who employ at least one other person.

If people working in the business, professional practice or farm, are not paid then he/she should be considered as self employed without staff.

#### *Self-employed without employees*

Self-employed persons without employees are defined as persons who work in their own business, professional practice or farm for the purpose of earning a profit, and who do not employ any other person.

Nevertheless he may engage members of his/her own family or apprenticed without payment. In this category one can find farmers working alone or using the assistance of members of family.

#### In particular:

- A woman who looks after one or more children that are not her own on a private basis and receiving a payment for this service is a self-employed.
- A freelancer should be classified as self-employed, although a person who has been regularly retained by a single employer for some time may also be regarded as an employee.

#### **Employee**

Employees are defined as persons who work for a public or private employer and who receive compensation in the form of wages, salaries, fees, gratuities, payment by results or payment in kind; non-conscripted members of the armed forces are also included.

An employee is usually working for an outside employer, but a son or daughter, for example, who is working in a parent's firm and receives a regular monetary wage is classified here as an employee.

- A woman looking after children in her own home is classified as an employee if she is paid to do this by the local authority (or any other public administration) and if she doesn't take any decision affecting the enterprise (e.g. schedules or number of children) but as an self employed if she does it privately.
- Apprentices, or trainees receiving remuneration should be considered as employees.
- Priests (of any kind of religion) are considered employees
- Persons who are simultaneously working in their own professional practice and for a public or private employer (e.g. doctors with their own cabinet and working in an hospital) should be classified according to the status where they work a more important number of hours.

#### Family worker

Family workers are persons who help another member of the family to run an agricultural holding or other business, provided they are not considered as employees.

Persons working in a family business or on a family farm without pay should be living in the same household as the owner of the business or farm, or in a slightly broader interpretation, in a house located on the same plot of land and with common household interests. Such people frequently receive remuneration in the form of fringe benefits and payments in kind. However, this applies only when the business is owned or operated by the individual themselves or by a relative. Thus, unpaid voluntary work done for charity should not be included.

This category includes:

- A son or daughter working in the parents' business or on the parents' farm without pay.
- A wife who assists her husband in his business, e.g. a haulage contractor, without receiving any formal pay.

#### Members of producers' co-operatives

Members of producers' co-operatives should be considered as self-employed if in the co-operative, each member takes part on an equal footing with other members in determining the organisation of production, sales and /or other work of the establishment, the investments and the distribution of the proceeds of the establishment amongst their members.

In the case a co-operative hired workers and these workers have an employment contract that gives them a basic remuneration (which is not directly dependent upon the revenue of the co-operative), these workers are identified as employees of the co-operative.

Even if the co-operative has employees (e.g. an accountant) the members of the co-operative should be considered as "self-employed without employees" because the co-operative as an institution (and not any of its members) is the employer.

## PL050: Occupation (ISCO-88 (COM))

LABOUR INFORMATION (Basic labour information on current activity status and on current main job, including information on last main job for previously active people)

Cross-sectional and longitudinal

Reference period: current/last situation

Unit: all current household members aged 16 and over

Mode of collection: personal interview, proxy or registers

# Values ISCO Code 88 (2 digits / see annex) Flags 1 filled 1 missing -2 not applicable (PL031 not = 1, 2, 3 or 4 and PL015 not = 1)

The EU SILC Regulation refers to the classification ISCO 88. However, from the 2011 operation onwards the classification ISCO 08 should be used. For the 2011 operation, coding according to both classifications ISCO 88 and ISCO 08 was done but no back casting was required. The double reporting should only be performed for 2011. From the 2012 operation onwards only the new classification ISCO 08 should be used.

missing value of PL050 because PL051 is used

This variable refers to the main job, namely the current main job for people at work (PL031 = 1, 2, 3 or 4) or the last main job for people who do not have a job (PL031 not = 1, 2, 3 or 4 and PL015 = 1).

If multiple jobs are held or were held, the main job should be the one with the greatest number of hours usually worked.

Interviewers, when asking the ISCO code, should refer, if applicable, to the code given the preceding year(s) in order to avoid too many (and unjustified) changes in the value of this variable from one year to the other.

The basis for the classification in the ISCO 88 scheme is the nature of the job itself and the level of skill required. A job is defined as the set of tasks and duties to be performed. Skills are the abilities to carry out the tasks and duties of a job. Skills consist of two dimensions: skill level and domain specialisation. The skill level is related to the level of educational attainment.

The questions needed for the classification by occupation are the job title associated with the main job and a further description of the tasks and duties.

For a few occupations, information on size group of workplace (the local unit of activity) is needed to code ISCO 88(COM).

<sup>&</sup>lt;sup>1</sup> The Living Conditions Working Group agreed in December 2009 by written consultation to use the double coding according to ISCO-88 and ISCO-08 in the 2011 operation, and to use only ISCO-08 from the 2012 operation onwards. This is in line with the Commission recommendation on the ISCO classification.

Personal Data (P-file)

This should be coded according to the ISCO 88 (COM) classification provided in annex, which is based upon ISCO 88, International Standard Classification of Occupations, published by the International Labour Office (Geneva, 1990).

# PL051: Occupation (ISCO-08 (COM))

LABOUR INFORMATION (Basic labour information on current activity status and on current main job, including information on last main job for unemployed previously active people)

Cross-sectional and longitudinal

Reference period: current/last situation

*Unit: all current household members aged 16 and over Mode of collection: personal interview, proxy or registers* 

# Values

ISCO Code 08 (2 digits / see annex)

#### Flags

- 1 filled
- -1 missing
- not applicable (PL015 not = 1) cross sectional not applicable (person never worked) longitudinal
- -5 missing value of PL051 because PL050 is still used

The EU-SILC Regulation refers to the classification ISCO-88. However, from the 2011 operation onwards the classification ISCO-08 should be used<sup>1</sup>. For the 2011 operation, coding according to both classifications ISCO-88 and ISCO-08 was done but no back-casting was required. The double reporting should only be performed for 2011. From the 2012 operation onwards only the new classification ISCO-08 should be used.

This variable refers to the main job, namely the current main job for people at work (PL031 = 1, 2, 3 or 4) or the last main job for people who do not have a job (PL031 not = 1, 2, 3 or 4 and PL015 = 1).

If multiple jobs are held or were held, the main job should be the one with the greatest number of hours usually worked.

Interviewers, when asking the ISCO code, should refer, if applicable, to the code given the preceding year(s) in order to avoid too many (and unjustified) changes in the value of this variable from one year to the other.

The basis for the classification is the nature of the job itself and the level of skill required. A job is defined as the set of tasks and duties to be performed. Skills are the abilities to carry out the tasks and duties of a job. Skills consist of two dimensions: skill level and domain specialisation. The skill level is related to the level of educational attainment. The questions needed for the classification by occupation are the job title associated with the main job and a further description of the tasks and duties.

For a few occupations, information on size group of workplace (the local unit of activity) is needed).

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<sup>&</sup>lt;sup>1</sup> The Living Conditions Working Group agreed in December 2009 by written consultation to use the double coding according to ISCO-88 and ISCO-08 in the 2011 operation, and to use only ISCO-08 from the 2012 operation onwards. This is in line with the Commission recommendation on the ISCO classification.

<b>EU-SILC</b> Description Target Variable	EU-SILC Descript	ion Target	Variables
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Personal Data (P-file)

This should be coded according to the ISCO-08 (COM) classification provided in annex.

# PL060: Number of hours usually worked per week in main job

LABOUR INFORMATION (Basic information on current activity status and on current main job)

Cross-sectional and longitudinal

Reference period: current

Unit: all current household members aged 16 and over Mode of collection: personal interview, proxy or registers

V	Values			
	1 - 99	number of hours		
F	Flags			
	1	filled		
	-1	missing		
	-2	not applicable (PL031 not = $1, 2, 3 \text{ or } 4$ )		
	-6	hours varying (even an average over 4 weeks is not possible)		

If multiple jobs are held, the main job should be the one with the greatest number of hours usually worked. Persons having changed job during the reference week should regard the job at the end of the reference week as their main job.

The number of hours corresponds to the number of hours the person normally works in his/her main job. This covers all hours including extra hours, either paid or unpaid, which the person normally works, but excludes the travel time between the home and the place of work as well as the main meal breaks (normally taken at midday).

Persons who usually also work at home (within the definitions given below) are asked to include the number of hours they usually work at home. Apprentices, trainees and other persons in vocational training are asked to exclude the time spent in school or other special training centres.

Some persons, particularly the self-employed and family workers, may not have usual hours, in the sense that their hours vary considerably from week to week or month to month. When the respondent is unable to provide a figure for usual hours for this reason, the average of the hours actually worked per week over the past four weeks is used as a measure of usual hours. Code '-6' is applied to those cases where neither the number of usual hours nor an average number of hours worked over the past four weeks can be established.

For self-employed people, in particular, normal hours may also include work done at home, such as planning, record-keeping and so on.

Apprentices, trainees and other persons in vocational training should exclude the time spent in school or other special training centres.

#### Persons who usually also work at home

This concept applies to many self-employed people, for example in artistic or professional activities, who work wholly or partly at home, often in a part of their living accommodation set aside for the purpose. However, if the place of work comprises a separate unit (for example, a doctor's surgery or tax consultant's practice) which is adjacent to the person's home but contains a separate entrance, then work performed there should not be considered to be done "at home". Similarly, a farmer is not to be regarded as working "at home" when he is

occupied in fields or buildings adjacent to his house. In the case of employees, "working at home" should be interpreted strictly in terms of formal working arrangements, where it is mutually understood by the employee and the employer that a certain part of the work is to be done at home. Such an arrangement may be explicitly included in the terms of employment, or may be recognised in other ways (for example, if the employee explicitly notifies the employer of this work by completing a timesheet, or by requesting additional payment or other form of compensation). This arrangement is also recognised if an employee is equipped with a computer in his home in order to perform his work. Other typical examples of "working at home" include travelling salesmen who prepare at home for appointments with clients which are then held at the clients' offices or homes, or persons who do typing or knitting work which on completion is sent to a central location.

"Working at home" does not cover cases where employees carry out tasks at home (because of personal interest or pressure of time), which under their working arrangements might equally have been performed at their place of work.

PL073: Number of months spent at full-time work as employee

PL074: Number of months spent at part-time work as employee

PL075: Number of months spent at full-time work as selfemployed (including family worker)

PL076: Number of months spent at part-time work as selfemployed (including family worker)

PL080: Number of months spent in unemployment

PL085: Number of months spent in retirement or early retirement

PL086: Number of months spent as disabled or/and unfit to work

PL087: Number of months spent studying

PL088: Number of months spent in compulsory military service

PL089: Number of months spent fulfilling domestic tasks and care responsibilities

PL090: Number of months spent in other inactivity

LABOUR INFORMATION (Basic information on activity status during income reference period)

Cross-sectional

Reference period: income reference period

Unit: all current household members aged 16 and over

 $Mode\ of\ collection:\ personal\ interview\ (proxy\ as\ an\ exception)\ or\ registers\ or\ deducted\ from$ 

PL211 variables

V	Values		
	0 - 12	number of months	
F	Flags		
	1	filled	
	-1	missing	
	-5	missing value because the definition of this variable is not used	

The status is self-defined and the same definitions as for variable PL031 apply (see PL031 for definitions and explanations). In particular, if the person combines different part-time jobs as employee leading to an equivalent full-time work, the person should consider his/herself as employee working full-time.

If more than one type of activities occur in the same month, priority should be given to economic activity ("main activity: work") over non-economic activity and over inactivity. On the basis of this principle, the following rules may be used:

- If the respondent worked, at least during 2 weeks of the month, then variables PL073 to PL076 should be filled in.
- If more than one of the other situations apply in the same month, the respondent will select one on the basis of self-assessment. The criterion of most time spent may be useful where applicable.

About variable PL087, the concept of "month spend studying" should be understood in a broad sense. It should include the time spend as "Pupil, student, further training, unpaid work experience" in order to correspond to the answering category "6" of PL031.

#### Retirement, early retirement

See RB170

#### **Values**

In principle, according to the regulation, these variables take values between 1 and 12. But, that cause problems if the number of months spent at full-time work are f.e.12. In this case, variables PL074, PL076,....PL090 should take value 0.

# PL100: Total number of hours usually worked in second, third... jobs

LABOUR INFORMATION (Total number of hours worked on current second/third ... jobs)

Cross-sectional

Reference period: current

Unit: all current household members aged 16 and over Mode of collection: personal interview, proxy or registers

V	Values		
	1 - 99	number of hours	
Fl	Flags		
	1	filled	
	-1	missing	
	-2	not applicable (person does not have a second job or PL031 not = $1, 2, 3$ or $4$ )	

The number of hours usually worked in second, third....jobs should be recorded.

See PL060

## PL111: NACE Rev.2

LABOUR INFORMATION (Detailed labour information)

Cross-sectional

Reference period: current

Unit: selected respondent (where applies) or all current household members aged 16 and

over

Mode of collection: personal interview (proxy as an exception) or registers

V	Values		
	NACE Rev.2 Code (2 digits / See annex 3)		
F	Flags		
	1	filled	
	-1	missing	
	-2	not applicable (PL031 not = $1, 2, 3 \text{ or } 4$ )	
	-3	not selected respondent	

The EU-SILC Regulation refers to the classification NACE Rev1.1. However, from the 2008 operation onwards the classification NACE Rev.2 should be used<sup>1</sup>. A double-coding referring to NACE Rev.1.1 and NACE Rev.2 occurred for the 2008 operation.

## The economic activity of the local unit of the main job for respondents who are currently at work.

This variable refers to the main job. If multiple jobs are held, the main job should be the one with the greatest number of hours usually worked.

This should be coded according to the NACE classification provided in annex, which is based upon the Statistical Classification of Economic Activities. The NACE, is the standard classification used at national and EU level for both economic and social statistics. Economic activities are characterised by the input of goods or services, a production process and the output of products.

Two types of questions can be used to obtain the data on the economic activity. The first type of question consists of the name and the address of the firm where a person is working. The second type of question asks the respondent to describe the economic activity and the kind of products or services supplied by the firm where (s)he works.

The first type of question, the name and address of the firm allows the linking of the survey responses with a database of all firms in a country, the statistical Business Register.

#### Local Unit

The "local unit" to be considered is the geographical location where the job is mainly carried out or, in the case of itinerant occupations, can be said to be based; normally it consists of a single building, part of a building, or, at the largest, a self-contained group of buildings. The "local unit" is therefore the group of employees of the enterprise who are geographically located at the same site.

See annex for more information of "local unit".

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<sup>&</sup>lt;sup>1</sup> Agreement during the Living Conditions Working Group meeting in June 2008 and Commission Regulation (EC) N° 973/2007 of 20 August 2007 amending certain EC Regulations on specific statistical domains implementing the statistical classification of economic activities NACE Revision 2

## PL120: Reason for working less than 30 hours

#### [Reason for working less than 30 hours (in main and other jobs)]

LABOUR INFORMATION (Detailed labour information)

Cross-sectional

Reference period: current

Unit: selected respondent (where applies) or all current household members aged 16 and

over

Mode of collection: personal interview (proxy as an exception) or registers

Values	
1	Undergoing education or training
2	Personal illness or disability
3	Want to work more hours but cannot find a job(s) or work(s) of more hours
4	Do not want to work more hours
5	Number of hours in all job(s) are considered as a full-time job
6	Housework, looking after children or other persons
7	Other reasons
Flags	
1	filled
-1	missing
-2	not applicable (Not (PL031 = 1, 2, 3 or 4, and PL060 + PL100 < 30))
-3	not selected respondent

This variable is intended to capture the concept of underemployment (working fewer hours than the person would prefer because they cannot find a job working more hours; see for example Working Group on Employment Statistics, 2001b). The target variable in EU-SILC will not capture a fully-harmonised definition of underemployment, however: to do so would require a larger number of items than the space constraints would permit. The cut-off filter for the EU-SILC item is set relatively high (at 30 hours for all of the jobs) so as to capture as many as possible of those who would wish to work a greater number of hours.

Note. In the case of teachers should be considered as worked the hours of teaching, those dedicated to preparation of classes, study, research as well as the ones of compulsory permanence in the centre of studies.

Variable PL120 refers to the main reason for working less than 30 hours. In this way, only one response must be ticked. In cases where more than one reasons apply and it is not clear which is the main reason, the list should be treated in order of priority, with code 1 having the highest priority and code 7 as the last priority.

## PL130: Number of persons working at the local unit

LABOUR INFORMATION (Detailed labour information)

Cross-sectional

Reference period: current

Unit: selected respondent (where applies) or all current household members aged 16 and

Mode of collection: personal interview (proxy as an exception) or registers

V	Values		
	1 - 10	exact number (if between 1 and 10)	
	11	between 11 and 19 persons	
	12	between 20 and 49 persons	
	13	50 persons and more	
	14	do not know but less than 11 persons	
	15	do not know but more than 10 persons	
Flags			
	1	filled	
	-1	missing	
	-2	not applicable (PL031 not = $1, 2, 3 \text{ or } 4$ )	
	-3	not selected respondent	

This variable refers to the main job. If multiple jobs are held or were held, the main job should be the one with the greatest number of hours usually worked.

