



Final Quality Report

EU-SILC 2010

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1. Common Longitudinal European Union Indicators based on the Longitudinal Component of EU-SILC

Persistent-at-risk-of-poverty rate by gender and age			
Age group	Males	Females	Total
18 - 24	4.8	9.5	7.2
25 - 49	4.4	9.2	6.7
50 - 64	7.8	8.7	8.3
65+	15.1	12.7	13.9
Total	7.6	9.9	8.7

2. Accuracy

2.1. Sample design

2.1.1. Type of sample design

A simple random sample of households was the sampling design used in all 4 years of EU-SILC from 2007 to 2010. The sample was extracted from the Census of Population and Housing 2005 database which is updated on a regular basis by the National Statistics Office.

Following recommendations by Eurostat, Malta's sample design followed a 4-year rotational panel. In the 2010 longitudinal wave, 848 households were surveyed for the fourth year (first interviewed in 2007), 919 households were surveyed for the third time (first interviewed in 2008) and 1,264 households were interviewed for the second year (first interviewed in 2009). Panel composition of the longitudinal file is depicted below:

Panel	2007	2008	2009	2010
1				
3				
4				
2				
1				

2.1.2. Sampling units

Persons living in private households residing in Malta were considered as the sampling units in EU-SILC. A simple random sample of these units was selected from the updated Census of Population and Housing 2005 for all the 4 years in the 2010 longitudinal component. All persons residing in these selected households were interviewed and are then followed for 4 consecutive years for re-interviews.

2.1.3. Stratification and sub-stratification criteria

Malta does not make use of stratification for EU-SILC.

2.1.4. Sample size and allocation criteria

In order to be compliant with the Council Regulation governing the EU-SILC methodology, all Member States are required to meet a specified minimum effective sample size. For the cross-sectional component, Malta's minimum effective sample size is required to be 3,000 households and 7,000 eligible persons. Meanwhile, for the longitudinal component, this is 2,250 households and 5,250 eligible persons. In this case, eligible persons refer to persons aged 16 and over.

As calculated from above, the gross sample size for the 2010 longitudinal component was of 3,031 households. Several factors contributed to achieving this sample size. In 2007, the initial gross sample size for the cross-sectional component was of 4,406 households. In the following years, the oldest panel was dropped and replaced by a new panel constituting of around 1,500 households. Furthermore, any split households created in 2008, 2009 and 2010 were also included in the sample.

2.1.5. Sample selection schemes

For EU-SILC, Malta uses a one-stage simple random sampling design for its sample selection. The sample constitutes of a number of households. All persons living in these selected households are then approached for an interview.

2.1.6. Sample distribution over time

The table below shows the distribution by month and year in which the selected households were interviewed, in the 2010 longitudinal component:

Year of survey	Month of interview				
	June	July	August	September	October
2007	845	257	44	20	-
2008	-	371	361	646	595
2009	-	664	746	875	670
2010	-	258	560	826	968

From the above table it can be seen that for all the 4 years, none of the interviewed households exceeded the 4 month data collection timeframe.

2.1.7. Renewal of the sample: rotational groups

Since Malta is using a 4-year rotational design recommended by Eurostat, it is therefore required that each year the oldest panel of the 4 is dropped and replaced by a new one. In 2010, the oldest panel (i.e. panel 1) which was the remaining panel from the 2006 cross-sectional component was dropped this year and replaced by a new panel.

2.1.8. Weightings

2.1.8.1. Design factor

The household design weight (DB080), which is calculated for households in their first year of survey, is equivalent to the inverse of the inclusion probability of households. Therefore, in the EU-SILC 2010 longitudinal component, this was calculated for all households in 2007 and for those households who featured for the first time in 2008 and 2009. The total sum of design weights for each panel equals the total number of households in the cross-sectional component for the corresponding year.

2.1.8.2. Non-response adjustments (1st wave of EU-SILC longitudinal component)

Catering for household non-response in the first wave of EU-SILC is essential. This adjustment was done through post-stratification after the design weights were computed.

2.1.8.3. Adjustment to external data (1st wave of EU-SILC longitudinal component)

Calibration was done through the use of CALMAR software, where the logit method was applied. Below is the list of variables used for the calibration:

- Sex (male, female);
- Age group (0-9, 10-19, 5-year age groups after that);
- Educational level (up to and including lower secondary, upper secondary and higher);
- Household type (without dependent children, with dependent children);
- Household size (1, 2, 3, 4, 5+).

2.1.8.4. Final longitudinal weight (1st wave of EU-SILC longitudinal component)

Personal base weight (RB060) is computed for all surveyed persons. In the case of persons being in the first wave of the survey, this is equal to the cross-sectional weight of that same wave, adjusted to reflect the total population for that year. Furthermore, three longitudinal weights were computed; RB062 (for persons who in 2010 were in their second, third or fourth year of survey), RB063 (for persons who in 2010 were in their third or fourth year of survey) and RB064 (for persons who in 2010 were in their fourth year of survey). Longitudinal weights were only computed for the final year of the longitudinal component, 2010.

2.1.8.5. Non-response adjustments (other waves of EU-SILC longitudinal component)

Each year, the personal base weight is adjusted for non-response so as to compensate for panel attrition. This is done through post-stratification at individual level, using sex and 5-year age groups (age as at year of entry into the survey) for each panel separately. Persons coming from non-sample households were assigned a weight of 0 and newborns were attributed the same weight as their mother. The weights were then averaged at household level and used to construct the final longitudinal weight.

2.1.8.6. Adjustment to external data (other waves of EU-SILC longitudinal component)

As in previous adjustments, calibration of data was done at household level with the use of CALMAR and the logit method. In order to calibrate, the following variables were some of those used: sex, age group, household type, household size and district. For the second, third and fourth waves, the benchmarks refer to the household's situation as at year of entry in the sample and not as at the year of interview in the first wave.

2.1.8.7. Final longitudinal weight (other waves of EU-SILC longitudinal component)

For the remaining waves in the EU-SILC longitudinal component, the final base weight RB060 is calculated using the cross-sectional weight for the household as at the year of entry in the survey. This cross-sectional weight is adjusted to take into consideration panel attrition and then is rescaled to reflect to the total target population.

To compute the longitudinal weights RB062, RB063 and RB064, the base weights were calibrated using population benchmarks for 2007, 2008 and 2009. Calibration was once again done by CALMAR, with the same benchmarks previously used.

2.1.8.8. Final household cross-sectional weight

Final household cross-sectional weights were obtained by calibrating base weights at household level. For this calibration, CALMAR was again used.

2.1.9. Substitutions

No substitutions were made.

2.2. Sampling errors

The tables below show the mean, total number of observations and standard errors for each income components. The means for income components collected at household level are averaged over all households while the mean for income components collected at personal level are averaged over all persons aged 16 and over (irrespective of whether that household or person received some income related to that particular component). Standard errors for each cross-sectional and longitudinal component were computed using the following:

$$s.e. = \left(1 - \frac{n}{N}\right) \frac{s^2}{n}$$

where: s = standard deviation

n = unweighted count

N = weighted count

Separate tables are computed for the 2010 cross-sectional component, and for each wave of the 2010 longitudinal component.