Person himself should be included in number, as the employer

For definition of local unit see PL110

## PL140: Type of contract

LABOUR INFORMATION (Detailed labour information)

Cross-sectional and longitudinal

Reference period: current/last situation

Unit: selected respondent (where applies) or all current household members aged 16 and

Mode of collection: personal interview (proxy as an exception) or registers

Values	S
1	permanent job/work contract of unlimited duration
2	temporary job/work contract of limited duration
Flags	
1	filled
-1	missing
-2	not applicable (PL040 not $= 3$ )
-3	not selected respondent
-4	not applicable because the person is employee (PL040=3) but has not any contract

This variable refers to the main job (current if PL031=1, 2, 3 or 4 and last otherwise). If multiple jobs are held or were held, the main job should be the one with the greatest number of hours usually worked.

This question is addressed only to employees. In the majority of Member States most jobs are based on written work contracts. However in some countries such contracts exist only for specific cases (for example in the public sector, for apprentices, or for other persons undergoing some formal training within an enterprise). Taking into account these different institutional arrangements the notions of "temporary job" and "work contract of limited duration" (likewise "permanent job" and "work contract of unlimited duration") describe situations which under different institutional frameworks can be regarded as similar. A job may be regarded as temporary if it is understood by both employer and the employee that the termination of the job is determined by objective conditions such as reaching a certain date, completion of an assignment or return of another employee who has been temporarily replaced. In the case of a work contract of limited duration the condition for its termination is generally mentioned in the contract.

To be included in these groups are:

- persons with a seasonal job
- persons engaged by an employment agency or business and hired out to a third party for the carrying out of a "work mission" (unless there is a work contract of unlimited duration with the employment agency or business)
- persons with specific training contracts. If there exists no objective criterion for the termination of a job or work contract these should be regarded as permanent or of unlimited duration.

What is involved is the actual employment being time-limited under an agreement - not that he/she has, for example, considered stopping work in order to travel or attend college. Students with jobs which they only reckon to have for as long as they are studying are thus not in a time-limited job.

Respondents who have a contract to do their job, which may be renewed, for example, once a year, should be coded according to whether or not the respondents themselves consider their job to be of an unlimited duration.

Contract for a probationary period when the contract finishes automatically at the end of the probationary period, necessitating a new contract if the person continues to be employed by the same employer, is considered as 'temporary job'.

## PL150: Managerial position

LABOUR INFORMATION (Detailed labour information)

Cross-sectional

Reference period: current/last situation

Unit: selected respondent (where applies) or all current household members aged 16 and over

Mode of collection: personal interview (proxy as an exception) or registers

Values	
1 2	supervisory non-supervisory
Flags	
1	filled
-1	missing
-2	not applicable (PL040 not $= 3$ )
-3	not selected respondent

This variable refers to the current job if PL031=1, 2, 3 or 4 and to the last main job otherwise.

#### **Supervisory**

Supervisory responsibility includes formal responsibility for supervising a group of other employees (other than apprentices), whom they supervise directly, some times doing some of the work they supervise. It implies that the supervisor or foreman takes charge of the work, directs the work and sees that it is properly done.

## PL160: Change of job since last year

LABOUR INFORMATION (Detailed labour information)

*Longitudinal (see note below)* 

Reference period: since last year (since last interview, if applicable)

Unit: selected respondent (where applies) or all current household members aged 16 and over

Mode of collection: personal interview (proxy as an exception) or registers

Values	
1	yes
2	no
Flags	
1	filled
-1	missing
-2	not applicable (PL031 not = $1, 2, 3 \text{ or } 4$ )
-3	not selected respondent

Whether the individual left a job or changed from one job to another since the last interview (or last 12 months for the first year of data collection)

For employees, a change of job means a change of employer, not moving from one set of duties to another with the same employer. Nevertheless, a change of contract with the same employer is considered as a change of job.

For the self-employed, a change of job means a change in the nature of the activity performed (or moving between employee and self-employed status). Completing one contract and beginning another does not constitute a change of job for the self-employed.

#### <u>Note</u>

For those MS using a 'rotational panel' as well as those MS using a 'pure panel' the variable PL160 will also be provided for EU-SILC cross-sectional component..

## PL170: Reason for change

LABOUR INFORMATION (Detailed labour information)

*Longitudinal(see note below)* 

Reference period: since last year (since last interview, if applicable)

Unit: selected respondent (where applies) or all current household members aged 16 and over

Mode of collection: personal interview (proxy as an exception) or registers

Value	S
1	To take up or seek better job
2	End of temporary contract
3	Obliged to stop by employer (business closure, redundancy, early retirement,
	dismissal etc.)
4	Sale or closure of own/family business
5	Child care and care for other dependent
6	Partner's job required us to move to another area or marriage
7	Other reasons
Flags	
1	filled
-1	missing
-2	not applicable (PL160 not $= 1$ )
-3	not selected respondent

The main reason the person left a job since last year.

#### To take up or seek better job

Better job should be understood in a broad sense; it covers better wage, better work conditions, less commuting, etc.

#### End of temporary contract

This code is used for employees who declare that their last job was temporary and came to an end, or that they had a formal work contract which was completed. This also applies to seasonal and casual jobs.

#### Obliged to stop by employer

It covers a number of situations, such as dismissed or made redundant, closures of the employer's business, or early retirement due to economic factors (labour market problems, difficulties in specific sectors of the economy, etc.). Termination for other reasons - such as due to end of contract (and refusal by employer to renew it), retirement at normal age, or retirement 'by own choice' i.e. not as a result of economic factors such as market problems, or due to closure of own business in the case of the self-employed - are included in other response categories.

#### Other reasons

This code is used where none of the codes 1-6 applies, including cases where the person has resigned from his job for reasons (such as personal dissatisfaction, retired from his/her job at the normal retirement age, respondent left his/her job because of personal health) not covered by any of the other codes.

<u>Note</u>
For those MS using a 'rotational panel' as well as those MS using a 'pure panel' the variable PL170 will also be provided for EU-SILC cross-sectional component.

## PL180: Most recent change in the individual's activity status

LABOUR INFORMATION (Detailed labour information)

*Longitudinal(see note below)* 

Reference period: since last year (since last interview, if applicable)

Unit: selected respondent (where applies) or all current household members aged 16 and over

Mode of collection: personal interview (proxy as an exception) or registers

Values	Values		
1	employed - unemployed		
2	employed - retired		
3	employed - other inactive		
4	unemployed - employed		
5	unemployed - retired		
6	unemployed - other inactive		
7	retired - employed		
8	retired - unemployed		
9	retired - other inactive		
10	other inactive - employed		
11	other inactive - unemployed		
12	other inactive - retired		
Flags			
1	filled		
- 1	missing		
- 2	not applicable (no change since last year)		
- 3	not selected respondent		

This variable collects whether there is a change in the individual activity status since the last interview (or last 12 months for the first year of data collection).

If more than one change in the individual activity status the most recent change should be recorded.

The status is self-defined and the same definitions as for variable PL031 apply (see PL031 for definitions and explanations).

#### Note

For those MS using a 'rotational panel' as well as those MS using a 'pure panel' the variable PL180 will also be provided for EU-SILC cross-sectional component.

## PL190: When began first regular job

LABOUR INFORMATION (Activity history)

*Longitudinal(see note below)* 

Reference period: working life

Unit: selected respondent (where applies) or all current household members aged 16 and over

Mode of collection: personal interview (proxy as an exception) or registers

Va	Values		
	8 - 65	age	
Fla	ags		
	1	filled	
	-1	missing	
	-2	not applicable (person never worked i.e. (PL031 not = 1, 2, 3 or 4 AND PL015	
		not= 1))	
	-3	not selected respondent	

#### Overview

Dynamic analysis of the employment situation requires measures extending over time. This requires measures that are more stable and more directly enumerated than the conventional labour force survey measures defined with reference to a short reference period, such as one week (Verma, 1999 and 1999a). EU-SILC follows the concept of self-declared or main activity status.

A selected subset of items is to be included in EU-SILC which would allow to obtain an overview of the person's total (lifetime) work experience and of their recent unemployment experience.

The activity history items are confined to the longitudinal component of EU-SILC. Some of the items of information will need to be collected only once of each person in the longitudinal component: such as the item on when the person started their first regular job, and the number of years since that time spent at work.

#### Age Started First Regular Job

It is designed to permit the calculation of the total potential time the person could have spent in the labour force. It is the age at which the person began their first regular job.

Vacation jobs taken by students, from which they return to studies or to other non-work situations are disregarded, as well as any other casual job undertaken from time to time. Part-time jobs the person may have engaged in while still in school or university are not included. But if the person works or worked in a formal regular work, during his/her studies, this work should be considered.

Normally, the job considered should be the first one which lasted for at least 6 months, unless it was terminated by a period of unemployment or by another job.

#### Note

For those MS using a 'rotational panel' as well as those MS using a 'pure panel' the variable PL190 will also be provided for EU-SILC cross-sectional component.

## PL200: Number of years spent in paid work

#### [Number of years spent in paid work (as employee or self-employee]

LABOUR INFORMATION (Activity history)

Longitudinal(see note below) Reference period: working life

Unit: selected respondent (where applies) or all current household members aged 16 and

over

Mode of collection: personal interview (proxy as an exception) or registers

V	Values		
	0 - 65	number of years	
F	lags		
	1	filled	
	-1	missing	
	-2	not applicable (person never worked i.e. (PL031 not = 1, 2, 3 or 4 AND PL015	
		not= 1))	
	-3	not selected respondent	

This indicator provides a summary measure of the labour force experience of the individual. The number of years, since starting the first regular job, that the person has spent at work, whether as an employee or self-employed.

When a person had a job, but was temporarily absent because of maternity leave, injury or temporary disability, slack work for technical or economical reasons, ... the related period is to be taken into account in the computation of the number of years spent in paid work.

'At work' is self-defined. In cases where there is doubt, such as when the person spent a number of years working on a part-time basis, the person's own perception of whether their main activity was 'at work' or something else should be taken. If a person retires and continues to have a paid work at the same time, this time period should only be taken into account if the person declares him/herself as working. If this person considers him/herself as retired, then the computed number of years spent in paid work stops with the retirement of the person.

See PL190

#### <u>Note</u>

For those MS using a 'rotational panel' as well as those MS using a 'pure panel' the variable PL200 will also be provided for EU-SILC cross-sectional component.

PL211A: Main activity on January PL211B: Main activity on February PL211C: Main activity on March PL211D: Main activity on April PL211E: Main activity on May PL211F: Main activity on June PL211G: Main activity on July PL211H: Main activity on August PL211I: Main activity on September PL211J: Main activity on October PL211K: Main activity on November PL211L: Main activity on December

### LABOUR INFORMATION (Calendar of activities)

Longitudinal (see note below)

Reference period: income reference period

Unit: selected respondent (where applies) or all current household members aged 16 and

over

*Mode of collection: personal interview (proxy as an exception) or registers* 

Values		
1	Employee working full-time	
2	Employee working part-time	
3	Self-employed working full-time (including family worker)	
4	Self-employed working part-time (including family worker)	
5	Unemployed	
6	Pupil, student, further training, unpaid work experience	
7	In retirement or in early retirement or has given up business	
8	Permanently disabled or/and unfit to work	
9	In compulsory military community or service	
10	Fulfilling domestic tasks and care responsibilities	
11	Other inactive person	
Flags	Flags	
1	filled	
-1	missing	
-3	not selected respondent	

This variable replaces, from the 2009 operation onwards, the variables PL210 defined in the EU-SILC Regulation<sup>1</sup>

The status is self-defined and the same definitions as for variable PL031 apply (see PL031 for definitions and explanations). In particular, if the person combines different part-time jobs as employee leading to an equivalent full-time work, the person should consider his/herself as employee working full-time (code 1 should be ticked for the month).

If more than one type of activities occur in the same month, priority should be given to economic activity ("main activity: work") over non-economic activity and over inactivity. On the basis of this principle, the following rules may be used:

- If the respondent worked, at least during 2 weeks of the month, then code 1, 2, 3 or 4 should be ticked for the month.
- If more than one of the other codes apply in the same month, the respondent will select one on the basis of self-assessment. The criterion of most time spent may be useful where applicable.

See also PL040

#### *Note*

For those MS using a 'rotational panel' as well as those MS using a 'pure panel' the variables PL211A-PL211L will also be provided for EU-SILC cross-sectional component.

<sup>&</sup>lt;sup>1</sup> Agreement during the Living Conditions Working Group meeting in June 2008 that the variables PL210 will be replaced by the variable PL211 with slightly different labelling in order to harmonise labour variables. In 2010, the LC WG agreed from the 2011 operation onwards to suppress PL210 and to keep only PL211.

## PY010G/PY010N: Employee cash or near cash income

INCOME (Gross personal income, total and components at personal level)

Cross-sectional and longitudinal

Reference period: income reference period

Unit: all current household members aged 16 and over

Mode of collection: personal interview (proxy as an exception for persons temporarily

away or in incapacity) or registers

V	Values		
	1 - 999999.99	income (national currency)	
	0	no income	
F	lags		
	See chapter 'Inc	ome flags'	

Gross means that neither taxes nor social contributions have been deducted at source.

If the gross value is a conversion from the net, the corresponding net variables should be filled also. If both - net and gross – values are collected, both should be recorded.

#### Employee income

Employee income is defined as the total remuneration, in cash or in kind, payable by an employer to an employee in return for work done by the latter during the income reference period.

The employee income is broken down into:

- (1) Gross employee cash or near cash income (PY010G)
- (2) Gross non-cash employee income (PY020G)
- (3) Employers' social insurance contributions (PY030G)

#### Gross employee cash or near cash income (PY010G)

It refers to the monetary component of the compensation of employees in cash payable by an employer to an employee. It includes the value of any social contributions and income taxes payable by an employee or by the employer on behalf of the employee to social insurance schemes or tax authorities.

Gross employee cash or near cash income includes the followings items:

- Wages and salaries paid in cash for time worked or work done in main and any secondary or casual job(s);
- Remuneration for time not worked (e.g. holiday payments);
- Enhanced rates of pay for overtime;
- Fees paid to directors of incorporated enterprises
- Piece rate payments
- Payments for fostering children
- Commissions, tips and gratuities
- Supplementary payments (e.g. thirteenth month payment)
- Profit sharing and bonuses paid in cash
- Additional payments based on productivity

- Allowances paid for working in remote locations (regarded as part of the conditions of the job)
- Allowances for transport to or from work
- Additional payments made by employers to their employees or former employees and other eligible persons to supplement the sick, disability, maternity leave or survivor's pay entitlement from social insurance schemes, where such payments can not be separately and clearly identified as social benefits.
- Payments made by employers to an employee in lieu of wages and salaries through a social insurance scheme when unable to work through sickness, disability or maternity leave where such payment can not be separately and clearly identified as social benefits.

#### It excludes:

- Reimbursements made by an employer for work-related expenses (e.g. business travel)
- Severance and termination pay to compensate employees for employment ending before the employee has reached the normal retirement age for that job and redundancy payments (they are included under 'unemployment benefits' (PY090G))
- Allowances for purely work-related expenses such as those for travel and subsistence or for protective clothes
- Lump sum payments at the normal retirement date (included under 'old age benefits' (PY100G))
- Union strike pay.

#### Note

Family allowance for marriage should be included in PY010.

The employers social insurance contributions are excluded

Payments for fostering children: It refers to the amount of money that the government or NPISHs give to families for taking care of children. These children live in a family instead of living in an institution. The family is not the real family. The children do not have the legal status of 'children of the family'.

Cash housing allowances paid by employer should be included in PY010.

#### Net employee cash or near cash income (PY010N)

The net income component correspond to the gross income components but the tax at source, the social insurance contributions or both are deducted.

## PY020G/PY020N: Non-Cash employee income

INCOME (Gross personal income, total and components at personal level)

Cross-sectional and longitudinal

Reference period: income reference period

Unit: all current household members aged 16 and over

Mode of collection: personal interview (proxy as an exception for persons temporarily

away or in incapacity) or registers

#### Values

1 - 999999.99 income (national currency)

0 no income

#### Flags

See chapter 'Income flags'

additional value allowed for both cross-sectional and longitudinal component:

-4 amount included in another component

additional value allowed only for longitudinal component:

missing because the variable was not mandatory at that time (when PB010 < 2007, i.e. PB010=2003, 2004, 2005 or 2006)

Till 2006, the variable collected only company car contribution. Starting from 2007, the variable collects the whole non-cash employee income. In order to monitor break in the time series, a separate variable collecting the company car contribution only was created: PY021G/PY021N.

In the **longitudinal** P-file, for ALL YEARS PY021 should correspond to "company car" and PY020 to "non-cash employee income". PY021 should be filled in for all years, while PY020 should only be filled in when PB010 is greater or equal to 2007 (PB010=2007, 2008, 2009 or 2010). When PB010 is less than 2007 (PB010=2003, 2004, 2005 or 2006), flag -2 should be used for PY020 and this means that the information is missing because the variable was not mandatory at that time.

#### Gross non-cash employee income (PY020G)

It refers to the non-monetary income components which may be provided free or at reduced price to an employee as part of the employment package by an employer <sup>1</sup>. Gross non-cash employee income includes:

- Company car and associated costs (e.g. free fuel, car insurance, taxes and duties as applicable) provided for either private use or both private and work use;
- Free or subsidised meals, luncheon vouchers;
- Reimbursement or payment of housing-related expenses (e.g. Gas, electricity, water, telephone or mobile telephone bills);
- Other goods and services provided free or at reduced price by the employer to their employees, when they are a significant component of the income at national level or

<sup>&</sup>lt;sup>1</sup> If any goods or services are both provided for private and work use, then private use as a proportion of total use has to be estimated and applied to the total value

they constitute a significant component of the income of particular groups of households.