– 2010 cross-sectional component:

		Mean (€)		Number of observations		Standard error
		Weighted	Un-weighted	Before imputation	After imputation	
Total household income						
Total household gross income	HY010	25730	23756	2877	3781	309
Total disposable household income	HY020	21681	20227	2874	3781	239
Total disposable household income before social transfers other than old age and survivors' benefits	HY022	20269	18840	2881	3781	241
Total disposable household income before social transfers including old age and survivors' benefits	HY023	16413	14466	2887	3781	246
Gross income components at household level						
Income from rental of property or land	HY040G	148	141	202	228	20
Interest, dividends, profit from capital investments in unincorporated business	HY090G	886	966	3119	3781	42
Family/Children related allowances	HY050G	357	329	1144	1144	15
Social exclusion not elsewhere classified	HY060G	275	292	1958	1958	16
Housing allowances	HY070G	41	41	543	543	2
Regular inter-household cash transfer received	HY080G	37	41	33	46	8
Interest repayments on mortgage	HY100G	309	220	431	439	14
Income received by people aged under 16	HY110G	5	5	10	10	2
Regular inter-household cash transfer paid	HY130G	30	25	35	41	5
Tax on income and social contributions	HY140G	4019	3504	2425	3160	79
Gross income components at personal level						
Gross employee cash or near cash income	PY010G	6954	6203	3516	3648	108
Gross non-cash employee income	PY020G	67	56	229	390	4
Company car	PY021G	20	16	97	97	2
Contributions to individual private pension plans	PY035G	178	156	1056	1097	9
Cash benefits or losses from self-employment	PY050G	1183	1087	685	703	60
Value of goods produced for own consumption	PY070G	-	-	-	-	-
Pension from individual private plans	PY080G	35	41	69	69	10
Unemployment benefits	PY090G	86	77	190	190	15
Old-age benefits	PY100G	1557	1823	1965	1965	54
Survivors' benefits	PY110G	65	75	96	96	9
Sickness benefits	PY120G	40	39	627	627	3
Disability benefits	PY130G	115	126	244	244	9
Education-related allowances	PY140G	70	71	417	567	3

– wave 2007 of 2010 longitudinal component:

		Un-weighted mean (€)	Number of observations		Standard error
			Before imputation	After imputation	
Total household income					
Total household gross income	HY010	22492	677	1166	501
Total disposable household income	HY020	18506	605	1166	366
Total disposable household income before social transfers other than old age and survivors' benefits	HY022	17303	603	1166	374
Total disposable household income before social transfers including old age and survivors' benefits	HY023	14633	381	1166	407
Gross income components at household level					
Income from rental of property or land	HY040G	111	1163	1166	26
Interest, dividends, profit from capital investments in unincorporated business	HY090G	1086	674	1166	79
Family/Children related allowances	HY050G	293	1166	1166	23
Social exclusion not elsewhere classified	HY060G	223	1166	1166	26
Housing allowances	HY070G	13	1161	1166	4
Regular inter-household cash transfer received	HY080G	88	1162	1166	25
Interest repayments on mortgage	HY100G	275	1160	1166	27
Income received by people aged under 16	HY110G	11	1164	1166	7
Regular inter-household cash transfer paid	HY130G	41	1164	1166	11
Tax on income and social contributions	HY140G	3944	1023	1166	143
Gross income components at personal level					
Gross employee cash or near cash income	PY010G	6131	2602	2727	169
Gross non-cash employee income	PY020G	51	2727	2727	5
Company car	PY021G	16	2727	2727	3
Contributions to individual private pension plans	PY035G	91	2724	2727	9
Cash benefits or losses from self-employment	PY050G	1259	2678	2727	125
Values of goods produced for own consumption	PY070G	25	2727	2727	5
Pension from individual private plans	PY080G	35	2727	2727	12
Unemployment benefits	PY090G	38	2727	2727	7
Old-age benefits	PY100G	1089	2727	2727	53
Survivors' benefits	PY110G	52	2727	2727	11
Sickness benefits	PY120G	35	2727	2727	4
Disability benefits	PY130G	146	2727	2727	16
Education-related allowances	PY140G	70	2726	2727	13

– wave 2008 of 2010 longitudinal component:

		Un-weighted mean (€)	Number of observations		Standard error
			Before imputation	After imputation	
Total household income					
Total household gross income	HY010	23009	1365	1973	431
Total disposable household income	HY020	19440	1350	1973	322
Total disposable household income before social transfers other than old age and survivors' benefits	HY022	18234	1370	1973	328
Total disposable household income before social transfers including old age and survivors' benefits	HY023	14946	1379	1973	352
Gross income components at household level					
Income from rental of property or land	HY040G	159	1957	1973	31
Interest, dividends, profit from capital investments in unincorporated business	HY090G	296	1526	1973	53
Family/Children related allowances	HY050G	232	1972	1973	18
Social exclusion not elsewhere classified	HY060G	24	1973	1973	21
Housing allowances	HY070G	53	1964	1973	2
Regular inter-household cash transfer received	HY080G	1233	1961	1973	13
Interest repayments on mortgage	HY100G	210	1968	1973	19
Income received by people aged under 16	HY110G	0	1973	1973	0
Regular inter-household cash transfer paid	HY130G	11	1971	1973	5
Tax on income and social contributions	HY140G	3558	1943	1973	117
Gross income components at personal level					
Gross employee cash or near cash income	PY010G	6122	4409	4563	141
Gross non-cash employee income	PY020G	59	4340	4563	5
Company car	PY021G	21	4563	4563	3
Contributions to individual private pension plans	PY035G	77	4545	4563	6
Cash benefits or losses from self-employment	PY050G	1238	4497	4563	91
Value of goods produced for own consumption	PY070G	23	4563	4563	2
Pension from individual private plans	PY080G	25	4556	4563	7
Unemployment benefits	PY090G	52	4562	4563	7
Old-age benefits	PY100G	1353	4551	4563	48
Survivors' benefits	PY110G	69	4563	4563	10
Sickness benefits	PY120G	38	4563	4563	3
Disability benefits	PY130G	126	4562	4563	12
Education-related allowances	PY140G	67	4534	4563	6

– wave 2009 of 2010 longitudinal component:

		Un-weighted mean (€)	Number of observations		Standard error
			Before imputation	After imputation	
Total household income					
Total household gross income	HY010	23957	2066	2955	344
Total disposable household income	HY020	20302	1964	2955	259
Total disposable household income before social transfers other than old age and survivors' benefits	HY022	18905	1958	2955	261
Total disposable household income before social transfers including old age and survivors' benefits	HY023	14953	1943	2955	287
Gross income components at household level					
Income from rental of property or land	HY040G	113	2927	2955	21
Interest, dividends, profit from capital investments in unincorporated business	HY090G	1223	2254	2955	58
Family/Children related allowances	HY050G	335	2955	2955	15
Social exclusion not elsewhere classified	HY060G	232	2955	2955	15
Housing allowances	HY070G	29	2954	2955	4
Regular inter-household cash transfer received	HY080G	49	2953	2955	10
Interest repayments on mortgage	HY100G	239	2608	2955	16
Income received by people aged under 16	HY110G	0	2955	2955	0
Regular inter-household cash transfer paid	HY130G	22	2953	2955	6
Tax on income and social contributions	HY140G	3633	2387	2955	91
Gross income components at personal level					
Gross employee cash or near cash income	PY010G	6335	6788	6817	122
Gross non-cash employee income	PY020G	69	6649	6817	5
Company car	PY021G	22	6817	6817	3
Contributions to individual private pension plans	PY035G	121	6183	6817	8
Cash benefits or losses from self-employment	PY050G	1108	6743	6817	63
Value of goods produced for own consumption	PY070G	-	-	-	-
Pension from individual private plans	PY080G	42	6815	6817	9
Unemployment benefits	PY090G	100	6793	6817	17
Old-age benefits	PY100G	1643	6739	6817	48
Survivors' benefits	PY110G	70	6817	6817	8
Sickness benefits	PY120G	45	6815	6817	3
Disability benefits	PY130G	131	6815	6817	10
Education-related allowances	PY140G	71	6757	6817	5