- The value of goods and services provided free shall be calculated according to the market value of these goods and services. The value of the goods and services provided at reduced price shall be calculated as the difference between the market value and the amount paid by the employee.

For goods provided by the employer, like laptop and phone, in order not to overestimate the profit, it can be envisaged to divide the market price to buy the product by 3 or 4, making the assumption that 3 or 4 years is the 'life duration' of the phone or laptop. For more expensive goods, like tractor and lawn mower, a division by a greater number, for example 10, can be envisaged, corresponding to a 'life duration' of 10 years. Different 'life duration period' for different categories of goods can be consequently envisaged.

#### It excludes:

- The cost of providing any of these goods and services by the employer if they are only required for the employees to carry out their work;
- Accommodation services at a place of work which cannot be used by the households to which the employees belong;
- Accommodation provided free or at reduced rent to an employee as the secondary residence of the household.
- Allowances paid to employees for the purchase of tools, equipment, clothes etc. needed exclusively or primarily for their work;
- Special meals or drinks necessitated by exceptional working conditions;
- Any goods or services provided to employees at the place of work or required because of the nature of their work (e.g. a medical examination required for work).

#### *Net non-cash employee income (PY020N)*

The net income component correspond to the gross income components but the tax at source, the social insurance contributions or both are deducted.

*See Annex 7 about the company car.* 

#### Difference with the EU-SILC Regulations:

Accommodation provided free or at reduced rent by the employer to the employees as the main residence of the household should be included in the non-cash employee income, and consequently not under the variable "imputed rent" (HY030).

## PY021G/PY021N: Company car

INCOME (Gross personal income, total and components at personal level)

Cross-sectional and longitudinal

Reference period: income reference period

Unit: all current household members aged 16 and over

Mode of collection: personal interview (proxy as an exception for persons temporarily

away or in incapacity) or registers

V	Values		
	1 - 999999.99	income (national currency)	
	0	no income	
F	Flags		
	See chapter 'Income flags'		
	additional value allowed for both cross-sectional and longitudinal component:		
	-4 amount i	ncluded in another component	

This additional variable was included in the P-file starting from the 2007 operation in order to monitor break in the time series.

In the **longitudinal** P-file, for ALL YEARS PY021 should correspond to "company car" and PY020 to "non-cash employee income". PY021 should be filled in for all years, while PY020 should only be filled in when PB010 is greater or equal to 2007 (PB010=2007, 2008, 2009 or 2010). When PB010 is less than 2007 (PB010=2003, 2004, 2005 or 2006), flag -2 should be used for PY020 and this means that the information is missing because the variable was not mandatory at that time.

For explanation, see annex 7.

## PY030G: Employer's social insurance contribution

## **PY031G: Optional employer's social insurance contributions**

INCOME (Gross income components at household level)

Cross-sectional and longitudinal

Reference period: income reference period

Unit: all current household members aged 16 and over Mode of collection: household respondent or register

Values	Values		
1 - 99 0	19999.99 amount (national currency) no contribution		
Flags	Flags		
0	no income		
1	income (variable is filled)		
-1	missing		
-5	not filled: variable of net (G) / gross (N) series is filled		

The employers' social insurance contributions should be recorded from 2007<sup>1</sup>.

#### Employers' social insurance contributions (PY030G)

Employers' contributions are defined as payments made, during the income reference period, by employers for the benefits of their employees to insurers (social security funds and private funded schemes) covering statutory, conventional or contractual contributions in respect of insurance against social risks.

- Employers' contributions to private retirement (pension) plans
- Employers' contributions to private health insurance
- Employers' contributions to life insurance
- Employers' contributions to other employer insurance schemes (e.g. disability)
- Employers' contributions to government insurance (social security) schemes (including payroll taxes levied for social insurance purposes).

It is needed to distinguish between two types of employers' social insurance contribution:

- Legal/mandatory contributions covering traditionally legal old age pension scheme, legal health insurance, unemployment ... These contributions are common to most employed persons and can be deduced from wages received according to published rules,
- Optional contributions made by employers on the basis of contractual or specific sectoral arrangements. These are more heterogeneous, limited to some employees and depending on the sector and the size of businesses. Typical examples are contributions to private pension plans, additional health insurance and term life

<sup>&</sup>lt;sup>1</sup> Following the results of the conducted feasibility studies

insurance. This type of contribution seems to remain limited in importance in most countries, sometimes inexistent, but are likely to grow rapidly in the future with the reform of social protection systems.

From 2007 onwards, "Employers' social insurance contributions" (PY030G) is included in the list of primary target variables of the EU-SILC instrument. In the limit it represents at least 90% of the total amount of social contributions of employers (compulsory + optional), variable PY030G could collect only the compulsory (legal) contributions of the employers.

In case a country is due to collect optional (non compulsory) contribution, variable PY030G will gather the total contributions (mandatory + optional) and a new variable PY031G will collect the optional part so that flexibility is allowed when carrying out comparative analysis on the datasets.

The documentation of coverage of the components collected should be integrant part of the final quality reports where the relative part of optional contribution should be monitored. External sources for this purpose are likely to be national accounts and/or labour cost surveys.

The need and the feasibility to impute fictitious employer's social contribution for categories of persons for which no real contribution is paid (civil servant, unemployed ...) has to be assessed.

# PY035G/PY035N: Contributions to individual private pension plans

INCOME (Gross income components at household level)

Cross-sectional and longitudinal

Reference period: income reference period

Unit: all current household members aged 16 and over Mode of collection: household respondent or register

Values			
1 - 999	9999.99 amount (national currency)		
0	no contribution		
Flags	Flags		
0	no contribution		
1+if	variable is filled		
	To value 1 must be concatenated the imputation factor (if)		
	if = collected value / recorded value		
-1	missing (As missing values are imputed this code is only acceptable if not		
	imputation is possible)		
-5	Not filled: variable of the net/gross series is filled		

#### Contributions to individual private pension plans (PY035G)

Contributions made, during the income reference period, to individual private pension plans refers to the pensions policies taken out by individual households on their own initiative and for their own benefit, independently of their employers or government and outside any social insurance scheme.

These contributions represent the counterpart to regular pensions from individual private plans (other than those covered under ESSPROS) (PY080G).

It includes: contributions to individual pensions plans related to old age, survivors, sickness, disability and unemployment.

#### **Comments**

Contributions to private pensions plans refers to the pension policies taken out by individual households on their own initiative and from their own benefit, independently of their employers or government and outside any social insurance scheme (i.e. it excludes contributions from mandatory government schemes or from mandatory employers-based schemes).

The schemes that need to be taken into account in variable PY035 are 'other insurance '(with the exception of life insurance schemes).

Other insurance provides individual institutional units exposed to certain risks with financial protection against the consequences of the occurrence of specified events. It is also a form of

financial intermediation in which funds are collected from policy holders and invested in financial and other assets which are held as technical reserves to meet future claims arising from the occurrence of the events specified in the insurance policies.

Other insurance policies held by households may cover the same risks or needs as those covered by social insurance schemes. However, other insurance policies held by households are distinguished from social insurance policies by the fact that hey are taken out on the individual households' own initiative and on their own benefit, independently of their employers or government.

#### Difference with the EU-SILC Regulations:

Contributions to individual pension plans (PY035G)/ (PY035N) should not be deducted from the total household disposable income.

Pensions received from individual private plans (other than those covered under ESSPROS) (PY080G)/(PY080N) are treated as a component of property income, and should be included in the total household gross income (HY010) and in the total disposable household income (HY020). Inclusion of PY080 in HY020, HY022 and HY023 should be implemented by countries from the 2011 operation onwards.

-

<sup>&</sup>lt;sup>1</sup> This follows a recommendation from the TF on methodological issues. The Indicator Sub Group (ISG) agreed in 2010 to include PY080 in the income definition and consequently in the computation of OMC indicators.

## PY050G/PY050N: Cash benefits or losses from self-employment

INCOME (Gross personal income, total and components at personal level)

Cross-sectional and longitudinal

Reference period: income reference period

Unit: all current household members aged 16 and over

Mode of collection: personal interview (proxy as an exception for persons temporarily

away or in incapacity) or registers

V	alues	
	1 - 999999.99	benefits
	-999999.991	losses
	0	no income
F	lags	
	See chapter 'Inco	ome flags'

#### Self-employment income

Self-employment income is defined as the income received, **during the income reference period**, by individuals, for themselves or in respect of their family members, as a result of their current or former involvement in self-employment jobs. Self-employment jobs are those jobs where the remuneration is directly dependent upon the profits (or the potential for profits) derived from the goods and services produced (where own consumption is considered to be part of profits). The self-employed make the operational decisions affecting the enterprise, or delegate such decisions while retaining responsibility for the welfare of the enterprise. (In this context "enterprise" includes one-person operations). The remuneration of hobbies shall be regarded as self-employment.

If the income collected or compiled correspond to a time period earlier than the reference period, basic adjustments shall be applied to update the data to the income reference period.

The self-employment income is broken down into:

- Gross cash benefits or losses from self-employment (including royalties) (PY050G)
- Value of goods produced for own consumption HY170G)

#### Gross cash benefits or losses from self-employment (including royalties) (PY050G)

#### It includes:

- Net operating profit or loss accruing to working owners of, or partners in, an unincorporated enterprise, less interest on business loans;
- Royalties earned on writing, inventions, and so on not included in the profit/loss of unincorporated enterprises;

 Rentals from business buildings, vehicles, equipment, etc not included in the profit/loss of unincorporated enterprises, after deduction of related costs such as interest on associated loans, repairs and maintenance and insurance charges.

#### It excludes:

- Directors fees earned by owners of incorporated enterprises (which are included under 'Gross employee cash or near cash income' (PY010G));
- Dividends paid by incorporated enterprises (which are included under 'Interest, dividends, profits from capital investment in an unincorporated business' (HY090G));
- Profits from capital invested in an unincorporated enterprise in which the
  person does not work ('sleeping partners') (it is included under 'Interest,
  dividends, profits from capital investment in an unincorporated business'
  (HY090G));
- Rent from land and receipts from boarders or lodgers (which are included under 'Income from rental of a property or land' (HY040G)).
- Rentals from dwellings not included in the profit/loss of unincorporated enterprises (which are included under 'Income from rental of a property or land' (HY040G)).

#### Income from self-employment shall be calculated as:

- Market output (gross revenue to turnover, including the value of goods produced by the enterprise but consumed by the self-employed person or his/her household)
- Plus market value of goods and services bought for the unincorporated enterprise but consumed by the entrepreneur and his/her household members
- Plus property income received in connection with financial and other assets belonging to the enterprise
- Minus intermediate consumption (raw material costs, costs of sales, distribution costs, maintenance costs, administrative expenses etc.)
- Minus compensation of employees (wages, salaries and social security contributions for employees)
- Minus taxes on production and import taxes
- Minus interest paid on business loans
- Minus rents paid on land and other non-produced tangible assets rented by the enterprise
- Minus consumption of fixed capital

#### Plus subsidies

In practice if the self-employed person or business prepares annual accounts for tax purposes, the gross income benefits/losses shall be calculated as net operating benefits/losses shown on this tax account for the most recent 12 month period, before deduction of taxes on income and compulsory social insurance contributions.

In the absence of annual accounts, either for tax purposes or as a business account, the alternative approach to measure self-employment income shall be to collect the amount of money (and goods) drawn out of the business for personal use (for consumption or saving, including the market value of goods produced or purchased by the business but taken for personal use).

#### Net cash benefits or losses from self-employment (including royalties) (PY050N)

The net income component correspond to the gross income components but the tax at source, the social insurance contributions or both (if applicable) are deducted.

#### **Comments**

#### Royalties

Royalties are regarded as income from self-employment because they are a return to the royalty-holder for effort expended.

#### <u>Difficulties on detect self-employed: Who are the self-employed?</u>

The guidelines Interpretation for the EU-SILC, based on ILO recommendations1, provided an overview of the central distinction between self-employment and employee status. The difference is determined by:

- the nature of the economic risk undertaken by the person concerned,
- the mode of remuneration,
- the type of authority enjoyed, and the authority to which he or she is subject.

There is also a discussion of some of the more complex types of cases. For instance, employees responsible for paying their own social insurance and tax contributions, but who are employees in other respects, should be considered employees. Outworkers should be considered as employees if (a) there exists an explicit or implicit contract or agreement of employment and (b) the remuneration depends basically on the time worked or the amount produced. However, an outworker should be considered self-employed if (a) there is no such contract or agreement and the decision as to the markets, scale of operation and finance is in the hands of the outworker or (b) the person's remuneration is a function of receipts or profits from the sale of his/her products or services.

<sup>&</sup>lt;sup>1</sup> R. Hussmanns and F. Mehran and V. Verma: *Surveys of Economically Active Population, Employment, Unemployment and Underemployment: An ILO Manual on Concepts and Methods*. Geneva: International Labour Office, 1990.

Summary of Distinction between Employee and Self-Employed Status

	Employee	Self-employed
Economic Risk	No (or very little) capital investment	Has capital investment (not a necessary condition, e.g Professional practice)
Mode of remuneration	Wage or salary based on hours worked or amount produced	Profit, amount depending on sales of produce or service
Type of authority 1 (autonomy)	Existence of implicit or explicit contract/agreement of employment	No such contract or agreement
Type of authority 2 (control)	No (or very little) say in decisions on markets, scale of operation and finance	Final decision on markets, scale of operation and finance

Among the self-employed, those with paid employees are defined as 'employers', while those without paid employees are defined as 'own-account workers'. Often a distinction is made between 'own-account workers' and 'unpaid family workers'. However, in an enterprise in which members of a household are engaged jointly, this distinction can be culturally (especially gender) biased, and in any case arbitrary. Furthermore, the income may not be strictly 'individual', as for example in the case of a household enterprise in which several members of the household are engaged jointly. For the purpose of EU-SILC, both these groups are to be considered as 'self-employed', i.e. as sharing self-employment income from the enterprise.

On the other hand, there are growing numbers of self-employed who do not consider themselves to be "running a business" and for whom therefore concepts such as gross revenue or even annual profit or loss have very little meaning. For this reason, some experimentation has been carried out, for example in the UK, to distinguish different groups of self-employed people and to try to tailor questions more closely to their circumstances (see Martin et al, 1996). For some people such as casual workers and sub-contractors, their remuneration is more akin to employment income than to gross revenue – they have very few if any of the outgoing listed above such as operating costs. They may even be uncertain about their employment status – whether they are in fact self-employed or employees. In the UK, it was found that the best way to distinguish this type of self-employed person from one who is in fact running a business was whether they prepared annual accounts for the tax authority.

If they do not, it is more appropriate to use a concept akin to that of earnings from employment to capture their income.

#### Measurement of income from self-employment

It is universally acknowledged that self-employment income is one of the most problematic elements of household income to define and to measure accurately. These difficulties result not only in inaccurate income data but also in lack of comparability both across time and across countries. While it is unrealistic of course to suppose that all the difficulties can be solved in the context of EU-SILC, the aim should be to draw on current best practice and 'state of the art', so that accuracy and comparability of the information on self-employment income is improved.

There is also evidence that self-employment is becoming *more prevalent* in the EU and that it is becoming *more heterogeneous* in its nature. The types of occupation in which the self-employed are engaged have diversified. More women are becoming self-employed and more

employees are taking on subsidiary work on a self-employed basis. Many of the new self-employed are engaged in the service sector, but the skill level of these jobs varies widely from low paid jobs on temporary contracts to high paid and specialised jobs in the banking and financial services and in information technology. The terms under which they work are also becoming more diverse. The traditional self-employed person running a business, perhaps with a few employees, is joined by people in casual work or involved with sub-contracting. The measurement framework adopted has to encompass all these possibilities.

Given the conceptual difficulties in defining self-employment income, it is perhaps not surprising that the collection of accurate income information from the self-employed is one of the most problematic areas for surveys:

- The self-employed often have accounting practices which make it difficult for them to provide accurate responses to survey questions (e.g. they may not separate their business and personal finances).
- Their financial and accounting framework does not relate well to that used by statisticians in constructing national accounts or household income analysis.
- The self-employed are less likely than the employed to respond to income surveys, and self-employment income variables are subject to higher levels of item non-response.
- Not only are the self-employed less likely than employees to respond to surveys, those that do respond are more likely to under-report their income.
- The growth in self-employment as a secondary activity for employees posses additional
  problems. Unless such secondary activities are properly covered in an income survey with
  questions that are just as detailed as those for the primary employment, this too will be a
  source of under-reporting.

### Conclusion

It has to be accepted that measurement of income from self-employment is one of the most difficult areas for income distribution analysis. However, the following strategies are recommended which may result in improved estimates:

- the categorisation of self-employed according to (i) whether they consider that they are running a business or (ii) that they have "work" (a job), and the use of a concept akin to that of earnings for the latter group;
- the collection of data on drawings (in the absence of annual accounts, either for tax purposes or as a business account);
- updating profit/loss data which are for a time period earlier than the reference period to using an appropriate index.
- development of procedures for estimating self-employment income net of income tax and social security contributions, procedures which may differ from those used for other income components.

## PY080G/PY080N: Pension from individual private plans

INCOME (Gross personal income, total and components at personal level)

Cross-sectional and longitudinal

Reference period: income reference period

Unit: all current household members aged 16 and over

Mode of collection: personal interview (proxy as an exception for persons temporarily

away or in incapacity) or registers

Values		
1 - 999999.99	income (national currency)	
0	no income	
Flags		
See chapter 'Income flags'		

## Gross Regular pensions from individual private plans (other than those covered under ESSPROS) (PY080G)

Regular pensions from private plans (other than those covered under ESSPROS) refer to pensions and annuities received, during the income reference period, in the form of interest or dividend income from individual private insurance plans, i.e. fully organised schemes where contributions are at the discretion of the contributor independently of their employers or government.

#### It includes:

- Old age, survivors, sickness, disability and unemployment pensions received as interest or dividends from individual insurance private plans.

#### It excludes:

- Pensions from mandatory government schemes.
- Pensions from mandatory employer-based schemes

# <u>Net Regular pensions from individual private plans (other than those covered under ESSPROS) (PY080N)</u>

The net income component correspond to the gross income components but the tax at source, the social insurance contributions or both (if applicable) are deducted.

#### Difference with the EU-SILC Regulations:

Contributions to individual pension plans (PY035G)/(PY035N) should not be deducted from the total household disposable income.

Pensions received from individual private plans (other than those covered under ESSPROS) (PY080G)/(PY080N) are treated as a component of property income, and should be included in the total household gross income (HY010) and in the total disposable household income

(HY020). Inclusion of PY080 in HY020, HY022 and HY023 should be implemented by countries from the 2011 operation onwards.

2012 Operation

<sup>&</sup>lt;sup>1</sup> This follows a recommendation from the TF on methodological issues. The Indicator Sub Group (ISG) agreed in 2010 to include PY080 in the income definition and consequently in the computation of OMC indicators.

PY090G/PY090N: Unemployment benefits

PY100G/PY100N: Old-age benefits PY110G/PY110N: Survivor' benefits PY120G/PY120N: Sickness benefits PY130G/PY130N: Disability benefits

PY140G/PY140N: Education-related allowances

INCOME (Gross personal income, total and components at personal level)

Cross-sectional and longitudinal

Reference period: income reference period

Unit: all current household members aged 16 and over

Mode of collection: personal interview (proxy as an exception for persons temporarily

away or in incapacity) or registers

#### Values

1 - 999999.99 income (national currency)

0 no income

#### Flags

See chapter 'Income flags'

additional value allowed for PY100G/PY100N, PY110G/PY110N, PY120G/PY120N, PY130G/PY130N:

-4 amount included in another component

#### Social benefits

Social benefits<sup>1</sup> are defined as current transfers received during the income reference period<sup>2</sup> by households intended to relieve them from the financial burden of a number of risk or needs, made through collectively organised schemes, or outside such schemes by government units and NPISHs.

It includes the value of any social contributions and income tax payable on the benefits by the beneficiary to social insurance schemes or to tax authorities.

In order to be included as a social benefit, the transfer must meet one of two criteria:

- Coverage is compulsory (under law, regulation or a collective bargaining agreement) for the group in question;
- It is based on the principle of social solidarity (i.e. if it is an insurance-based pension, the premium and entitlements are not proportional to the individual exposure to risk of the people protected).

<sup>&</sup>lt;sup>1</sup> The social benefits included in EU-SILC, with the exception of housing benefits, are restricted to cash benefits.

<sup>&</sup>lt;sup>2</sup> In order to get a closer measure to the well-being of the household, the lump-sum benefits received during the income reference period shall be treated according to Eurostat technical recommendations. In the same way, lump-sum received before the income reference period could be taken into account and imputed according to Eurostat recommendations.

The Social benefits collected a individual level are the following:

- Unemployment benefits (PY090G)/ (PY090N)
- Old-age benefits (PY100G)/ (PY100N)
- Survivor' benefits (PY110G)/ (PY110N)
- Sickness benefits (PY120G/PY120N)
- Disability benefits (PY130G/PY130N)
- Education related allowances (PY140G/PY140N)

#### Social benefits exclude:

 Benefits paid from schemes into which the recipient has made voluntary payments only, independently of his/her employer or government (which are included under 'Pensions from individual private plans (other than those covered under ESSPROS)' (PY080G)).

#### **Comments**

Although the ESSPROS classification is used for social benefits in the EU-SILC income definition, not all elements of ESSPROS itself are included.

#### **ESSPROSS**

In the EU a classification of social benefits has been developed which depends on the risks or needs which may give rise to the payment of social benefits. The distinction based on source is secondary. The logic behind this is that from the social exclusion perspective the risk or need being met by the scheme is more important than the source of the transfer. This system is known as the European System of integrated Social Protection Statistics (ESSPROS), and was developed in the late 1970s in response to the need for a specific instrument of statistical observation of social protection in EC Member States. It has since been revised and updated.

In order to be included as a social benefit (under ESSPROS), the transfer must meet one of two criteria:

- 1) coverage is compulsory (under law, regulation or a collective bargaining agreement) for the group in question or
- 2) it is based on the principle of social solidarity (i.e. if it is an insurance-based pension, the premium and entitlements are not proportional to the individual exposure of the people protected). The principle of social solidarity is a feature of all non-contributory schemes.

Difficult borderline cases arise when the law allows people to leave a general social insurance scheme managed by the state social security fund and acquire protection through other channels – known as 'contracting out'. The fact that coverage is compulsory by law (though no particular scheme is specified) or that an insurance policy replaces a government scheme is not sufficient to classify it as social protection. In these cases, the criterion of social solidarity can be a useful guide.

The list of risks and needs that may give rise to social protection is fixed by convention in the ESSPROS methodology as follows:

Sickness/Health care Disability Old Age Survivors Family/children Unemployment Housing Social exclusion not elsewhere classified

These are normally termed 'functions' of social protection. They represent the areas which are felt to be most relevant in the European context. These functions define the primary purposes for which resources and benefits are provided, irrespective of legislative or institutional structures behind them. This enables comparable statistics to be produced despite the fact that the institutions, regulations and social traditions of Members States vary widely.

Functions are therefore defined in terms of their end purpose, rather than in terms of particular branches of social protection or pieces of legislation. Thus for example, the benefits granted by a pension fund cannot simply be classified in their entirety under the Old Age function, as some benefits may relieve the recipient from needs related to the death of a breadwinner (and thus belong to the Survivors function) or the loss of the physical ability to engage in economic and social activities (and thus belong to the Disability function).

The main differences between EU-SILC and ESSPROSS are:

- the EU-SILC definition of social benefits includes the function education while ESSPROS does not.
- the ESSPROS definition covers both current and capital transfers whereas the EU-SILC definition covers current transfers only.
- the ESSPROS definition covers certain reductions on taxes where they meet the general criteria for social protection schemes and certain other criteria.
- the EU-SILC definition covers only the cash benefits ( with the exceptions of housing)

Full details of the most recent version of ESSPROS, including a detailed guide to the interpretation of each function, may be found in the ESSPROS Manual, 2008 Edition (Eurostat, 2008).

The ESSPROS classification scheme has many merits in providing a break-down of social benefits according to the purposes for which they are paid, irrespective of the legislative or institutional structures behind them. However, it is not possible to collect data directly according to this classification because of its unfamiliarity to survey respondents. Instead, data have to be collected in terms familiar to respondents and then correspondence tables used to map the national social benefit system onto ESSPROS. In order for this mapping to be as accurate as possible, it is important that the survey provides comprehensive prompts to the respondent to ensure that all benefit receipts are reported and that each can be correctly ascribed to a particular social protection scheme, and also that this information is properly recorded in the questionnaire.

### **Unemployment benefits (PY090G)**

Unemployment benefits refer to benefits that replace in whole or in part income lost by a worker due to the loss of gainful employment; provide a subsistence (or better) income to persons entering or re-entering the labour market; compensate for the loss of earnings due to partial unemployment; replace in whole or in part income lost by an older worker who retires from gainful employment before the legal retirement age because of job reductions for economic reasons; contribute to the cost of training or re-training people looking for employment; or help unemployed persons meet the cost of travelling or relocating to obtain employment;

#### It includes:

- Full unemployment benefits: benefits compensating for loss of earnings where a
  person is capable of working and available for work but is unable to find suitable
  employment, including persons who had not previously been employed.
- Partial unemployment benefits: benefits compensating for the loss of wages or salary due to formal short-time working arrangements, and/or intermittent work schedules, irrespective of their cause (business recession or slow-down, breakdown of equipment, climatic conditions, accidents and so on), and where the employer/employee relationship continues.
- Early retirement for labour market reasons: periodic payments to older workers who
  retire before reaching standard retirement age due to unemployment or to job
  reductions caused by economic measures such as the restructuring of an industrial
  sector or of a business enterprise. These payments normally cease when the
  beneficiary becomes entitled to an old age pension.
- Vocational training allowance: payments by social security funds or public agencies to targeted groups of persons in the labour force who take part in training schemes intended to develop their potential for employment.
- Mobility and resettlement: payments by social security funds or public agencies to unemployed persons to encourage them to move to another locality or change their occupation in order to seek or to obtain work.
- Severance and termination payments (benefits compensating employees for employment ending before the employee has reached the normal retirement age for that job).
- Redundancy compensation: capital sums paid to employees who have been dismissed through no fault of their own by an enterprise that is ceasing or cutting down its activities.
- Other cash benefits: other financial assistance, particularly payments to the long-term unemployed

#### It excludes:

- family allowances paid for dependent children (which are included under 'Family/children related allowances' (HY050G)).

#### *Unemployment benefits (PY090N)*

The net income component correspond to the gross income components but the tax at source, the social insurance contributions or both (if applicable) are deducted.

#### Comments about unemployment benefits

- There are two concepts related to vocational training allowance under the unemployment benefit function:

The vocational training allowance, i.e. payment by social security funds or public agencies to targeted groups of persons in the labour force who take part in training schemes intended to develop their potential for employment. This is considered as benefit in cash and thus included in PY090.

A benefit (in-kind) related to vocational training, i.e. payments by social security funds or public agencies to institutions that provide training courses to unemployed people. This benefits are excluded from EU-SILC.

#### Old age benefits (PY100G)

The Old age function refers to the provision of social protection against the risk linked to old age, loss of income, inadequate income, lack of independence in carrying out daily tasks, reduced participation in social life, and so on.

Old age benefits cover benefits that: provide a replacement income when the aged person retires from the labour market, or guarantee a certain income when a person has reached a prescribed age.

#### It includes:

- Old age pensions: periodic payments intended to maintain the income of the beneficiary after retirement from gainful employment at the standard age or support the income of old persons
- Anticipated old age pensions: periodic payments intended to maintain the income of beneficiaries who retire before the standard age as defined in the relevant scheme or in the scheme of reference. This may occur with or without a reduction of the normal pension.
- Partial retirement pensions: periodic payment of a portion of the full retirement pension to older workers who continue to work but reduce their working hours or whose income from a professional activity is below a defined ceiling.
- Care allowances: benefit paid to old people who need frequent or constant assistance to help them meet the extra costs of attendance (other than medical care) when the benefit is not a reimbursement of certified expenditure.
- Disability cash benefits paid after the standard retirement age.
- Lump-sum payments at the normal retirement date.
- Other cash benefits: other periodic and lump-sum benefits paid upon retirement or on account of old age, such as capital sums paid to people who do not fully meet the requirements for a periodic retirement pension, or who were members of a scheme designed to provide only capital sums at retirement.
- It excludes:
- Family allowances for dependent children (which are included under 'Family/children related allowances' (HY050G)).
- Early retirement benefits paid for labour market reasons or in case of reduced capacity to work (they are included respectively under 'Unemployment benefits' (PY090G) or under 'Disability benefits' (PY130G)).
- Benefits paid to old people who need frequent or constant assistance to help them
  meet the extra costs of attendance when the benefits are reimbursed against a
  certified expenditure.

#### Survivor's benefits (PY110G)

Survivors' benefits refer to benefits that provide a temporary or permanent income to people below retirement age who have suffered from the loss of their spouse, partner or next-of-kin, usually when the latter represented the main breadwinner for the beneficiary.

Survivors eligible for benefit may be the spouse or ex-spouse of the deceased person, his or her children, grandchildren, parents or other relatives. In some cases, the benefit may also be paid to someone outside the family.

A survivor's benefit is normally granted on the basis of a derived right, that is, a right originally belonging to another person whose death is a condition for granting the benefit.

#### It includes:

- Survivor's pension: periodic payments to people whose entitlement derives from their relationship with a deceased person protected by a scheme (widows, widowers, orphans and similar) (even after the standard retirement age).
- Death grant: single payment to someone whose entitlement derives from their relationship with a deceased person (widows, widowers, orphans and similar).
- Other cash benefits: other periodic or lump-sum payments made by virtue of a derived right of a survivor.

#### It excludes:

- Family allowances for dependent children (These benefits are included under Family/children related allowance (HY050G)).
- Funeral expenses
- Additional payments made by employers to other eligible persons to supplement the survivors' benefits pay entitlement from a social insurance scheme, where such payments cannot be separately and clearly identified as social benefits (those payments are included under 'gross employee cash or near cash income' (PY010G)).

Note: periodic payments to people whose entitlement derives from their relationship with a deceased person during a war are included in PY110. Survivor's benefits paid after the standard retirement age are included under 'Old age benefits'

#### Sickness benefits (PY120G)

Sickness benefits refer to cash benefits that replace in whole or in part loss of earnings during temporary inability to work due to sickness or injury.

#### Sickness benefits include:

- Paid sick leave: flat-rate or earnings-related payments intended to compensate the protected person in full or in part for the loss of earnings caused by temporary inability to work due to sickness or injury. These benefits may be paid by autonomous social protection schemes, but they may also be provided by the employer in form of a continued payment of wages and salaries during the period of sickness.
- Paid leave in case of sickness or injury of a dependent child.
- Other cash benefits: miscellaneous payments made to protected people in connection with sickness or injury.

#### It excludes:

- Cash benefits that replace loss of earnings during temporary inability to work in case of pregnancy (these benefits are included under 'Family/children related allowance (HY050G)).
- Cash benefits that replace loss of earnings during temporary inability to work in case of disability (these benefits are included under 'Disability benefits' (PY130G)).
- Payments made for employers to an employee in lieu of wages and salaries through a
  social insurance scheme when unable to work through sickness where such payment
  can not be separately and clearly identified as social benefits (these payments are
  included under 'gross employee cash or near cash income' (PY010G).

 Additional payments made for employers to an employee to supplement the sickness leave pay entitlement from a social insurance scheme, where such payments can not be separately and clearly identified as social benefits (those payments are included under 'gross employee cash or near cash income' (PY010G)).

#### Disability benefits (PY130G)

Disability benefits refer to benefits that provide an income to persons below standard retirement age whose ability to work and earn is impaired beyond a minimum level laid down by legislation by a physical or mental disability.

Disability is the full or partial inability to engage in economic activity or to lead a normal life due to a physical or mental impairment that is likely to be either permanent or to persist beyond a minimum prescribed period.

#### It includes:

- Disability Pension: periodic payment intended to maintain or support the income of someone below standard retirement age who suffers from a disability which impairs his or her ability to work or earn beyond a minimum level laid down by legislation.
- Early retirement in case of reduced ability to work: periodic payments to older workers who retire before reaching standard retirement age as a result of reduced ability to work. These pensions normally cease when the beneficiary becomes entitled to an old age pension.
- Care allowance: benefit paid to disabled people below standard retirement age who
  need frequent or constant assistance to help them meet the extra costs of attendance
  (other than medical care). The benefit must not be a reimbursement of certified
  expenditure.
- Economic integration of the handicapped: allowances paid to disabled people when they undertake work adapted to their condition, normally in a sheltered workshop, or when they undergo vocational training.
- Disability benefits to disabled children in their own right, irrespective of dependency.
- Other cash benefits: periodic and lump-sum payments not falling under the above headings, such as occasional income support and so on.

#### It excludes:

- Benefits provided to replace in whole or in part earnings during temporary incapacity to work due to sickness or injury (these benefits are included under 'Sickness benefits' (PY120G)).
- Family allowances paid to recipients of disability benefits (these benefits are included under 'Family/children related allowances' (HY050G)).
- Benefits paid to the surviving dependants of disabled people, such as pensions (these benefits are included under 'Survivors benefits' (PY110G)).
- Benefits that are a reimbursement of certified expenditure.
- Disability cash benefits paid after the standard retirement age (these benefits are included under 'Old age benefits' (PY100G)).
- Payments made by employers to an employee or former employee in lieu of wages and salaries through a social insurance scheme when unable to work through disability where such payment cannot be separately and clearly identified as social benefits (these payments are included under 'gross employee cash or near cash income' (PY010G).

 Additional payments made for employers to an employee or former employee to supplement the disability leave pay entitlement from a social insurance scheme, where such payments can not be separately and clearly identified as social benefits (those payments are included under 'gross employee cash or near cash income' (PY010G)).

Note: periodic payment intended to maintain or support the income of someone below standard retirement age who suffers from a disability got during a 'war' are included under PY130. Disability cash benefits paid after the standard retirement age are included under 'Old age benefits' (PY100G)).