– wave 2010 of 2010 longitudinal component:

		Un-weighted mean (€)	Number of observations		Standard error
			Before imputation	After imputation	
Total household income					
Total household gross income	HY010	23235	1874	2612	369
Total disposable household income	HY020	19787	1871	2612	286
Total disposable household income before social transfers other than old age and survivors' benefits	HY022	18437	1876	2612	289
Total disposable household income before social transfers including old age and survivors' benefits	HY023	13988	1880	2612	295
Gross income components at household level					
Income from rental of property or land	HY040G	127	2589	2612	23
Interest, dividends, profit from capital investments in unincorporated business	HY090G	876	2063	2612	46
Family/Children related allowances	HY050G	312	2612	2612	17
Social exclusion not elsewhere classified	HY060G	285	2612	2612	18
Housing allowances	HY070G	38	2612	2612	2
Regular inter-household cash transfer received	HY080G	45	2599	2612	9
Interest repayments on mortgage	HY100G	230	2610	2612	17
Income received by people aged under 16	HY110G	3	2612	2612	2
Regular inter-household cash transfer paid	HY130G	23	2606	2612	6
Tax on income and social contributions	HY140G	3425	1911	2612	95
Gross income components at personal level					
Gross employee cash or near cash income	PY010G	6115	5815	5931	130
Gross non-cash employee income	PY020G	56	5669	5931	6
Company car	PY021G	16	5931	5931	2
Contributions to individual private pension plans	PY035G	167	5111	5931	11
Cash benefits or losses from self-employment	PY050G	1085	5920	5931	70
Value of goods produced for own consumption	PY070G	-	-	-	-
Pension from individual private plans	PY080G	45	5872	5931	9
Unemployment benefits	PY090G	44	5931	5931	17
Old-age benefits	PY100G	77	5931	5931	69
Survivors' benefits	PY110G	1882	5931	5931	10
Sickness benefits	PY120G	77	5931	5931	3
Disability benefits	PY130G	42	5931	5931	10
Education-related allowances	PY140G	124	5931	5931	12

The below tables show the weighted and unweighted means, total number of observations before and after imputation as well as the standard error of the equivalised disposable income, categorized by household size, age and sex. The means are averages over all persons in the sample. Separate tables are shown for the 2010 cross-sectional component, and for each wave of the 2010 longitudinal component.

– **2010 cross-sectional component:**

	Mean (€)		Number of observations		Standard error
	Weighted	Un-weighted	Before imputation	After imputation	
Subclasses by household size					
1 household member	9232	9109	556	715	201
2 household members	11744	10790	1764	2252	165
3 household members	13802	13207	1773	2325	163
4 or more	11240	11023	3695	5092	82
Population by age group					
<25	11030	10818	2167	3006	110
25-34	13829	13424	867	1147	205
35-44	12162	11697	925	1203	196
45-54	12521	12208	1014	1515	177
55-64	12188	11640	1335	1700	212
65+	9883	9584	1480	1813	127
Population by sex					
Male	11922	11484	3792	5089	97
Female	11679	11181	3996	5295	93

– wave 2007 of 2010 longitudinal component:

	Un-weighted mean (€)	Number of observations		Standard error
		Before imputation	After imputation	
Subclasses by household size				
1 household member	8356	183	185	425
2 household members	9400	609	612	247
3 household members	10749	846	855	194
4 or more	10091	1700	1714	121
Population by age group				
<25	9843	1064	1067	155
25-34	11925	438	440	294
35-44	10280	424	428	262
45-54	10678	502	504	234
55-64	9689	492	495	267
65+	8004	418	432	218
Population by sex				
Male	10107	1661	1669	134
Female	9968	1691	1697	132

– wave 2008 of 2010 longitudinal component:

	Un-weighted mean (€)	Number of observations		Standard error
		Before imputation	After imputation	
Subclasses by household size				
1 household member	7974	350	354	311
2 household members	9985	1104	1112	226
3 household members	12282	1212	1215	236
4 or more	10621	2897	2906	91
Population by age group				
<25	10415	1754	1759	136
25-34	12523	614	617	253
35-44	11034	698	699	290
45-54	11771	830	835	256
55-64	10720	840	846	234
65+	8490	827	831	178
Population by sex				
Male	10857	2743	2756	126
Female	10524	2820	2831	120

– wave 2009 of 2010 longitudinal component:

	Un-weighted mean (€)	Number of observations		Standard error
		Before imputation	After imputation	
Subclasses by household size				
1 household member	9100	473	562	202
2 household members	10724	1460	1704	154
3 household members	12891	1638	1812	191
4 or more	11049	3775	4117	82
Population by age group				
<25	10800	2213	2421	122
25-34	13385	899	974	210
35-44	11258	876	973	193
45-54	12506	1144	1235	220
55-64	11361	1131	1271	173
65+	9244	1083	1321	122
Population by sex				
Male	11394	3598	4020	97
Female	11121	3748	4175	99

– wave 2010 of 2010 longitudinal component:

	Un-weighted mean (€)	Number of observations		Standard error
		Before imputation	After imputation	
Subclasses by household size				
1 household member	8935	510	516	227
2 household members	10732	1590	1602	199
3 household members	13301	1527	1533	212
4 or more	10870	3407	3411	93
Population by age group				
<25	10783	2015	2018	135
25-34	13449	806	808	233
35-44	11522	799	807	233
45-54	12148	1018	1022	211
55-64	11458	1113	1124	278
65+	9392	1255	1283	147
Population by sex				
Male	11353	3441	3455	119
Female	11103	3593	3607	113

2.3. Non-sampling errors

2.3.1. Sampling frame and coverage errors

The database from the Census of Population and Housing 2005 was used as a sampling frame for all the 4 years included in the 2010 longitudinal EU-SILC. Ever since 2005, this database has been updated annually through register data, thus providing a comprehensive count of all persons living in the country at a particular point in time. Nonetheless, even though this exercise is carried out as exhaustively as possible, some households in the sample were still found to be ineligible.

2.3.2. Measurement and processing errors

A summary of the main sources of measurement and processing errors is given below.

Questionnaire

Every year, prior to start of data collection, the questionnaire from the previous year is thoroughly checked for errors and misinterpretations, where improvements and corrections are then made as necessary. However, a few minor errors, such as wording, were noticed after the data collection process started. In these cases, interviewers were informed straight away so as to reduce the impact of that particular error. These errors are then noted so as to be corrected in the subsequent EU-SILC questionnaire.