#### **Comments**

See PY090G

#### National system of pensions

ESSPROSS points out that in the majority of Member States the old-age disability and survivors' functions take part of consistent group of benefits organised like a own system. This group is often known as the 'National System of Pensions'

According to ESPROSS recommendation, all these benefits should be recorded as old-age benefits for people above retirement age as established in the reference national scheme.

For people below retirement age a question should be asked in order to separate the different types of benefits.

#### Survivors function

The survivors' function should include not only survivors' pension from the National insurance scheme, but also survivors' pensions from occupational pensions.

#### Social benefits

See PY090G

#### Education-related allowances (PY140G)

Education allowances refers to grants, scholarships and other education help received by students.

#### **Comments**

See PY090G

The net income component correspond to the gross income components but the tax at source, the social insurance contributions or both ( if applicable) are deducted.

## PY200G: Gross monthly earnings for employees

INCOME (Gross personal income, total and components at personal level)

Cross-sectional

Reference period: current

Unit: all current household members aged 16 and over

Mode of collection: personal interview (proxy as an exception for persons temporarily

away or in incapacity) or registers

## Values

1 - 999999.99 income (national currency)

0 no income

#### Flags

See chapter 'Income flags' additional value allowed:

-2 not applicable (PL040 not = 3 or MS has other source to calculate gender pay gap or for analyse it)

The gross amount refers to the amount before tax and social insurance contributions are deducted.

It refers to the monthly amount in the main job for employees.

It includes usual paid overtime, tips and commission but excludes income from investments-assets, savings, stocks and shares .

If a person receive as a part of salary supplementary payments (13th or 14th month payments), or payments like holiday pay, profit share, bonuses, these payments should be taken into account in a monthly basis.

Only monetary earnings should be taken into account.

See PY010G.

## **Annexes**

## Annex 1: NUTS

## CodeCountry Level 2

## 1) EU Member States

## ÖSTERREICH

AT11	Burgenland (A)
AT12	Niederösterreich
AT13	Wien
AT21	Kärnten
AT22	Steiermark
AT31	Oberösterreich
AT32	Salzburg
AT33	Tirol
AT34	Vorarlberg
ATZZ	Extra-Regio

## **BELGIQUE-BELGIË**

BE10	Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest
BE21	Prov. Antwerpen
BE22	Prov. Limburg (B)
BE23	Prov. Oost-Vlaanderen
BE24	Prov. Vlaams-Brabant
BE25	Prov. West-Vlaanderen
BE31	Prov. Brabant Wallon
BE32	Prov. Hainaut
BE33	Prov. Liège
BE34	Prov. Luxembourg (B)
BE35	Prov. Namur
BEZZ	Extra-Regio

## **BULGARIA**

BG31	Severozapaden
BG32	Severen tsentralen
BG32 BG33	Severoiztochen
BG34	Yugoiztochen
BG34 BG41	Yugozapaden
BG42	Yuzhen tsentralen
BGZZ	Extra-Regio
DULL	L'aua-Kegio

## KYPROS / KIBRIS

CY00	Kypros / Kibris
CYZZ	Extra-Regio

#### **CESKA REPUBLIKA**

CZ01 Praha CZ02 Stredni Cechy CZ03 Jihozapad CZ04 Severozapad CZ05 Severovychod CZ06 Jihovychod CZ07 Stredni Morava CZ08 Moravskoslezsko **CZZZ** Extra-Regio

#### **DEUTSCHLAND**

Stuttgart DE11 DE12 Karlsruhe **DE13** Freiburg **DE14** Tübingen DE21 Oberbayern DE22 Niederbayern DE23 Oberpfalz DE24 Oberfranken DE25 Mittelfranken DE26 Unterfranken DE27 Schwaben **DE30** Berlin Brandenburg DE40 Bremen

## **DE50**

DE60 Hamburg Darmstadt **DE71 DE72** Gießen **DE73** Kassel

**DE80** Mecklenburg-Vorpommern

**DE91** Braunschweig Hannover **DE92 DE93** Lüneburg

Weser-Ems **DE94** DEA1 Düsseldorf

Köln DEA2 DEA3 Münster DEA4 Detmold DEA5 Arnsberg Koblenz DEB1 DEB2 Trier

DEB3 Rheinhessen-Pfalz

DEC<sub>0</sub> Saarland DED2 Dresden DED4 Chemnitz DED5 Leipzig

Sachsen-Anhalt DEE0 DEF0 Schleswig-Holstein

DEG0	Thüringen
DEZZ	Extra-Regio

#### **DANMARK**

DK01 Hovedstaden
DK02 Sjælland
DK03 Syddanmark
DK04 Midtjylland
DK05 Nordjylland
DKZZ Extra-Regio

#### **EESTI**

EE00 Eesti

EEZZ Extra-Regio

#### **ESPAÑA**

ES11 Galicia

ES12 Principado de Asturias

ES13 Cantabria ES21 País Vasco

ES22 Comunidad Foral de Navarra

ES23 La Rioja ES24 Aragón

ES30 Comunidad de Madrid

ES41 Castilla y León ES42 Castilla-La Mancha

ES43 Extremadura ES51 Cataluña

ES52 Comunidad Valenciana

ES53 Illes Balears ES61 Andalucía

ES62 Región de Murcia

ES63 Ciudad Autónoma de Ceuta ES64 Ciudad Autónoma de Melilla

ES70 Canarias ESZZ Extra-Regio

#### SUOMI / FINLAND

FI19 Länsi-Suomi
FI1B Helsinki-Uusimaa
FI1C Etelä-Suomi

FI1D Pohjois- ja Itä Suomi

FI20 Åland FIZZ Extra-Regio

#### **FRANCE**

FR10 Île de France

FR21 Champagne-Ardenne

FR22 Picardie

FR23 Haute-Normandie

FR24	Centre
FR25	Basse-Normandie
FR26	Bourgogne
FR30	Nord - Pas-de-Calais
FR41	Lorraine
FR42	Alsace
FR43	Franche-Comté
FR51	Pays de la Loire
FR52	Bretagne
FR53	Poitou-Charentes
FR61	Aquitaine
FR62	Midi-Pyrénées
FR63	Limousin
FR71	Rhône-Alpes
FR72	Auvergne
FR81	Languedoc-Roussillon
FR82	Provence-Alpes-Côte d'Azur
FR83	Corse
FR91	Guadeloupe
FR92	Martinique
FR93	Guyane
FR94	Réunion
FRZZ	Extra-Regio
ELLADA	
<b>EL</b> 11	"Anatoliki Makedonia, Thraki"
EL12	Kentriki Makedonia
EL13	Dytiki Makedonia
EL14	Thessalia
EL21	Ipeiros
EL22	Ionia Nisia
EL23	Dytiki Ellada
EL24	Sterea Ellada
EL25	Peloponnisos
EL30	Attiki
EL41	Voreio Aigaio
EL42	Notio Aigaio
EL43	Kriti
<mark>EL</mark> ZZ	Extra-Regio
	· · · · · · · · · · · · · · · · · · ·
MAGYAROI	RSZAG
HU10	Kozep-Magyarorszag
HU21	Kozep-Dunantul
HU22	Nyugat-Dunantul
-	Dal Dunantul

HU10	Kozep-Magyarorszag
HU21	Kozep-Dunantul
HU22	Nyugat-Dunantul
HU23	Del-Dunantul
HU31	Eszak-Magyarorszag
HU32	Eszak-Alfold
HU33	Del-Alfold
HUZZ	Extra-Regio

#### **IRELAND**

IE01 Border, Midland and Western

IE02 Southern and Eastern

IEZZ Extra-Regio

#### **ITALIA**

ITC1 Piemonte

ITC2 Valle d'Aosta/Vallée d'Aoste

ITC3 Liguria ITC4 Lombardia ITF1 Abruzzo ITF2 Molise ITF3 Campania ITF4 Puglia ITF5 Basilicata ITF6 Calabria ITG1 Sicilia ITG2 Sardegna

ITH1 Provincia Autonoma Bolzano/Bozen

ITH2 Provincia Autonoma Trento

ITH3 Veneto

ITH4 Friuli-Venezia Giulia ITH5 Emilia-Romagna

ITI1 Toscana ITI2 Umbria ITI3 Marche ITI4 Lazio

ITZZ Extra-Regio

#### **LIETUVA**

LT00 Lietuva LTZZ Extra-Regio

## LUXEMBOURG (GRAND-DUCHÉ)

LU00 Luxembourg (Grand-Duché)

LUZZ Extra-Regio

#### LATVIJA

LV00 Latvija LVZZ Extra-Regio

#### **MALTA**

MT00 Malta MTZZ Extra-Regio

#### **NEDERLAND**

NL11 Groningen NL12 Friesland (NL) NL13 Drenthe NL21 Overijssel

NL22	Gelderland
NL23	Flevoland
NL31	Utrecht
NL32	Noord-Holland
NL33	Zuid-Holland
NL34	Zeeland
NL41	Noord-Brabant
NL42	Limburg (NL)
NLZZ	Extra-Regio

#### **POLSKA**

I OLDINI	
PL11	Lodzkie
PL12	Mazowieckie
PL21	Malopolskie
PL22	Slaskie
PL31	Lubelskie
PL32	Podkarpackie
PL33	Swietokrzyskie
PL34	Podlaskie
PL41	Wielkopolskie
PL42	Zachodniopomorskie
PL43	Lubuskie
PL51	Dolnoslaskie
PL52	Opolskie
PL61	Kujawsko-Pomorskie

PL62 Warminsko-Mazurskie

PL63 Pomorskie PLZZ Extra-Regio

## **PORTUGAL**

PT11	Norte
PT15	Algarve
PT16	Centro (PT)
PT17	Lisboa
PT18	Alentejo
PT20	Região Autónoma dos Açores

PT30 Região Autónoma da Madeira

PTZZ Extra-Regio

## **ROMANIA**

RO11	Nord-Vest
RO12	Centru
RO21	Nord-Est
RO22	Sud-Est
DO21	0 1 1 7

RO31 Sud - Muntenia RO32 Bucuresti - Ilfov RO41 Sud-Vest Oltenia

RO42 Vest

ROZZ Extra-Regio

#### **SVERIGE**

SE11	Stockholm
SE12	Östra Mellansverige
SE21	Småland med öarna
SE22	Sydsverige
SE23	Västsverige
CE21	Nama Mallanavaniaa

SE31 Norra Mellansverige SE32 Mellersta Norrland SE33 Övre Norrland SEZZ Extra-Regio

#### **SLOVENIJA**

SI01 Vzhodna Slovenija SI02 Zahodna Slovenija SIZZ Extra-Regio

#### SLOVENSKA REPUBLIKA

SK01	Bratislavsky kraj
SK02	Zapadne Slovensko
SK03	Stredne Slovensko
SK04	Vychodne Slovensko

SKZZ Extra-Regio

#### **UNITED KINGDOM**

UKC1	Tees Valley and Durham
UKCI	ices valie y and Durnam

UKC2 Northumberland and Tyne and Wear

UKD1 Cumbria

UKD3 Greater Manchester

UKD4 Lancashire
UKD6 Cheshire
UKD7 Merseyside

UKE1 East Yorkshire and North Lincolnshire

UKE2 North Yorkshire UKE3 South Yorkshire UKE4 West Yorkshire

UKF1 Derbyshire and Nottinghamshire

UKF2 Leicestershire, Rutland and Northamptonshire

UKF3 Lincolnshire

UKG1 Herefordshire, Worcestershire and Warwickshire

UKG2 Shropshire and Staffordshire

UKG3 West Midlands UKH1 East Anglia

UKH2 Bedfordshire and Hertfordshire

UKH3 Essex

UKI1 Inner London UKI2 Outer London

UKJ1 Berkshire, Buckinghamshire and Oxfordshire

UKJ2 Surrey, East and West Sussex UKJ3 Hampshire and Isle of Wight

UKJ4 Kent

#### **EU-SILC** Description Target Variables

Gloucestershire, Wiltshire and Bristol/Bath area UKK1 **Dorset and Somerset** UKK2 UKK3 Cornwall and Isles of Scilly UKK4 Devon

UKL1 West Wales and The Valleys

East Wales UKL2 Eastern Scotland UKM2 South Western Scotland UKM3 UKM5 North Eastern Scotland UKM6 Highlands and Islands Northern Ireland UKN0

Extra-Regio **UKZZ** 

#### 2) EFTA countries

#### SCHWEIZ/SUISSE/SVIZZERA

CH01 Région lémanique CH02 **Espace Mittelland** CH03 Nordwestschweiz

CH04 Zürich CH05 Ostschweiz Zentralschweiz CH06

CH07 Ticino

ÍSLAND

Ísland IS

#### **LIECHTENSTEIN**

LI Liechtenstein

#### **NORGE**

NO01 Oslo og Akershus Hedmark og Oppland NO02

Sør-Østlandet NO03 Agder og Rogaland NO04

NO05 Vestlandet Trøndelag NO06 NO07 Nord-Norge

#### 3) Other countries

#### **HRVATSKA**

HR01 Sjeverozapadna Hrvatska

Sredisnja i Istocna (Panonska) Hrvatska HR02

HR03 Jadranska Hrvatska

#### **MONTENEGRO**

ME00 Montenegro

## THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA (FYROM)

MK00 The Former Yugoslav Republic of Macedonia (FYROM)

## TURKIYE

Istanbul
Tekirdag
Balikesir
Izmir
Aydin
Manisa
Bursa
Kocaeli
Ankara
Konya
Antalya
Adana
Hatay
Kirikkale
Kayseri
Zonguldak
Kastamonu
Samsun
Trabzon
Erzurum
Agri
Malatya
Van
Gaziantep
Sanliurfa
Mardin

## **Annex 2: Classification of Countries**

BE	Belgique/Belgie
BG	Bulgaria
CZ	Czech republic
DK	Denmark
DE	Deutschland
EE	Estonia
IE	Ireland
EL	Elláda
ES	España
FR	France
IT	Italia
CY	Cyprus
LV	Latvia
LT	Lithuania
LU	Luxembourg
HU	Hungary
MT	Malta
NL	Nederland
AT	Österreich
PL	Poland
PT	Portugal
RO	Romania
SI	Slovenia
SK	Slovak republic
FI	Suomi
SE	Sverige
UK	United Kingdom
	-
СН	Switzerland
HR	Croatia
ME	Montenegro
MK	The Former Yugoslav Republic of Macedonia (FYROM)
IS	Iceland
NO	Norway
TR	Turkey

## OEU Other European Countries

NAF North Africa

(Algeria, Egypt, Libyan Arab Jamahiriya, Morocco, Sudan, Tunisia, Western Sahara)

WAF West Africa

(Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Saint Helena, Senegal, Sierra Leone, Togo)

OAF Other Africa

USA United States

CAN Canada

CSA Central and South America

NME Near and Middle East

(Armenia, Azerbaijan, Bahrain, Georgia, Iraq, Israel, Jordan, Kuwait, Lebanon, Occupied Palestinian Territory, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, United Arab

Emirates, Yemen)

OAS Other Asia

OCE Australia and Oceania

OTH Other

## **Annex 3: NACE: Statistical Classification Of Economic Activities**

#### NACE Rev.1: To use until the 2008 operation included

#### Section A Agriculture, hunting and forestry

- 01 Agriculture, hunting and related service activities
- 02 Forestry, logging and related service activities

#### **Section B Fishing**

05 Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing

#### Section C Mining and quarrying

- 10 Mining of coal and lignite; extraction of peat
- 11 Extraction of crude petroleum and natural gas; service activities incidental to oil and gas extraction excluding surveying
- 12 Mining of uranium and thorium ores
- 13 Mining of metal ores
- 14 Other mining and quarrying

#### **Section D Manufacturing**

- 15 Manufacture of food products and beverages
- 16 Manufacture of tobacco products
- 17 Manufacture of textiles
- 18 Manufacture of wearing apparel; dressing and dyeing of fur
- 19 Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear
- 20 Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
- 21 Manufacture of pulp, paper and paper products
- 22 Publishing, printing and reproduction of recorded media
- 23 Manufacture of coke, refined petroleum products and nuclear fuel
- 24 Manufacture of chemicals and chemical products
- 25 Manufacture of rubber and plastic products
- 26 Manufacture of other non-metallic mineral products
- 27 Manufacture of basic metals
- 28 Manufacture of fabricated metal products, except machinery and equipment
- 29 Manufacture of machinery and equipment n.e.c.
- 30 Manufacture of office machinery and computers
- 31 Manufacture of electrical machinery and apparatus n.e.c.
- 32 Manufacture of radio, television and communication equipment and apparatus
- 33 Manufacture of medical, precision and optical instruments, watches and clocks
- 34 Manufacture of motor vehicles, trailers and semi-trailers
- 35 Manufacture of other transport equipment
- 36 Manufacture of furniture; manufacturing n.e.c.
- 37 Recycling

#### Section E Electricity, gas and water supply

- 40 Electricity, gas, steam and hot water supply
- 41 Collection, purification and distribution of water

#### **Section F Construction**

45 Construction

## Section G Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods

- 50 Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel
- 51 Wholesale trade and commission trade, except of motor vehicles and motorcycles
- 52 Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods

#### **Section H Hotels and restaurants**

55 Hotels and restaurants

#### Section I Transport, storage and communication

- 60 Land transport; transport via pipelines
- 61 Water transport
- 62 Air transport
- 63 Supporting and auxiliary transport activities; activities of travel agencies
- 64 Post and telecommunications

#### **Section J Financial intermediation**

- 65 Financial intermediation, except insurance and pension funding
- 66 Insurance and pension funding, except compulsory social security
- 67 Activities auxiliary to financial intermediation

#### Section K Real estate, renting and business activities

- 70 Real estate activities
- 71 Renting of machinery and equipment without operator and of personal and household goods
- 72 Computer and related activities
- 73 Research and development
- 74 Other business activities

#### Section L Public administration and defence, compulsory social security

75 Public administration and defence; compulsory social security

#### **Section M Education**

80 Education

#### Section N Health and social work

85 Health and social work

#### Section O Other community, social and personal service activities

- 90 Sewage and refuse disposal, sanitation and similar activities
- 91 Activities of membership organization n.e.c.
- 92 Recreational, cultural and sporting activities
- 93 Other service activities

#### Section P Private households with employed persons

95 Private households with employed persons

#### Section Q Extra-territorial organizations and bodies

99 Extra-territorial organizations and bodies

#### NACE Rev.2: To use from the 2008 operation onwards

#### SECTION A — AGRICULTURE, FORESTRY AND FISHING

- 01 Crop and animal production, hunting and related service activities
- 02 Forestry and logging
- 03 Fishing and aquaculture

#### SECTION B — MINING AND QUARRYING

- 05 Mining of coal and lignite
- 06 Extraction of crude petroleum and natural gas
- 07 Mining of metal ores
- 08 Other mining and quarrying
- 09 Mining support service activities

#### SECTION C — MANUFACTURING

- 10 Manufacture of food products
- 11 Manufacture of beverages
- 12 Manufacture of tobacco products
- 13 Manufacture of textiles
- 14 Manufacture of wearing apparel
- 15 Manufacture of leather and related products
- 16 Manufacture of wood and of products of wood and cork, except
- 17 Manufacture of paper and paper products
- 18 Printing and reproduction of recorded media
- 19 Manufacture of coke and refined petroleum products
- 20 Manufacture of chemicals and chemical products
- 21 Manufacture of basic pharmaceutical products and pharmaceutical preparations
- 22 Manufacture of rubber and plastic products
- 23 Manufacture of other non-metallic mineral products
- 24 Manufacture of basic metals
- 25 Manufacture of fabricated metal products, except machinery and equipment
- 26 Manufacture of computer, electronic and optical products
- 27 Manufacture of electrical equipment
- 28 Manufacture of machinery and equipment n.e.c.
- 29 Manufacture of motor vehicles, trailers and semi-trailers
- 30 Manufacture of other transport equipment
- 31 Manufacture of furniture
- 32 Other manufacturing
- 33 Repair and installation of machinery and equipment

#### SECTION D — ELECTRICITY, GAS, STEAM AND AIR CONDITIONING SUPPLY

35 Electricity, gas, steam and air conditioning supply

## SECTION E — WATER SUPPLY; SEWERAGE, WASTE MANAGEMENT AND REMEDIATION ACTIVITIES

- 36 Water collection, treatment and supply
- 37 Sewerage
- 38 Waste collection, treatment and disposal activities; materials recovery

#### 39 Remediation activities and other waste management services

#### SECTION F — CONSTRUCTION

- 41 Construction of buildings
- 42 Civil engineering
- 43 Specialised construction activities

## SECTION G — WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES AND MOTORCYCLES

- 45 Wholesale and retail trade and repair of motor vehicles and motorcycles
- 46 Wholesale trade, except of motor vehicles and motorcycles
- 47 Retail trade, except of motor vehicles and motorcycles

#### SECTION H — TRANSPORTATION AND STORAGE

- 49 Land transport and transport via pipelines
- 50 Water transport
- 51 Air transport
- 52 Warehousing and support activities for transportation
- 53 Postal and courier activities

#### SECTION I — ACCOMMODATION AND FOOD SERVICE ACTIVITIES

- 55 Accommodation
- 56 Food and beverage service activities

#### SECTION J — INFORMATION AND COMMUNICATION

- 58 Publishing activities
- 59 Motion picture, video and television programme production, sound
- 60 Programming and broadcasting activities
- 61 Telecommunications
- 62 Computer programming, consultancy and related activities
- 63 Information service activities

#### SECTION K — FINANCIAL AND INSURANCE ACTIVITIES

- 64 Financial service activities, except insurance and pension funding
- 65 Insurance, reinsurance and pension funding, except compulsory social security
- 66 Activities auxiliary to financial services and insurance activities

#### SECTION L — REAL ESTATE ACTIVITIES

68 Real estate activities

#### SECTION M — PROFESSIONAL, SCIENTIFIC AND TECHNICAL ACTIVITIES

- 69 Legal and accounting activities
- 70 Activities of head offices; management consultancy activities
- 71 Architectural and engineering activities; technical testing and analysis
- 72 Scientific research and development
- 73 Advertising and market research
- 74 Other professional, scientific and technical activities
- 75 Veterinary activities

#### SECTION N — ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES

#### 77 Rental and leasing activities

- 78 Employment activities
- 79 Travel agency, tour operator reservation service and related activities
- 80 Security and investigation activities
- 81 Services to buildings and landscape activities
- 82 Office administrative, office support and other business support

#### SECTION O — PUBLIC ADMINISTRATION AND DEFENCE; COMPULSORY SOCIAL SECURITY

84 Public administration and defence; compulsory social security

#### SECTION P — EDUCATION

85 Education

#### SECTION Q — HUMAN HEALTH AND SOCIAL WORK ACTIVITIES

- 86 Human health activities
- 87 Residential care activities
- 88 Social work activities without accommodation

#### SECTION R — ARTS, ENTERTAINMENT AND RECREATION

- 90 Creative, arts and entertainment activities
- 91 Libraries, archives, museums and other cultural activities
- 92 Gambling and betting activities
- 93 Sports activities and amusement and recreation activities

#### SECTION S — OTHER SERVICE ACTIVITIES

- 94 Activities of membership organisations
- 95 Repair of computers and personal and household goods
- 96 Other personal service activities

## SECTION T — ACTIVITIES OF HOUSEHOLDS AS EMPLOYERS; UNDIFFERENTIATED GOODS- AND SERVICES-PRODUCING ACTIVITIES OF HOUSEHOLDS FOR OWN USE

- 97 Activities of households as employers of domestic personnel
- 98 Undifferentiated goods- and services-producing activities of private households for own use

#### SECTION U — ACTIVITIES OF EXTRATERRITORIAL ORGANISATIONS AND BODIES

99 Activities of extraterritorial organisations and bodies

# **Annex 4: ISCO: International Standard Classification of Occupations**

## ISCO-08: To use from the 2011 operation onwards

Please refer to:

 $\underline{http://www.ilo.org/public/english/bureau/stat/isco/isco08/index.htm}$ 

## **Annex 5: The enterprise and local unit**

#### The Enterprise

The concept of enterprise is based on those of 'legal units' and 'institutional units'.

Combination of legal units

"The *enterprise* is the smallest combination of *legal units* [defined below] that is an organisational unit producing goods and services, which benefits from a certain degree of autonomy in decision-making, especially for the allocation of its current resources..... An enterprise may be a sole legal unit." However, under certain circumstances, it can "correspond to a grouping of several legal units. Some legal units, in fact, perform activities exclusively for other legal units and their existence can only be explained by administrative factors (e.g. tax reasons), without them being of any economic significance. A large proportion of the legal units with no persons employed also belongs to this category. In many cases the activities of these legal units should be seen as ancillary activities of the parent legal unit they serve, to which they belong to which they must be attached to form an enterprise used for economic analysis.

Hence to constitute the enterprise unit, use is made of legal units that exercise, wholly or partially, a productive activity. *Legal units* include: "legal persons whose existence is recognised by law independently of the individuals or institutions which may own them or are members of them"; and "natural persons who are engaged in an economic activity in their own right". The legal unit always forms, either by itself or sometimes in combination with other legal units, the legal basis for the statistical unit known as the 'enterprise'.

#### Institutional units.

"In the corporate enterprises sector, the enterprise corresponds to the institutional units used in the ESA. Similar institutional units also exist in the general government and private non-profit institutions sectors". Here, the *institutional unit* refers to "an elementary economic decision-making centre characterised by uniformity of behaviour and decision-making autonomy in respect of its principal function. A unit is regarded as constituting an institutional unit if it has decision-making autonomy in respect of its principal function and keeps a complete set of records". This includes public and private companies and public corporations; agencies of general government; and co-operatives or partnerships, public enterprises, non-profit institutions etc., recognised as independent legal entities. Also included are other quasi-corporate enterprises (sole proprietorships and other partnerships and public enterprises) "in so far as their economic and financial behaviour can be separated from that of their owners and resembles that of corporate enterprises". Household enterprises - not necessarily keeping a complete set of accounts but by convention deemed to have autonomy of decision - also form institutional units. The institutional unit in the household sector covers all activities of households, while the term 'enterprise' is reserved exclusively for their production activities.

#### Classification by principal activity

Units such as enterprises or 'local units' are classified in terms of their *economic activity of production*. An 'activity' takes place when "resources such as equipment, labour, manufacturing techniques, information networks of products are combined, leading to the creation of specific goods or services." An activity is characterised by "an input of products (goods and services), a production process and an output of products", and is classified by reference to a specific level of NACE Rev.1.

If a unit carries out more than one activity, the following procedure applies to its classification. A distinction is made between *principal activity* and *secondary activities*. For this purpose "all the activities which are not ancillary activities are ranked according to the gross value-added at factor cost which they generate... If no value-added figures are available, other criteria must be used, such as, for example, employment, payroll, turnover and assets, with a view to obtaining the closest possible approximation to the classification which would have been obtained on the basis of value-added.... If one activity accounts for over 50% of the value added this determines the classification of the unit. In all other cases ... classification is carried out in stages from the highest level of aggregation... [and] at each level [it] must be compatible with the previous level". In the EU-SILC, information is sought on the nature of economic activity of the local unit only to the second digit level (section and division) of the classification.

Principal and secondary activities are "backed up by *ancillary activities*, such as, for example, administration, accounts, data processing, process monitoring, purchasing, sales and marketing, ware housing, repairs, transport and renovation. These ancillary activities within a unit are carried out in order to permit or facilitate production by the unit of goods and services for third parties." The products of ancillary activities do not generate gross fixed capital formation nor normally form part of the unit's end product, and are not themselves supplied to third parties. Examples of ancillary activities include production of small implements for the unit's use, own-account transport, sales of own products, or administrative department of an enterprise. For the purpose of classification according to type of activity of the enterprise or other economic unit, the general rule is that "the ancillary activity is not taken into account when classifying the activity of the entity by which the ancillary activities are carried out".

The concept of principal activity applies to any level of units. The EU-SILC seeks information at the *level of the local unit*, as defined below. In the case of a local unit engaged only in ancillary activity, its activity classification is determined by the principal activity of the unit or units it serves in the enterprise.

#### The Local Unit

An enterprise carries out one or more activities at one or more locations. The *local unit* is "an enterprise or part thereof (e.g. a workshop, factory, warehouse, office, mine or depot) situated in a geographically identified place. At or from this place economic activity is carried out for which - save for certain exceptions - one or more persons work (even if only part-time) for one and the same enterprise." Further explanatory rules include the following.

- ▶ A geographically identified place is interpreted on a strict basis: two units belonging to the same enterprise at different locations (even within the smallest administrative unit of the Member State) are regarded as separate local units.
- ▶ If a person works in more than one place or at home, the local unit is taken to be place from which instructions emanate or from where the work is organised.

The concept of local unit relates to the operational definition of the *establishment* in ISIC Rev.3 as follows. A single local unit may carry out, at a single location, more than one kinds of activities. The operational definition of the establishment corresponds to the *local kind-of-activity unit (local KAU)*, i.e. the part of the enterprise KAU which corresponds to a local unit. As to the definition of enterprise KAU, it "groups all the parts of an enterprise contributing to the performance of an activity at class level (four digits) of NACE Rev. 1 and corresponds to one or more operational subdivisions of the enterprise".

## Annex 6: Register files in EU-SILC

The aim of this annex is to help to fill the register files focusing on the variables and their values.

In the tables on the following pages a "key variable" is variable that identifies the household and its members and links the different files. "x" means that the variable should be filled with any value of the list of target variables. Values in brackets are values of the corresponding flag-variable.

## A) Cross-sectional component

## 1) Household register

	Variable			Value		
	DB010	YEAR - key variable				
	DB020	COUNTRY - key variable				
	DB030	HID - key variable				
	DB040	X				
	DB050			Х		
	DB060			Х		
	DB062			Χ		
	DB070			Х		
	DB075			Х		
	DB080			Х		
	DB090			Х		
	DB100			Х		
	DB110			only longitudina		
	DB120		11	_	21,22,23,[-1]	
	DB130	11		21,22,23,24,[-1]	[-2]	
	?	Yes	No			
	DB135	1	2,[-1]		[-2]	
	P-File RFile RFile H-File					
	ne* persona	al interview co	mpleted			
RB245		1,2		3,4		
RB250	11,13	12,21,22,23,3				
* 16 (1	Yes		No			

<sup>\*</sup> If there is a selected respondent, his/her interview must be completed

YEAR = year of the survey (4 digits)

COUNTRY = country code (2 characters)

HID = sequential number (up to 6 digits)

- must be unique
- can be reused during the following survey years

If the household interview or no personal interview is completed then no data for this household must be provided in the R-, H-, and P-File.

## 2) Personal register

Variable	Value					
RB010	YEAR - key variable					
RB020	COUNTRY - key variable					
RB030	PID - key variable					
RB040	only longitudinal					
RB050	Х					
RB060	only longitudinal					
RB100	only longitudinal					
RB070	Х					
RB080	Х					
RB090	Х					
RB110	only longitudinal					
RB120	only longitudinal					
RB140	only longitudinal					
RB150	only longitudinal					
RB160	only longitudinal					
RB170	only longitudinal					
RB180	only longitudinal					
RB190	only longitudinal					
RB200	Х					
RB210	Х					
RB220	X					
RB230	X					
RB240	X					
RB245	1,2,3	4				
RB250	11,13					
RB260	1,2,3,4,[-1] 5 [-2] [-2]	[-2]				
RB270	[-2] x [-2] [-2]	[-2]				
·	P-File					

YEAR = year of the survey (4 digits)

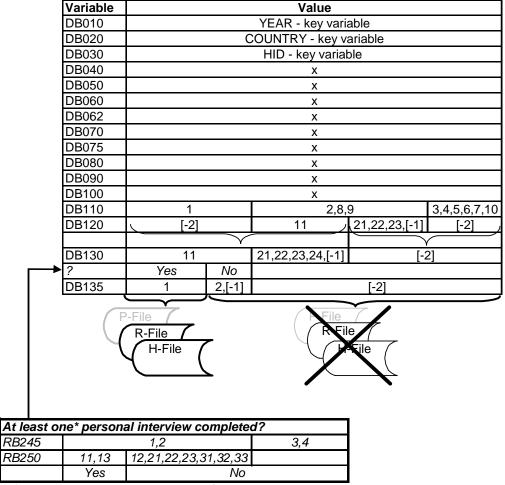
COUNTRY = country code (2 characters)

PID = HID + 2 digit sequential number

- 2 digit sequential number must be unique per household
- can be reused during the following survey years

## B) Longitudinal component

### 1) Household register



\* If there is a selected respondent, his/her interview must be completed

YEAR = year of the survey (4 digits)

COUNTRY = country code (2 characters)

HID = household number (up to 6 digits) + 2 digit split number

- household number must be unique during whole survey
- split number must be unique per household
- split number is '00' for a new household (DB110 = 9)
- households from previous wave (DB110 = 1,2,3,4,5,6,7 or 10) keep their HID
- For every split-off household (DB110 = 8) the next not used split number will be given

If the household interview or no personal interview is completed then no data for this household must be provided in the R-, H-, and P-File.

#### Split of a household:

- The household which stays at the same address than previous year keeps the HID (DB110 = 1).
- The split-off household(s) receive(s) a HID with the household number and the next not used split number (DB110 = 8).
- If no household stays at the same address than previous year, then the household with the member with the lowest 'person number' for that HID in the previous wave keeps the HID (DB110 = 2).

### Fusion of two sample households (each household has an own HID in previous year):

- The new household keeps the HID of the household which was at the same address in the previous year (DB110 = 1).
- The other HID will be coded DB110 = 10 and dropped next year.
- If no household stays at the same address than previous year, the HID of the previous household of the member with lowest 'person number' in the current year will be chosen.