The preferred data collection method used in data collection of the EU-SILC is Computer Assisted Personal Interviewing (CAPI). As seen throughout the years, this method produces better results than the Paper Assisted Personal Interviewing (PAPI) method due to instant automatic validations. This implies that any queries are dealt with immediately during the data collection phase and so preventing both data and human errors. CAPI also reduces considerably the average length and time of interview, thus reducing the burden on the responding households.

Nevertheless, the Maltese EU-SILC team is confident that any problems surfaced in the data collection stage will have minimal impact on the quality of the data provided. However, there is always room for improvement and are constantly striving to develop the questionnaire further.

Interviewers

An essential part of collecting reliable data is to have well-trained interviewers. Hence, two briefing sessions were organised at the beginning of the data collection period. One of the briefing sessions was targeted for those interviewers participating in the EU-SILC for the first time, where the entire questionnaire was covered in detail. The second briefing was for those interviewers who already have experience with EU-SILC data collection and during this briefing only the changes made and errors found since the previous year were highlighted. New interviewers were also given another briefing, in which they were able to familiarise themselves with the data entry program. All the interviewers were instructed that should they encounter any difficulty, they are to contact the office immediately for clarification and further instructions.

The office carried out regular audits on the interviewers' work so as to ensure that they were conducting their work diligently. These audits consisted in contacting a sample of the households and asking them a short set of questions. Some of these audits indicated that a small number of interviewers were not fully complying with the set instructions and thus, disciplinary action was taken.

Respondents

In general, the EU-SILC response rate for Malta is considered to be reasonably satisfactory, especially when one considers the high level of burden on the respondents. Also, it is important to note that since the effective sample size for Malta is relatively large with respect to the total population, there is a much higher probability for the persons to be chosen in other surveys apart from the EU-SILC. This may therefore explain the high levels of attrition in some panels.

When comparing with other countries, Malta has a relatively high level of proxy interviews. Mainly, this is because it is very difficult to set an appointment where all the household members are present. Therefore, proxy information is preferred as opposed to no information at all. However, interviewers were instructed to ask the household to prepare any relevant data for those persons who will not be present for the interview upon setting the appointment. Furthermore, if the respondents were not able to answer on behalf of those not present, interviewers were allowed to contact the household at a later date by telephone to obtain the missing information.

A negative affect on the response rate is the nature of the EU-SILC questions, especially those related to income. This is due to the fact that Malta is a small country, thus respondents are scared of others finding out this sensitive information and so are more likely to refuse to answer such questions. Further to this, due to the EU-SILC questionnaire being rather long and intense, the attention and interest of the respondent is more likely to diminish with time, leading to more bias and non-response in the questions which are positioned towards the end of the survey.

In order to improve the response rate for old households, the NSO organised a lottery for those households that were participating in the survey for the second, third and fourth time. The lottery prize was a holiday trip for two, including flight and accommodation.

Data collection and data entry

The CAPI method was used for data collection of the Malta EU-SILC. The data entry program was installed on a laptop, which the interviewers used when visiting the households. The data entry program is built on Blaise software and contains a number of built-in validations and automated routing. This limits as much as possible data entry and human errors. Furthermore, the CAPI method helps in speeding up the data collection process.

Due to making use of the CAPI method, it was essential that the interviewers were computer literate. Apart from this, as mentioned earlier, interviewers were given specialised training so that they can familiarise themselves with laptop usage and the data entry program. Each interviewer was also assigned a number of fictitious 'test' households on which they were free to experiment with data inputting before starting to interview actual households.

For the 4 years considered in the 2010 longitudinal component, only the CAPI method was adopted. In the case of households participating for the second, third or fourth time, some data which was considered unlikely to change (such as sex, date of birth and country of birth) was uploaded in the laptop prior to the data collection.

2.3.3. Non-response errors

2.3.3.1. Achieved sample size

The table below shows the number of households in the 2010 EU-SILC longitudinal component and the number of persons aged 16 and over:

Wave	Number of households for which an interview is accepted for database	Sample persons (aged 16+)	Co-residents (aged 16+)
2007	1166	2727	-
2008	1973	4620	11
2009	2955	6834	53
2010	2612	5919	146
Total	8706	20100	210

2.3.3.2. Unit non-response

– Household non-response rate (wave 2007)

The address contact rate (R_a) is given by:

$$R_a = \frac{\sum[DB120 = 11]}{\sum[DB120 = all] - \sum[DB120 = 23]} = \frac{1379}{1507 - 49} = 0.946$$

The proportion (R_h) of complete household interviews accepted for the database is:

$$R_h = \frac{\sum[DB135 = 1]}{\sum[DB130 = all]} = \frac{1166}{1379} = 0.85$$

The household non-response rate (NR_h) is given by:

$$NR_h = (1 - (R_a * R_h)) * 100 = (1 - (0.946 * 0.85)) * 100 = 19.6\%$$

– Individual non-response rate (wave 2007)

The proportion (R_p) of complete interviews within the households accepted for the database is:

$$R_p = \frac{\sum[RB250 = 11 + 12 + 13]}{\sum[RB245 = 1 + 2 + 3]} = \frac{2727}{2727} = 1$$

The individual non-response rate (NR_p) is given by:

$$NR_p = (1 - (R_p)) * 100 = (1 - (1)) * 100 = 0\%$$

When a household is selected and one or more of the members were not able to respond, present responding members provided proxy answers for these individuals. Therefore, this explains the zero individual non-response rate.

– **Overall individual non-response rate (wave 2007)**

The overall individual non-response rate (NR_p) is given by:

$$NR_p = (1 - (R_a * R_h * R_p)) * 100 = (1 - (0.946 * 0.85 * 1)) * 100 = 19.6\%$$

The following information refers to the 2008, 2009 and 2010 waves of the EU-SILC longitudinal component:

– **Response rate for households**

• **Wave response rate**

- **Wave 2008:** where $t-1 = 2007$ and $t = 2008$
Wave response rate = $100 * (\text{number of households with DB135=1 and DB010=2008} / \text{number of households with DB010=2008})$
= $100 * (1973/2699)$
= 73.10%
- **Wave 2009:** where $t-1 = 2008$ and $t = 2009$
Wave response rate = $100 * (\text{number of households with DB135=1 and DB010=2009} / \text{number of households with DB010=2009})$
= $100 * (2955/3778)$
= 78.22%
- **Wave 2010:** where $t-1 = 2009$ and $t = 2010$
Wave response rate = $100 * (\text{number of households with DB135=1 and DB010=2010} / \text{number of households with DB010=2010})$
= $100 * (2612/3031)$
= 86.18%

• **Longitudinal follow-up rate**

- **Wave 2009:** where $t-1 = 2008$, $t = 2009$ and $t+1 = 2010$
Longitudinal follow-up rate = $100 * (\text{number of households with DB010=2010 and DB075 = 3 or 4} / \text{number of households with DB010=2008})$
= $100 * (1767/2699)$
= 65.47%