## Follow-up of the households

	DB110 (fixed HID)				
year - 1	current year	year + 1			
1,2,8,9	1	1,2,3,4,5,6,7,10			
1,2,0,9	except DB130 = 21 or DB130_F= -1	drop			
	2	1,2,3,4,5,6,7,10			
1,2,8,9	except DB120 = 21,23 or DB120_F= -1 or DB130 = 21 or DB130_F= -1	drop			
1,2,8,9	3	drop			
1,2,8,9	4	drop			
1,2,8,9	5	drop			
1,2,8,9	6	drop			
1,2,8,9	7	drop			
	8	1,2,3,4,5,6,7,10			
na	except DB120 = 21,23 or DB120_F= -1 or DB130 = 21 or DB130_F= -1	drop			
	9	1,2,3,4,5,6,7,10			
na	except DB120 = 21,22,23 or DB120_F= -1 or DB130 = 21,22,23,24 or DB130_F= -1	drop			
1,2,8,9	10	drop			

except

2 consecutive years: year - 1 + current year	year + 1
DB120 not = 11 or DB130 not = 11 or DB135 not = 1	drop

### 2) Personal register

Variable			Value					
RB010			YEAR - key variable	;				
RB020		CC	DUNTRY - key varia	ble				
RB030			PID - key variable					
RB040			HID - key variable					
RB050			only cross-sectiona					
RB060			Х					
RB100			Х					
RB070			Х					
RB080			Х					
RB090			Х					
RB110		1,2,4	4	3	5	6	7	[-1]
RB120		[-2]		[-2]	Х	[-2]	[-2]	[-2]
RB140		[-2]		[-2]	Х	Х	[-2]	[-2]
RB150		[-2]		[-2]	Х	Х	[-2]	[-2]
RB160		[-2]		[-2]	Х	Х	Х	[-2]
RB170		[-2]		[-2]	Х	Х	Х	[-2]
RB180		[-2]			[-2]			
RB190		[-2]		Х		[-	2]	
RB200	x [-2]							
RB210	x [-2				2]			
RB220			Х			[-	2]	
RB230			Х			[-	2]	
RB240		Х				2]		
RB245		1,2,3					2]	
RB250				[-2]		[-	2]	
RB260	1,2,3,4,[-1] 5 [-2] [-2] [-2] [-2			2]				
RB270	[-2] x	[-2]	[-2]	[-2]		[-	2]	
'	$\overline{}$							
	P-File	-						

YEAR = year of the survey (4 digits)

COUNTRY = country code (2 characters)

 $PID = original\ HID + 2\ digit\ sequential\ number$ 

- must be unique during whole survey
  - 2 digit sequential number must be unique per household
  - members from previous year (RB110 = 1,2,5 or 6) keep their PID

HID = current HID (= DB030)

#### Sample person (first year member of a household)

RB100 (PID first year in survey independent from HID)						
RB110			1			3,4
RB245	1	2	3	4	4	-
AGE*	-	-	-	<14	14+	-
RB100	1	1	2	2	1	2

<sup>\*</sup>Age at end of Income Reference Period for a 4 year panel. For panels with longer duration the age decreases.

Members from previous year keep the value of RB100.

#### Follow-up of the household members

RB	RB110 (fixed PID) in same HID				
year - 1	current year	year + 1			
1,2,3,4	1	1,5,6			
na	2	1,5,6			
na	3	1,5,6			
na	4	1,5,6			
1,2,3,4	5*	drop			
1,2,3,4	6	drop			
na	7	na			

First year: RB110 = 1

- If DB135 not = 1 in year 1, then the values of year 1 correspond to year 2
- If  $RB110_F = -1$  the person normally will be dropped in year + 1
- If RB110 = 5 and RB120 = 1 and RB100 = 1 then this PID will be recorded twice in the R-file, but with different RB040 (RB110 = 5 with RB040 of previous year (household where the person moved out) and RB110 = 2 with RB040 of current year (household where the person lives actually))

<sup>\*</sup>RB120 = 1 and RB100 = 1: PID exist also with RB110 = 2

## **Annex 7: Company car**

#### Different approaches on how to impute a value for the use of a company car

#### 1. Direct approach

#### 1.1. Individual tax assessment of the benefit

Apparently the simplest and most direct approach is to ask directly for the amount of benefit for which the recipient is assessed for tax purposes.

#### **Advantages**

- Very simple approach. Only two questions are needed:
  - 1. Whether there is private use of company car, and if so,
  - 2. the corresponding amount assessed for tax (this amount should be taken into account the associated cost).
- Furthermore, no modelling or collection of secondary information is required. (In any case, in the presence of item non-response to the question, the alternative series of questions described below can (and should) be followed for the respondents concerned in the same survey).

#### Drawbacks

- It may be subjected to large levels of non-response and/or response errors; and possibly also under-coverage (benefits not being reported, especially if not taxed).
- Secondly, that the approach depends entirely on national taxation rules.

#### 1.2. Car allowance

While the purchase and provision by the employer of an actual vehicle at least partly for private use is the normal form in which the benefit is provided, sometimes the benefit is simply in the form of a regular (such as monthly) cash allowance along with normal salary. It is even possible that there is no reference to any specific "company car". In this situation the direct approach in terms of the additional income as assessed for income tax purposes is the only possible approach.

Another important point to note is that in a survey, a benefit in this form may already have been included in the reported income from work, and care is needed to avoid double counting.

Sometimes, the employee has to forgo reimbursement of certain travel expenses as a consequence of receiving a car allowance, expenses which would normally be claimed in the absence of such an allowance. In principle, such expenses should be deducted from the allowance to obtain the *net* level of benefits received. The amount of benefit assessed for tax purposes is again likely to be the most direct and convenient source of this information.

#### 2. Indirect or modelling approaches

The second approach is to begin with obtaining information on characteristics of the company car. These characteristics are then used to determine the "utility" which the benefit has for the recipient per unit of time (such as over a year). Exactly which characteristics are collected

depends very much on the model or the approach used for this conversion. Basically there are two types of "indirect" approaches:

## 2.1. Conversion using tax rules

One is to use national tax rules to make this conversion. This differs from the direct approach (A) in that here *tax-related information is not sought from individual respondents*, *but is compiled at the macro-level outside the survey* – hence it does not involve increased response burden.

#### <u>Advantages</u>

- The approach is also likely to be less prone to response, non-response and coverage errors than the direct approach.
- It is still relatively simple: either the characteristics of interest such as make, model and registration year of the car or the associated cost are easily reported<sup>1</sup>.

#### Drawbacks

- Comparability problems (using the value of the benefit as assessed by the tax authorities, since this value is likely to vary by country).
- The approach does depend on national tax rules, and it is not quite in line with the hitherto stated preference for EU-SILC.

#### 2.2. Valuation on the basis of accrued saving

An alternative approach would be to valuate the benefit of private use of company car in terms of the amount the recipient would have to pay over the reference period to enjoy the same benefit from the use of own vehicle.

Seen in the above mentioned terms, the benefit equals the sum of:

- (i) **Depreciation** over the reference period in the capital value of the car, plus
- (ii) coverage by the employer of other costs which would normally fall on the user of his/her own car. The latter may cover car insurance and possibly maintenance and major repair costs, but would normally exclude fuel and other running costs.

The idea is not to collect (i) and (ii) from individual respondents, but to use external sources to construct suitable average schedules for these.

#### Advantages

- The approach is independent of the national tax rules.

- Its comparability is affected by national differences in prices of the identical vehicles, both as a result of differences in sales taxes and in market conditions (these differences can be considered legitimate, as they reflect actual differences in prices, and hence differences in the value of the derived benefit).

#### **Drawbacks**

 To construct a depreciation schedule, i.e. a model of the decline in the market value of the car over time.

<sup>&</sup>lt;sup>1</sup> the specific characteristics need to be collected depend on what is required for the application of the tax assessment rules in the country concerned. Normally, it may be simpler to collect information from the respondent on physical characteristics (make, model, year, etc.) of the company car, than on the current prices. If information on prices is needed for the purpose of tax assessment, then it may be compiled externally as a function of the physical characteristics (see B.2)

 It requires a manual codification of model, make, etc to compare with external sources.

## The depreciation method

### How to calculate depreciation schedule?

The main requirement is to construct a 'depreciation model'. The idea is to impute to the employee the amount the recipient would have to pay over the reference period to enjoy the same benefit from the use of own vehicle.

Depreciation = 
$$\frac{Purchase \ prices - selling \ prices \ at \ X}{X}$$
Where X = 'the average age of a company car'

Note. The selling price could be replace by the 'residual leasing value at X'.

To calculate the 'Purchase price' and the 'selling price', the make, the model, the registration year and other characteristics of the car can be used. As was already mentioned, such characteristics may be more readily collected in the surveys. List prices or manufacturer's recommended retail prices (RRP) are readily available for a wide range of new cars. For instance, the Competition DG produces a list of manufactures recommended retail prices by the manufacturer, make and model, in all the EU countries. If a type of car is not included in the list, the RRP should be available from the manufacturer's website. If an RRP is not available for a particular country, then it could be estimated based on the price of a similar car or the price relative to other cars in a country with a similar pricing structure. The list price should include VAT and vehicle registration tax.

For calculating 'the average age of a company car', external information from enterprises can be used. If this information is not available an average of 5 could be considered.

### An alternative method

An alternative method for valuating the benefit of private use of company car in terms of the amount the recipient would have to pay over the reference period to enjoy the same benefit from the use of own vehicle, could be the amount paid per year of renting a similar car for X years. This amount could be obtained from external sources (renting companies).

In the estimation of the value to be imputed, it is necessary to take into account if some of the associated cost (reparations, insurance, etc.) are included.

### The extent of use

Valuation of the benefit derived from private use of company car also depends on the extent to which the provision is used during the period concerned. In principle, this extent of use is determined by (i) the *duration of use* during the reference period, and (ii) the *intensity of use* during that period.

### Duration of use

This is easily measured in terms of the number of months during the reference year for which the company car was available for private use. This information may not be required in two special situations:

- 1. When the current income concept (rather than the concept of income during the reference year) is used, information on private use of company car is also obtained on a current basis, and its value is annualised in the same way as other income components.
- 2. When the "direct method" (method A described above) is used, it records the total amount of benefit for which the recipient is assessed for tax purposes during the reference period. That itself is the target variable, and hence no further information is required on the duration (or intensity) of private use<sup>1</sup>.

In all other cases, the models described in the preceding section give the "utility per unit of time (year)", which has to be multiplied by the duration of use to obtain the amount of benefit actually received during the income reference period.

### Intensity of use

It may appear that the last mentioned calculation should also take into account the intensity of private use during the period the vehicle is available for the purpose. The intensity may for instance be measured by the proportion of private use in the total use of company car, and/or mileage of private use.

However, even without reference to practical difficulties in obtaining such information in a survey, it can be argued *that it is not necessary or logical to introduce this factor*. The percentage of private in total use may, for instance, be determined mainly by the extent to which the employee is required to use the vehicle for work-related purposes, rather than by the extent of private use. Similarly, the mileage of private use may be determined largely by the persons private needs and preferences: restriction on the form or extent of private use are not common for company vehicles provided for the purpose. Hence it cannot be assumed that the level of private use of company car – whatever that level is in the particular circumstances of the person concerned – generally differs in any systematic way from what it would be with ones own car. The amount of benefit is the money saved from not using ones own car for the purpose.<sup>2</sup>

### **Conclusions**

- It is not possible to have a single approach in all of countries.
- Although a method based on the assess for tax purposes implies relaxing the earlier stated intention that the approach should not depend on particularities of the national taxation systems, this approach is essentially the one applicable in situations where the information is obtained from registers, or where a regular allowance rather than actually a car is provided; and the approach is well-established in some other countries.

The intention is not to exclude fuel if it is provided free for PRIVATE use of company car – certainly not in principle or as a matter of definition. But in practice, probably this provision is not common or at least not significant. In view of the need for simplicity ("Recommendation 1" above), we have indicated that it may be left out. In any case, component (ii) is to be estimated from external data (normally as a function of physical characteristics of the car), and hence if in a country free fuel is a significant part, then an average allowance may be included for it in the estimation of that component.

The case is not all that dissimilar from the common one of personal computers. The cost of a PC and the rate of its depreciation - and hence in our hedonistic world its "value" to the individual - is the same whether the person uses it for intensive SAS computations all hours of the day or merely for video games at the week-end.

# Annex 8: 2012 Module on Housing conditions (guidelines and questionnaire)

## Unit

The target variables relate to two types of units:

- Household: all variables except for the ones related to the "change of the dwelling".
- Individual: variables related to the "change of the dwelling".

## Mode of data collection

For variables asked at household level (section 1 in the list below), the mode of data collection is personal interview with the household respondent.

For variables asked at individual level (section 2 in the list below), the mode of data collection is personal interview with all current household members aged 16 years old and over or, if applicable, with the household selected respondent.

Owing to the characteristics of the information to be collected, only personal interviews (proxy interviews as an exception for persons temporarily away or in incapacity) or extracted information from registers are allowed.

# Reference period

The target variables relate to four types of reference periods:

- Usual: an ordinary winter/summer, in the area where the dwelling is located (for the variables "dwelling comfortably warm during winter time" and "dwelling comfortably cool during summer time").
- Last five years (for the variables related to the "change of the dwelling"). It refers to the five years prior to the date of the interview.
- Next six months (for the variables related to "risk of changing the dwelling"). It refers to the six months succeeding to the date of the interview.
- Current (for all other variables).

## **Definitions**

1. Dwelling installations and facilities

- (a) Electrical installations: wiring, contacts, sockets and other permanent electrical installations in the dwelling.
- (b) Plumbing/water installations: pipes, taps, drainage and outlets.
- (c) Central heating or similar: a housing unit is considered 'centrally heated' if heating is provided either from a community heating centre or from an installation built in the building or in the housing unit, established for heating purposes, without attention paid to the source of energy. Fixed electrical radiators, fixed gas heaters and similar are included if they form part of the heating installation. The heating shall be available in most rooms.
- (d) Other fixed heating: a housing unit is considered heated by 'other fixed heating' when the heating is not considered as 'central heating/or similar'. It includes stoves, heaters, fireplaces and similar ('fixed' air conditioning appliances used as a heating facility included).
- (e) Other non-fixed heating: no fixed heating system or heating device. The dwelling could however be equipped with portable heating, including portable air conditioning appliances used as a heating facility.
- (f) Adequate: sufficient to satisfy the general requirements/needs of the household. An installation which is permanently out of order is considered as no installation. Inadequate installations can be: installations in bad condition, dangerous installations, installations which are regularly out of order, where there is not enough electrical power/pressure for the water to be used, the water is not drinkable, or there is limited availability. Minor temporary problems such as a blockage in the outlet do not mean that the installation is inadequate.
- 2. Accessibility of basic needs
- (a) Accessibility: this shall relate to the services used by the household having regard to the financial, physical, technical and health conditions.

Accessibility of services is to be assessed in terms of physical and technical access, and opening hours, but not in terms of quality, price and similar aspects. Consequently, the access should refer to an objective and physical reality. It should not be based on a subjective feeling.

The access should be determined in relation to the services actually used by the household. If the household does not use the service, flag -2 'Not applicable' should be used.

The physical access has to be assessed in terms of distance but also of infrastructure and equipment for example for respondents with a physical disability.

Accessibility in terms of phone-banking and PC-banking should also be part of the assessment, if these ways are actually used by the household.

The services provided at home should also be taken into account, if they are actually used by the household. The accessibility has thus to be evaluated regardless the way(s) the household access to the service.

The accessibility should be considered at the level of the household, the difficulty to access has to be evaluated for the household as a whole. If the respondent doesn't use a service but other household member(s) do, the respondent should assess the accessibility according to this (these) other household member(s).

If one member of the household has a disability, but if another member can access easily to the service for him/her and the access to the service does not cause any problems for the

household in the sense that it doesn't represent any burden for the household, then the service would be considered as easily accessible by the household.

On the other hand, if one member of the household has a disability and can hardly access a service (which he needs as an individual) and the household has no resource available to provide him support (e.g. if no other member can access easily to the service for him/her), or really represents a burden for the household, in this case the access to the service would be considered as difficult for the household.

- (b) Grocery services: services which can provide most of the daily needs.
- (c) Banking services: withdraw cash, transfer money and pay bills.
- (d) Postal services: send and receive ordinary and parcel post.
- (e) Public transport: bus, metro, tram and similar.
- (f) Primary health care services: general practitioner, primary health centre or similar.
- (g) Compulsory schools: if more than one child in the household is in compulsory school the respondent should refer to the one with the most difficulty.

## **Data transmission**

The target secondary variables should be sent to Eurostat in the Household Data file (H-file) and in the Personal Data File (P-file) after the target primary variables.

# 1. ITEMS ASKED AT HOUSEHOLD LEVEL

# HC010: Shortage of space in the dwelling

Values		
1	Yes	
2	No	
Flags		
1	Filled	
-1	Missing	

This variable refers to the respondent's opinion/feeling about shortage of space in dwelling.

## HC020: Size of the dwelling in square meters

Val	Values		
	0-999 square meters		
Fla	Flags		
	1 Filled		
	-1 Missing		

The dwelling size refers to the useful floor space using the same definition as for the population and housing census and as recommended in the Programme of Current Housing and Building Statistics for Countries in the UNECE Region (Statistical Standards and Studies No. 43).

Useful floor space is defined as the floor space measured inside the outer walls excluding non-habitable cellars and attics and, in multi-dwelling buildings, all common spaces.

Household should declare the area of dwelling that can be exclusively used. If part of the dwelling area is shared with other households (within the same dwelling) the procedure is as follow:

- If the number of persons living in all households occupying the same dwelling is known, the shared area should be divided by the number of persons living there and the part of shared area should be added to each household according to the number of its members;
- If only the number of households occupying the same dwelling is known, the shared area should be divided by the number of households and the equal share should be added to each household;
- In all other cases the shared space should be added to each household.

# HC030: Adequate electrical installations

Values	
1	Yes
2	No
Flags	
1	Filled
-1	Missing
-2	Not applicable (no electrical installations)

The electrical installations refer to wiring, contacts, sockets and other permanent electrical installations in the dwelling.

The term "adequate" means sufficient to satisfy the general requirements/needs of the household. An installation which is permanently out of order is considered as no installation.

Inadequate installations can be: installations in bad condition, dangerous installations, installations which are regularly out of order, where there is not enough electrical power or there is limited availability.

Minor temporary problems such as a blockage in the outlet do not mean that the installation is inadequate.

# **HC040:** Adequate plumbing/water installations

Values	
1	Yes
2	No
Flags	
1	Filled
-1	Missing
-2	Not applicable (no plumbing/water installations)

The plumbing/water installations refer to pipes, taps, drainage and outlets.

The term "adequate" means sufficient to satisfy the general requirements/needs of the household. An installation which is permanently out of order is considered as no installation.

Inadequate installations can be: installations in bad condition, dangerous installations, installations which are regularly out of order, where there is not enough pressure for the water to be used, or there is limited availability.

Minor temporary problems such as a blockage in the outlet do not mean that the installation is inadequate.

## HC050: Dwelling equipped with heating facilities

V	alues	
	1	Yes – central heating or similar
	2	Yes – other fixed heating
	3	Yes – non-fixed heating
	4	No – no heating at all
Fl	lags	
	1	Filled
	-1	Missing

This variable should refer to the degree of comfort of the dwelling, the first category corresponding to the most comfortable and the fourth category to the less comfortable. When deciding if a dwelling belongs to the first category, a key element should be the availability of heating in most rooms.

If different modes of heating are combined, the aspect of "degree of comfort" must be kept in mind. If the combination allows a high level of comfort and if heating is available in most rooms, the first category should be chosen. An example of this situation is a fireplace (in the living room) combined with panel heaters (in the other rooms).

The four categories are defined as follows:

### **Central heating or similar**

The heating is provided either from a community heating centre or from an installation built in the building or in the housing unit, established for heating purposes, without regard to the source of energy. Fixed electrical radiators, fixed gas heaters and similar are included if they form part of the heating installation. The heating shall be available in most rooms.

This category contains fixed electrical radiators. So, if a dwelling is equipped with electrical panel heaters and if the heating is available in most rooms, then it will belong to this first category.

### Other fixed heating

The heating is not considered as 'central heating/or similar'. The dwelling is equipped with stoves, heaters, fireplaces or similar heating device. This category also includes 'fixed' air conditioning appliances used as a heating facility.

## **Non-fixed heating**

There are no fixed heating systems or heating device. The dwelling could however be equipped with non-fixed heating, including portable air conditioning appliances used as a heating facility.

### No heating at all

The dwelling is not equipped with any device for heating purposes (fixed or non-fixed).

# HC060: Dwelling comfortably warm during winter time

V	alues		
	1	Yes	
	2	No	
F	lags		
	1	Filled	
	-1	Missing	

This variable refers to the equipment of the dwelling in terms of heating system and insulation.

The concern of this variable covers the two following concepts: "Is the heating system efficient enough to keep the dwelling warm?" and "Is the dwelling sufficiently insulated against the cold?". These two concepts should be kept in mind by the interviewers but the two questions have not been explicitly recorded in the questionnaire. The central point concerns the general state of the dwelling, i.e. is the condition of the dwelling good enough to allow that it is comfortably warm during winter time.

It should not be confused with the variable HH050 "Ability to keep home adequately warm" which refers to the financial resources of the household and for which the concern could be expressed as: "Does the household have sufficient financial resources to keep its dwelling sufficiently warm during winter time?"

# HC070: Dwelling comfortably cool during summer time

V	alues				
	1	Yes			
	2	No			
Fl	ags				
	1	Filled			
	-1	Missing			

This variable refers to the equipment of the dwelling in terms of insulation and cooling system.

The concern of this variable is the following: "Is the cooling system efficient enough to keep the dwelling cool?" and/or "Is the dwelling sufficiently insulated against the warm?"

# HC080: Overall satisfaction with the dwelling

V	alues	
	1	Very dissatisfied
	2	Dissatisfied
	3	Satisfied
	4	Very satisfied
Fl	lags	
	1	Filled
	-1	Missing

The variable refers to the respondent's opinion/feeling about the degree of satisfaction with the dwelling in terms of meeting the household needs/opinion on the price, space, neighbourhood, distance to work, quality and other aspects (including the availability of a garage or parking space).

# HC090: Accessibility of grocery services

Values	
1	With great difficulty
2	With some difficulty
3	Easily
4	Very easily
Flags	
1	Filled
-1	Missing
-2	Not applicable (services not used by the household)

About the concept of "accessibility", see explanations in the "Definitions" section.

The grocery services refer to the services which can provide most of the daily needs (food, etc.).

The aspects linked to the prices, like the affordability, should not be considered. Only the physical access and the adequacy of the opening hours should be taken into account.

The accessibility could also be assessed in a technical point of view if the technology allows an access to these services, for example order of daily needs via Internet or by phone.

Consequently, the access to order of daily needs via Internet or by phone should be evaluated by the household, if the household uses it.

The accessibility has to be evaluated according to the facility/difficulty to buy the daily products (to fill the fridge) no matter if it is done by internet, phone or "ordinary shopping".

# HC100: Accessibility of banking services

Va	lues	
	1	With great difficulty
	2	With some difficulty
	3	Easily
	4	Very easily
Fla	ags	
	1	Filled
	-1	Missing
	-2	Not applicable (services not used by the household)

About the concept of "accessibility", see explanations in the "Definitions" section.

The banking services refer to the following actions: withdraw cash, transfer money and pay bills.

When assessing the accessibility, the physical access and the opening hours should be taken into account.

For the banking services, the technical access could also intervene. The accessibility in terms of phone-banking and PC-banking should also be part of the assessment, if these ways are actually used by the household.

The accessibility has to be evaluated according to the facility/difficulty to transfer, withdraw money... no matter if it is done by phone-banking and PC-banking or in a bank.

# HC110: Accessibility of postal services

Values	
1	With great difficulty
2	With some difficulty
3	Easily
4	Very easily
Flags	
1	Filled
-1	Missing
-2	Not applicable (services not used by the household)

About the concept of "accessibility", see explanations in the "Definitions" section.

When assessing the accessibility, the physical access and the opening hours should be taken into account.

The postal services refer to the sending and receiving of ordinary postal services (e.g. letters, registered mails, parcels etc.) by any postal service. Postal services provided by both public and private companies should be taken into account.

# HC120: Accessibility of public transport

V	alues	
	1	With great difficulty
	2	With some difficulty
	3	Easily
	4	Very easily
Fl	lags	
	1	Filled
	-1	Missing
	-2	Not applicable (services not used by the household)

About the concept of "accessibility", see explanations in the "Definitions" section.

The public transport refer to the bus, metro, tram and similar.

As the accessibility should be assessed in terms of physical and technical access, if the respondent or another household member has a physical disability and if the available public transport is not adapted to his disability, a difficulty in the accessibility should be recorded.

If the public transport are too far away or have inappropriate timetable, the access would also be considered as difficult.

# HC130: Accessibility of primary health care services

Val	lues	
	1	With great difficulty
	2	With some difficulty
3	3	Easily
4	4	Very easily
Fla	gs	
	1	Filled
-	-1	Missing
-	-2	Not applicable (services not used by the household)

About the concept of "accessibility", see explanations in the "Definitions" section.

The primary health care services refer to the general practitioner, a primary health centre, a casualty department or similar, where first-aid treatment could be received.

# HC140: Accessibility of compulsory school

Values	
1	With great difficulty
2	With some difficulty
3	Easily
4	Very easily
Flags	
1	Filled
-1	Missing
-2	Not applicable (services not used by the household)

About the concept of "accessibility", see explanations in the "Definitions" section.

The accessibility is assessed in relation to the school actually attended by the children of the household.

If more than one child in the household is in compulsory school, the respondent should refer to the one with the most difficulty.

This variable only concerns children whose age corresponds to the compulsory school attendance in the country, and not the other children even if the majority of them go to school.

For example in Luxembourg, where the compulsory school attendance is fixed from 4 years until 15 years, the household has to evaluated the school accessibility only for the children (member of the household) aged from 4 until 15. Children aged from 16 to 18 must not be taken into account even if nearly all of them in the country attend the school.

# HC150: Immediate risk of changing the dwelling

Va	alues	
	1	Yes – household will be forced to leave the dwelling
	2	Yes – household plans to change the dwelling
	3	No – household does not expect any change of the dwelling
Fla	ags	
	1	Filled
	-1	Missing

This variable records if the household expects to be forced to leave the dwelling or expects to change the dwelling in the next 6 months.

The household can expect to be forced to leave the dwelling due to end of the contract, eviction, financial or other reasons (for detailed explanation see variable HC160).

The household can expect to change the dwelling due to education, employment, family or other related reasons.

# HC160: Main reason for the expectation to be forced to leave the dwelling

Values	
1	Household will be forced to leave, since notice has been/will be given by
	the landlord on termination of the contract
2	Household will be forced to leave, since notice has been/will be given by
	the landlord in the absence of a formal contract
3	Household will be forced to leave because of eviction
4	Household will be forced to leave for financial difficulties
5	Household will be forced to leave for some other reasons
Flags	
1	Filled
-1	Missing
-2	Not applicable (HC150=2 or 3)

If the household expects to be forced to leave the dwelling for several reasons during the reference period, the main reason should be given.

The categories are defined as follows:

## **Eviction**

The household will be forced to move for legal reasons.

## **Financial difficulties**

The expectation to be forced to leave the dwelling is due to problems for paying the rent or mortgage, but no legal decisions have occurred. It should also include the situation when there are problems with paying the maintenance costs and/or utility bills.

# 2. ITEMS ASKED AT INDIVIDUAL LEVEL

# PC170: Change of the dwelling

V	alues	
	1 2	Yes No
Fl	ags	
	1	Filled
	-1	Missing
	-3	Not selected respondent

The reference period is 'the last five years'.

This variable records if there has been at least one change of the dwelling during the last five years.

Flag -3 should only be used in countries where the selected respondents' model applies.

# PC180: Main reason for the change of the dwelling

Values	
1	Family-related reasons
2	Employment-related reasons
3	Education-related reasons
4	Eviction
5	Landlord did not prolong the contract
6	Desire to change tenure status
7	Dwelling-related reasons
8	Neighbourhood-related reasons
9	Financial reasons
10	Other reasons
Flags	
1	Filled
-1	Missing
-2	Not applicable ( $PC170 = 2$ )
-3	Not selected respondent

The reference period is 'the last five years'.

If there have been several changes of the dwelling per person during the reference period, the main reason for the most recent change should be given.

Note that if the household changed the dwelling due to the fact that one household member changed of job, this person should refer to employment-related reasons (value = '2') and the other members of the household should usually refer to family-related reasons (value = '1'), except if, for instance, another household member had another reason of changing of dwelling (for instance also changing at the same time for education- or employment-related reason).

Flag -3 should only be used in countries where the selected respondents' model applies.

The categories are defined as follows:

### **Family-related reasons**

This category relates to a change in the marital or partnership status.

The change of the dwelling could occur in order to establish own household, to follow partner/parents or to obtain better school or care facilities for children or other dependants.

## **Employment-related reasons**

This category includes the following reasons: to start a new job; to be transferred from an existing job; to look for work; to be closer to work/easier to commute; to be made redundant; to retire.

## **Education-related reasons**

This category includes for example a change of the dwelling in order to attend or to leave/graduate college/university.

## **Desire to change tenure status**

This category corresponds to the desire to change the tenure status.

## **Dwelling-related reasons**

This category corresponds to the desire to have a new or a better house/apartment.

## **Neighbourhood-related reasons**

This category corresponds to the desire to seek a better neighbourhood (with less crime, more shops, more facilities, etc.).

## **Eviction**

This category refers to the situation when the household is forced to move for legal reasons.

## Landlord did not prolong the contract

This category corresponds to a non-renewal of the contract or to the initial establishment of a short-term contract.

## **Financial reasons**

This category relates to the change of the dwelling due to rent or mortgage paying problems, but no legal decisions have occurred. It should also include the situation when there are problems with paying the maintenance costs and/or utility bills.

## Other reasons

This category includes for example a change of the dwelling for health and/or other reasons.

It refers also to the situation when an individual sharing the dwelling with others decides to change the dwelling and live with other people not changing, for instance, the tenure status.

# 3. ADDITIONAL VARIABLES FOR NATIONAL CONSIDERATION

# Production of renewable energies for own consumption

Va	alues	
	1	Yes – firewood
	2	Yes – solar-thermal
	3	Yes – solar-photovoltaic
	4	Yes – geothermal or environmental heat (heat pumps)
	5	Yes – other
	6	No
Fla	ags	
	1	Filled
	-1	Missing

This variable refers to the equipment of the dwelling for producing renewable energy and using it on a regular basis for heating purposes and/or electricity production and/or warm water supply. If several types of renewable energy are used in the dwelling, the one mainly used should be given. Only domestic production of renewable energy should be recorded under this variable, i.e. it excludes the energy bought from a third party. It includes the collective systems serving more than one household.

#### **Firewood**

- Used in central heating system: the equipment necessary to use wood for producing heat and/ or warm water in a central heating system.
- Used in individual stoves: the equipment necessary to use wood for burning and produce heat in an individual stove.

## **Solar-thermal**

The equipment for the production of domestic hot water.

### **Solar-photovoltaic**

The equipment to convert sunlight into electricity by the use of solar cells usually made of semi-conducting material which exposed to light generates electricity.

## **Geothermal or environmental heat (heat pumps)**

A device that brings geothermal or Environmental heat in the dwelling using a compressor (mechanical work).

## **Heat pumps**

A device that brings heat in the dwelling from the environment using a compressor (mechanical work).

## Other

Other technologies allowing the exploitation of renewable energy.

# Dwelling equipped with air conditioning facilities

V	alues		
	1	yes	
	2	no	
F	lags		
	1	filled	
	-1	missing	

The air conditioning facilities are systems for controlling, especially lowering, the temperature and humidity of an enclosed space. These are systems that keep air cool and dry. Simple fans are not considered as air conditioning.

# PROPOSAL FOR A CORRESPONDING QUESTIONNAIRE

## 1) IN THE HOUSEHOLD QUESTIONNAIRE

HC010	1. Do you have a problem with shortage of space in your dwelling?
1	Yes
2	No

HC020	2. What is the size of your dwelling, in square meters? If you do not know	
	please give an approximate number	
	It refers to the floor space measured inside the outer walls excluding non-habitable	
	cellars and attics and excluding in multi-dwelling buildings all common spaces  Square meters (number, 0-999)	

HC030 3. Is your dwelling equipped with adequate electrical installations?	
1	Yes
2	No
Flag -2	No electrical installations

HC040	4. Is your dwelling equipped with adequate plumbing/water installations?			
1	Yes			
2	No			
Flag -2	No plumbing/water installations			

HC050	5. Is your dwelling equipped with heating facilities?	
1	Yes – central heating or similar	
2	Yes – other fixed heating	
3	Yes – non-fixed heating	
4	No – no heating at all	

HC060	6. Is your dwelling comfortably warm during winter time?
1	Yes
2	No

HC070	7. Is your dwelling comfortably cool during summer time?
1	Yes
2	No

HC080	8. How satisfied in general are you with your dwelling?		
1	Very dissatisfied		
2	Dissatisfied		
3	Satisfied		
4	Very satisfied		

HC090- HC140	9. Thinking of physical access, opening hours and the like, how do you describe the access of your household to the following services? Service is accessible						
			with great difficulty	with some difficulty	easily	very easily	service not used
110000	Г	Grocery services	1	2	3	4	flag -2
HC090 HC100		Banking services	1	2	3	4	flag -2
HC110		Postal services	1	2	3	4	flag -2
HC120		Public transport	1	2	3	4	flag -2
HC130		Primary health care services	1	2	3	4	flag -2
HC140		Compulsory school	1	2	3	4	flag -2

HC150	10. Do you feel your household (as a whole) may leave or be forced to leave	
	your dwelling in the next 6 months?	
1	Yes – household will be forced to leave the dwelling	
2	Yes – household plans to change the dwelling $\rightarrow$ go to variable PC170	
3	No – household does not expect any change of the dwelling $\rightarrow$ go to variable PC170	

HC160	11. If the household may be forced to leave the dwelling, what is the main reason?
1	Household will be forced to leave, since notice has been/will be given by the
	landlord on termination of the contract
2	Household will be forced to leave, since notice has been/will be given by the
	landlord in the absence of a formal contract
3	Household will be forced to leave because of eviction or distraint
4	Household will be forced to leave for financial difficulties
5	Household will be forced to leave for some other reasons
Flag -2	HC150 = 2  or  3

# 2) IN THE INDIVIDUAL QUESTIONNAIRE

PC170 12. Have you personally changed a dwelling in the past five years?	
1	Yes
2	No→ end of the questionnaire

PC180	13. If yes, what was the main reason for changing the dwelling?			
1	Family-related reasons			
2	Employment-related reasons			
3	Education-related reasons			
4	Eviction/distraint			
5	Landlord did not prolong the contract			
6	Desire to change tenure status			
7	Dwelling-related reasons			
8	Neighbourhood-related reasons			
9	Financial reasons			
10	Other reasons			
Flag -2	PC170 = 2			
Flag -3	Not selected respondent			