• **Follow-up ratio**

- **Wave 2008:** where $t-1 = 2007$ and $t = 2008$
Number of households passed on from 2007 to 2008
= number of households with DB010=2008 and DB075 = 3
= 1195
- **Wave 2009:** where $t = 2008$ and $t+1 = 2009$
Number of households passed on from 2008 to 2009 (that were originally in 2007)
= number of households with DB010=2009 and DB075 = 3
= 968

- **Wave 2010:** where $t = 2009$ and $t+1 = 2010$
 Number of households passed on from 2009 to 2010 (that were originally in 2007)
 = number of households with DB010=2010 and DB075 = 3
 = 848

Follow-up ratio = $848/1195 = 0.71$

- **Achieved sample size ratio**

- **Wave 2008:** where $t-1 = 2007$ and $t = 2008$
 Achieved sample size ratio = number of households with DB135=1 and DB010=2008 / number of households with DB135=1 and DB010=2007
 = $1973/1166$
 = 1.69
- **Wave 2009:** where $t-1 = 2008$ and $t = 2009$
 Achieved sample size ratio = number of households with DB135=1 and DB010=2009 / number of households with DB135=1 and DB010=2008
 = $2955/1973$
 = 1.50
- **Wave 2010:** where $t-1 = 2009$ and $t = 2010$
 Achieved sample size ratio = number of households with DB135=1 and DB010=2010 / number of households with DB135=1 and DB010=2009
 = $2612/2955$
 = 0.88

- **Response rate for persons**

- **Wave response rate for sample persons**

- **Wave 2008:** where $t-1 = 2007$ and $t = 2008$
 Wave response rate for sample persons = $100 * (\text{number of persons with RB100=1 \& RB250=11,12,13 \& RB010=2008} / \text{number of persons with RB100=1 \& RB010=2008})$
 = $100 * (4552/4747)$
 = 95.89%
- **Wave 2009:** where $t-1 = 2008$ and $t = 2009$
 Wave response rate for sample persons = $100 * (\text{number of persons with RB100=1 \& RB250=11,12,13 \& RB010=2009} / \text{number of persons with RB100=1 \& RB010=2009})$
 = $100 * (6764/6968)$
 = 97.07%
- **Wave 2010:** where $t-1 = 2009$ and $t = 2010$
 Wave response rate for sample persons = $100 * (\text{number of persons with RB100=1 \& RB250=11,12,13 \& RB010=2010} / \text{number of persons with RB100=1 \& RB010=2010})$
 = $100 * (5792/5964)$
 = 97.12%

- **Wave response rate for co-residents**

- **Wave 2008:** where $t-1 = 2007$ and $t = 2008$
Wave response rate for co-residents $= 100 * (\text{number of persons with RB100=2 \& RB250=11,12,13 \& RB010=2008} / \text{number of persons with RB100=2 \& RB010=2008})$
 $= 100 * (11/915)$
 $= 1.20\%$
- **Wave 2009:** where $t-1 = 2008$ and $t = 2009$
Wave response rate for co-residents $= 100 * (\text{number of persons with RB100=2 \& RB250=11,12,13 \& RB010=2009} / \text{number of persons with RB100=2 \& RB010=2009})$
 $= 100 * (53/1303)$
 $= 4.07\%$
- **Wave 2010:** where $t-1 = 2009$ and $t = 2010$
Wave response rate for co-residents $= 100 * (\text{number of persons with RB100=2 \& RB250=11,12,13 \& RB010=2010} / \text{number of persons with RB100=2 \& RB010=2010})$
 $= 100 * (139/1247)$
 $= 11.15\%$

- **Longitudinal follow-up rate**

- **Wave 2008:** where $t-1 = 2007$ and $t = 2008$
Longitudinal follow-up rate $= 100 * (\text{number of persons with RB100=1 \& RB250=11,12,13 \& RB010=2008} / \text{number of persons with RB100=1 \& RB110<5 \& RB010=2008})$
 $= 100 * (4552/4679)$
 $= 97.29\%$
- **Wave 2009:** where $t-1 = 2008$ and $t = 2009$
Longitudinal follow-up rate $= 100 * (\text{number of persons with RB100=1 \& RB250=11,12,13 \& RB010=2009} / \text{number of persons with RB100=1 \& RB110<5 \& RB010=2009})$
 $= 100 * (6764/6896)$
 $= 98.09\%$
- **Wave 2010:** where $t-1 = 2009$ and $t = 2010$
Longitudinal follow-up rate $= 100 * (\text{number of persons with RB100=1 \& RB250=11,12,13 \& RB010=2010} / \text{number of persons with RB100=1 \& RB110<5 \& RB010=2010})$
 $= 100 * (5792/5837)$
 $= 99.23\%$

- **Achieved sample size ratio**

- **Wave 2008:** where $t-1 = 2007$ and $t = 2008$
 Achieved sample size ratio = number of persons with
 RB250=11,12,13 & RB010=2008 / number of persons with
 RB250=11,12,13 & RB010=2007
 $= 4563/2727$
 $= 1.67$
- **Wave 2009:** where $t-1 = 2008$ and $t = 2009$
 Achieved sample size ratio = number of persons with
 RB250=11,12,13 & RB010=2009 / number of persons with
 RB250=11,12,13 & RB010=2008
 $= 6817/4563$
 $= 1.49$
- **Wave 2010:** where $t-1 = 2009$ and $t = 2010$
 Achieved sample size ratio = number of persons with
 RB250=11,12,13 & RB010=2010 / number of persons with
 RB250=11,12,13 & RB010=2009
 $= 5931/6817$
 $= 0.87$

- **Response rate for non-sample persons**

- **Wave 2008:**
 Response rate for non-sample persons = number of persons aged
 16+ and with RB100=2 & RB250=11,12,13 & RB010=2008 / number
 of persons aged 16+ and with RB100=2 & RB010=2008
 $= 11/11$
 $= 1$
- **Wave 2009:**
 Response rate for non-sample persons = number of persons aged
 16+ and with RB100=2 & RB250=11,12,13 & RB010=2009 / number
 of persons aged 16+ and with RB100=2 & RB010=2009
 $= 53/53$
 $= 1$
- **Wave 2010:**
 Response rate for non-sample persons = number of persons aged
 16+ and with RB100=2 & RB250=11,12,13 & RB010=2010 / number
 of persons aged 16+ and with RB100=2 & RB010=2010
 $= 139/146$
 $= 0.95$

2.3.3.3. Distribution of households by household status (DB110), by record of contact at address (DB120), by household questionnaire result (DB130) and by household interview acceptance (DB135)

Household status (DB110) distribution by households for each wave of the EU-SILC longitudinal component:

	2007		2008		2009		2010	
	Count	% of total	Count	% of total	Count	% of total	Count	% of total
At the same address as last interview	0	0.0	1096	40.6	1902	50.3	2845	93.9
Entire household moved to a private household within the country	0	0.0	37	1.4	34	0.9	35	1.2
Entire household moved to a collective household or institution within the country	0	0.0	0	0.0	6	0.2	1	0.0
Household moved outside the country	0	0.0	3	0.1	3	0.1	3	0.1
Entire household died	0	0.0	1	0.0	2	0.1	3	0.1
Household does not contain sample person	0	0.0	3	0.1	0	0.0	1	0.0
Household unable to access	0	0.0	0	0.0	9	0.2	31	1.0
Split-off household	0	0.0	29	1.1	58	1.5	76	2.5
New address added to the sample this wave or first wave	1507	100.0	1504	55.7	1747	46.2	0	0.0
Lost household	0	0.0	26	1.0	17	0.5	36	1.2
Total	1507	100.0	2699	100.0	3778	100.0	3031	100.0

Record of contact at address (DB120) distribution by households for each wave of the EU-SILC longitudinal component:

	2007			2008			2009			2010		
	Count	% of total	% of sub-total	Count	% of total	% of sub-total	Count	% of total	% of sub-total	Count	% of total	% of sub-total
Address contacted	1379	91.5	91.5	1411	52.3	89.9	1711	45.3	93.0	93	3.1	83.8
Address cannot be located	34	2.3	2.3	60	2.2	3.8	58	1.5	3.2	14	0.5	12.6
Address unable to access	45	3.0	3.0	70	2.6	4.5	51	1.3	2.8	0	0.0	0.0
Address does not exist or is non-residential address or is unoccupied or not principal residence	49	3.3	3.3	29	1.1	1.8	19	0.5	1.0	4	0.1	3.6
Sub-total	1507	100.0	100.0	1570	58.2	100.0	1839	48.7	100.0	111	3.7	100.0
N/A (DB110 not = 2,8 or 9)	0	0.0		1129	41.8		1939	51.3		2920	96.3	
Total	1507	100.0		2699	100.0		3778	100.0		3031	100.0	

Household questionnaire result (DB130) distribution by households for each wave of the EU-SILC longitudinal component:

	2007			2008			2009			2010		
	Count	% of total	% of sub-total	Count	% of total	% of sub-total	Count	% of total	% of sub-total	Count	% of total	% of sub-total
Household questionnaire completed	1166	77.4	84.6	1973	73.1	78.7	2955	78.2	81.8	2612	86.2	88.9
Refusal to co-operate	137	9.1	9.9	289	10.7	11.5	345	9.1	9.5	215	7.1	7.3
Entire household temporarily away for duration of fieldwork	0	0.0	0.0	27	1.0	1.1	17	0.4	0.5	5	0.2	0.2
Household unable to respond (illness, incapacity,...)	16	1.1	1.2	38	1.4	1.5	34	0.9	0.9	39	1.3	1.3
Other reasons	60	4.0	4.4	180	6.7	7.2	262	6.9	7.3	67	2.2	2.3
Sub-total	1379	91.5	100.0	2507	92.9	100.0	3613	95.6	100.0	2938	96.9	100.0
N/A (DB120 not = 11 or DB110 not = 1)	128	8.5		192	7.1		165	4.4		93	3.1	
Total	1507	100.0		2699	100.0		3778	100.0		3031	100.0	

Household interview acceptance (DB135) distribution by households for each wave of the EU-SILC longitudinal component:

	2007		2008		2009		2010	
	Count	% of total	Count	% of total	Count	% of total	Count	% of total
Interview accepted for database	1166	77.4	1973	73.1	2955	78.2	2612	86.2
N/A (DB130 not = 11)	341	22.6	726	26.9	823	21.8	419	13.8
Total	1507	100.0	2699	100.0	3778	100.0	3031	100.0

2.3.3.4. Distribution of persons by membership status (RB110)

Membership status (RB110) distribution of persons for 2008, 2009 and 2010 waves of the EU-SILC longitudinal component:

	2008		2009		2010	
	Count	% of total	Count	% of total	Count	% of total
Was in this household in previous wave or current household member	5545	97.9	8059	97.4	6881	95.4
Moved into this household from another sample household since previous wave	7	0.1	28	0.3	45	0.6
Moved into this household from outside sample since previous wave	15	0.3	70	0.8	86	1.2
Newly born into this household since last wave	20	0.4	38	0.5	50	0.7
Moved out since previous wave or last interview if not contacted in previous wave	56	1.0	48	0.6	104	1.4
Died	16	0.3	27	0.3	42	0.6
Lived in the household for at least three months during the income reference period and was not recorded in the register	3	0.1	1	0.0	3	0.0
Total	5662	100.0	8271	100.0	7211	100.0

2.3.3.5. Item non-response

The information on item non-response below refers to income components collected at a household level for each wave of the longitudinal component.

Note:

- * percentages are out of the total number of households in each wave for which the interview was accepted for the database
- ** percentages are out of the total number of households in each wave having received an amount (positive or negative) for that household income variable

– **wave 2007 of 2010 longitudinal component:**

		Households having received an amount		Of which (before imputation)...					
				Full Information		Partial Information		Missing values	
		No.	%*	No.	%**	No.	%**	No.	%**
Total household income									
Total household gross income	HY010	1166	100.0	677	58.1	488	41.9	1	0.1
Total disposable household income	HY020	1166	100.0	605	51.9	557	47.8	4	0.3
Total disposable household income before social transfers except old age and survivors' benefits	HY022	1166	100.0	603	51.7	561	48.1	2	0.2
Total disposable household income before social transfers including old age and survivors' benefits	HY023	1166	100.0	381	32.7	783	67.2	2	0.2
Gross income components at household level									
Income from rental of property or land	HY040G	47	4.0	44	93.6	0	0.0	3	6.4
Interest, dividends, profit from capital investments in unincorporated business	HY090G	1166	100.0	674	57.8	492	42.2	0	0.0
Family/Children related allowances	HY050G	314	26.9	314	100.0	0	0.0	0	0.0
Social exclusion not elsewhere classified	HY060G	236	20.2	236	100.0	0	0.0	0	0.0
Housing allowances	HY070G	24	2.1	19	79.2	0	0.0	5	20.8
Regular inter-household cash transfer received	HY080G	23	2.0	19	82.6	0	0.0	4	17.4
Interest repayments on mortgage	HY100G	144	12.3	138	95.8	0	0.0	6	4.2
Income received by people aged under 16	HY110G	4	0.3	2	50.0	0	0.0	2	50.0
Regular inter-household cash transfer paid	HY130G	23	2.0	21	91.3	0	0.0	2	8.7

– wave 2008 of 2010 longitudinal component:

		Households having received an amount		Of which (before imputation)...					
				Full Information		Partial Information		Missing values	
		No.	%*	No.	%**	No.	%**	No.	%**
Total household income									
Total household gross income	HY010	1973	100.0	1365	69.2	587	29.8	21	1.1
Total disposable household income	HY020	1973	100.0	1350	68.4	612	31.0	11	0.6
Total disposable household income before social transfers except old age and survivors' benefits	HY022	1973	100.0	1370	69.4	550	27.9	53	2.7
Total disposable household income before social transfers including old age and survivors' benefits	HY023	1973	100.0	1379	69.9	459	23.3	135	6.8
Gross income components at household level									
Income from rental of property or land	HY040G	98	5.0	82	83.7	0	0.0	16	16.3
Interest, dividends, profit from capital investments in unincorporated business	HY090G	1973	100.0	1526	77.3	0	0.0	447	22.7
Family/Children related allowances	HY050G	509	25.8	508	99.8	0	0.0	1	0.2
Social exclusion not elsewhere classified	HY060G	411	20.8	411	100.0	0	0.0	0	0.0
Housing allowances	HY070G	333	16.9	324	97.3	0	0.0	9	2.7
Regular inter-household cash transfer received	HY080G	31	1.6	19	61.3	0	0.0	12	38.7
Interest repayments on mortgage	HY100G	206	10.4	201	97.6	0	0.0	5	2.4
Income received by people aged under 16	HY110G	0	0.0	0	0.0	0	0.0	0	0.0
Regular inter-household cash transfer paid	HY130G	10	0.5	8	80.0	0	0.0	2	20.0

– wave 2009 of 2010 longitudinal component:

		Households having received an amount		Of which (before imputation)...					
				Full Information		Partial Information		Missing values	
		No.	%*	No.	%**	No.	%**	No.	%**
Total household income									
Total household gross income	HY010	2955	100.0	2066	69.9	856	29.0	33	1.1
Total disposable household income	HY020	2955	100.0	1964	66.5	642	21.7	349	11.8
Total disposable household income before social transfers except old age and survivors' benefits	HY022	2955	100.0	1958	66.3	913	30.9	84	2.8
Total disposable household income before social transfers including old age and survivors' benefits	HY023	2955	100.0	1943	65.8	915	31.0	97	3.3
Gross income components at household level									
Income from rental of property or land	HY040G	189	6.4	161	85.2	0	0.0	28	14.8
Interest, dividends, profit from capital investments in unincorporated business	HY090G	2955	100.0	2254	76.3	0	0.0	701	23.7
Family/Children related allowances	HY050G	944	31.9	944	100.0	0	0.0	0	0.0
Social exclusion not elsewhere classified	HY060G	1499	50.7	1499	100.0	0	0.0	0	0.0
Housing allowances	HY070G	514	17.4	513	99.8	0	0.0	1	0.2
Regular inter-household cash transfer received	HY080G	45	1.5	43	95.6	0	0.0	2	4.4
Interest repayments on mortgage	HY100G	347	11.7	0	0.0	347	100.0	0	0.0
Income received by people aged under 16	HY110G	0	0.0	0	0.0	0	0.0	0	0.0
Regular inter-household cash transfer paid	HY130G	26	0.9	24	92.3	0	0.0	2	7.7

– wave 2010 of 2010 longitudinal component:

		Households having received an amount		Of which (before imputation)...					
				Full Information		Partial Information		Missing values	
		No.	%*	No.	%**	No.	%**	No.	%**
Total household income									
Total household gross income	HY010	2612	100.0	1874	71.7	723	27.7	15	0.6
Total disposable household income	HY020	2612	100.0	1871	71.6	726	27.8	15	0.6
Total disposable household income before social transfers except old age and survivors' benefits	HY022	2612	100.0	1876	71.8	714	27.3	22	0.8
Total disposable household income before social transfers including old age and survivors' benefits	HY023	2612	100.0	1880	72.0	691	26.5	41	1.6
Gross income components at household level									
Income from rental of property or land	HY040G	140	5.4	117	83.6	0	0.0	23	16.4
Interest, dividends, profit from capital investments in unincorporated business	HY090G	2612	100.0	2063	79.0	0	0.0	549	21.0
Family/Children related allowances	HY050G	781	29.9	781	100.0	0	0.0	0	0.0
Social exclusion not elsewhere classified	HY060G	1377	52.7	1377	100.0	0	0.0	0	0.0
Housing allowances	HY070G	364	13.9	364	100.0	0	0.0	0	0.0
Regular inter-household cash transfer received	HY080G	35	1.3	22	62.9	0	0.0	13	37.1
Interest repayments on mortgage	HY100G	304	11.6	302	99.3	0	0.0	2	0.7
Income received by people aged under 16	HY110G	4	0.2	4	100.0	0	0.0	0	0.0
Regular inter-household cash transfer paid	HY130G	26	1.0	20	76.9	0	0.0	6	23.1

The following information on item non-response refers to income components collected at a personal level for each wave of the longitudinal component.

Note:

- * percentages are out of the total number of respondents (aged 16+) in each wave for which the interview was accepted for the database
- ** percentages are out of the total number of respondents (aged 16+) in each wave having received an amount (positive or negative) for that household income variable

– wave 2007 of 2010 longitudinal component:

		Persons 16+ having received an amount		Of which (before imputation)...					
				Full Information		Partial Information		Missing values	
		No.	%*	No.	%**	No.	%**	No.	%**
Gross income components at personal level									
Gross employee cash or near cash income	PY010G	1143	41.9	1018	89.1	0	0.0	125	10.9
Gross non-cash employee income	PY020G	239	8.8	239	100.0	0	0.0	0	0.0
Company car	PY021G	38	1.4	38	100.0	0	0.0	0	0.0
Contributions to individual private pension plans	PY035G	184	6.7	0	0.0	184	100.0	0	0.0
Cash benefits or losses from self-employment	PY050G	173	6.3	124	71.7	0	0.0	49	28.3
Value of goods produced for own consumption	PY070G	90	3.3	90	100.0	0	0.0	0	0.0
Pension from individual private plans	PY080G	12	0.4	12	100.0	0	0.0	0	0.0
Unemployment benefits	PY090G	42	1.5	42	100.0	0	0.0	0	0.0
Old-age benefits	PY100G	446	16.4	446	100.0	0	0.0	0	0.0
Survivors' benefits	PY110G	24	0.9	24	100.0	0	0.0	0	0.0
Sickness benefits	PY120G	205	7.5	205	100.0	0	0.0	0	0.0
Disability benefits	PY130G	95	3.5	95	100.0	0	0.0	0	0.0
Education-related allowances	PY140G	121	4.4	120	99.2	0	0.0	1	0.8

– wave 2008 of 2010 longitudinal component:

		Persons 16+ having received an amount		Of which (before imputation)...					
				Full Information		Partial Information		Missing values	
		No.	%*	No.	%**	No.	%**	No.	%**
Gross income components at personal level									
Gross employee cash or near cash income	PY010G	1827	40.0	1673	91.6	0	0.0	154	8.4
Gross non-cash employee income	PY020G	362	7.9	139	38.4	21	5.8	202	55.8
Company car	PY021G	64	1.4	64	100.0	0	0.0	0	0.0
Contributions to individual private pension plans	PY035G	288	6.3	0	0.0	288	100.0	0	0.0
Cash benefits or losses from self-employment	PY050G	289	6.3	223	77.2	0	0.0	66	22.8
Value of goods produced for own consumption	PY070G	164	3.6	164	100.0	0	0.0	0	0.0
Pension from individual private plans	PY080G	19	0.4	12	63.2	0	0.0	7	36.8
Unemployment benefits	PY090G	96	2.1	95	99.0	0	0.0	1	1.0
Old-age benefits	PY100G	883	19.4	871	98.6	0	0.0	12	1.4
Survivors' benefits	PY110G	51	1.1	51	100.0	0	0.0	0	0.0
Sickness benefits	PY120G	351	7.7	351	100.0	0	0.0	0	0.0
Disability benefits	PY130G	127	2.8	126	99.2	0	0.0	1	0.8
Education-related allowances	PY140G	250	5.5	221	88.4	17	6.8	12	4.8

– wave 2009 of 2010 longitudinal component:

		Persons 16+ having received an amount		Of which (before imputation)...					
				Full Information		Partial Information		Missing values	
		No.	%*	No.	%**	No.	%**	No.	%**
Gross income components at personal level									
Gross employee cash or near cash income	PY010G	2825	41.4	2796	99.0	0	0.0	29	1.0
Gross non-cash employee income	PY020G	535	7.8	367	68.6	40	7.5	128	23.9
Company car	PY021G	93	1.4	93	100.0	0	0.0	0	0.0
Contributions to individual private pension plans	PY035G	634	9.3	624	98.4	0	0.0	10	1.6
Cash benefits or losses from self-employment	PY050G	522	7.7	448	85.8	0	0.0	74	14.2
Pension from individual private plans	PY080G	49	0.7	47	95.9	0	0.0	2	4.1
Unemployment benefits	PY090G	165	2.4	141	85.5	0	0.0	24	14.5
Old-age benefits	PY100G	1468	21.5	1390	94.7	0	0.0	78	5.3
Survivors' benefits	PY110G	73	1.1	73	100.0	0	0.0	0	0.0
Sickness benefits	PY120G	550	8.1	548	99.6	0	0.0	2	0.4
Disability benefits	PY130G	198	2.9	196	99.0	0	0.0	2	1.0
Education-related allowances	PY140G	424	6.2	364	85.8	28	6.6	32	7.5

– wave 2010 of 2010 longitudinal component:

		Persons 16+ having received an amount		Of which (before imputation)...					
				Full Information		Partial Information		Missing values	
		No.	%*	No.	%**	No.	%**	No.	%**
Gross income components at personal level									
Gross employee cash or near cash income	PY010G	2367	39.9	2251	95.1	0	0.0	116	4.9
Gross non-cash employee income	PY020G	419	7.1	157	37.5	27	6.4	235	56.1
Company car	PY021G	69	1.2	69	100.0	0	0.0	0	0.0
Contributions to individual private pension plans	PY035G	820	13.8	799	97.4	0	0.0	21	2.6
Cash benefits or losses from self-employment	PY050G	479	8.1	468	97.7	0	0.0	11	2.3
Pension from individual private plans	PY080G	59	1.0	59	100.0	0	0.0	0	0.0
Unemployment benefits	PY090G	134	2.3	134	100.0	0	0.0	0	0.0
Old-age benefits	PY100G	1378	23.2	1378	100.0	0	0.0	0	0.0
Survivors' benefits	PY110G	67	1.1	67	100.0	0	0.0	0	0.0
Sickness benefits	PY120G	445	7.5	445	100.0	0	0.0	0	0.0
Disability benefits	PY130G	162	2.7	162	100.0	0	0.0	0	0.0
Education-related allowances	PY140G	386	6.5	288	74.6	52	13.5	46	11.9

2.4. Mode of data collection

Data collection was carried out for all household members living in households that were selected in the sample. For persons aged 16 and over, data collection was carried out by means of an interview only.

The table below shows the distribution of household members aged 16 and over by type of interview and by whether the person was a sample person or co-resident. Each segment of the following table represents each wave of the 2010 longitudinal component.

	Sample person		Co-resident		Total	
	Count	%	Count	%	Count	%
2007						
Face to face interview: PAPI	0	0.0	0	0.0	0	0.0
Face to face interview: CAPI	1921	70.5	0	0.0	1921	70.5
CATI, telephone interview	0	0.0	0	0.0	0	0.0
Self-administered by respondent	0	0.0	0	0.0	0	0.0
Proxy interview	802	29.5	0	0.0	802	29.5
Total	2723	100.0	0	0.0	2723	100.0
2008						
Face to face interview: PAPI	0	0.0	0	0.0	0	0.0
Face to face interview: CAPI	3596	80.2	5	45.5	3601	80.1
CATI, telephone interview	0	0.0	0	0.0	0	0.0
Self-administered by respondent	0	0.0	0	0.0	0	0.0
Proxy interview	890	19.8	6	54.5	896	19.9
Total	4486	100.0	11	100.0	4497	100.0
2009						
Face to face interview: PAPI	0	0.0	0	0.0	0	0.0
Face to face interview: CAPI	4723	69.8	23	43.4	4746	69.6
CATI, telephone interview	0	0.0	0	0.0	0	0.0
Self-administered by respondent	0	0.0	0	0.0	0	0.0
Proxy interview	2041	30.2	30	56.6	2071	30.4
Total	6764	100.0	53	100.0	6817	100.0
2010						
Face to face interview: PAPI	0	0.0	0	0.0	0	0.0
Face to face interview: CAPI	4160	71.8	78	56.1	4238	71.5
CATI, telephone interview	0	0.0	0	0.0	0	0.0
Self-administered by respondent	0	0.0	0	0.0	0	0.0
Proxy interview	1632	28.2	61	43.9	1693	28.5
Total	5792	100.0	139	100.0	5931	100.0

2.5. Imputation procedure

Missing value imputations of variables which are considered to be important in the EU-SILC was necessary. Imputation is normally done by making use of already existing information in conjunction with several methods. For respondents taking part for the second, third or fourth time, imputation was done by using data collected in the previous years. This method was preferred since it ensured consistency with the previous years' data. When considering new respondents or when information from previous years was not available, information from other persons or households with similar characteristics was used. In the case that these two methods were not possible, mathematical imputation methods, such as hot deck imputation and regression based techniques were used.

To limit the need for imputation, several measures were taken during the design of the questionnaire. As an example, from previous surveys it was noted that non-response in income variables such as self-employment and income from interests and/or dividends was considerably high. Therefore, to increase response for these questions, respondents were given the option to provide the answer in the form of income brackets as opposed to giving the exact amount. The mean of that income bracket was then assigned to the respondent during the data analysis stage.

2.6. Imputed rent

Since imputed rent became mandatory from 2007, this is the first longitudinal component in which it is featured in all the 4 years. The number of dwellings rented at market value is quite low in Malta. Thus, estimation of imputed rent values was not possible through EU-SILC data due to low sample counts not providing reliable data for estimation of rent figures. As an alternative, imputed rents were assigned according to average values estimated for National Accounts purposes, taking into consideration the size and type of dwelling.

2.7. Company cars

The non-cash employee income in relation to the provision of company car, van or other vehicle available for private use was estimated by the use of insurance registers. Since 2007, respondents were asked to provide the vehicle's make, model, engine type and year of registration. Then, by the use of insurance registers, an estimate of the car's market value was obtained. The market value was then used to estimate the fringe benefit value by applying the methodology used by the Inland Revenue Department for tax purposes. The applied method makes use of the car's market value to estimate further the car use value, maintenance value, fuel value and private use value (the last being the fringe benefit value).

3. Comparability

To ensure maximum comparability, the Malta EU-SILC team made sure that national concepts matched those used in EU-SILC as much as possible. Despite our best efforts, in some cases these concepts tended to differ slightly. The following section highlights these mentioned differences.

3.1. Basic concepts and definitions

- **Reference population**

There is no departure from the common definition of this concept. The reference population consists of all private households and their residents, who were living in Malta at the time of the data collection. Persons in collective households and institutions were excluded from the target population.

- **Private household definition**

There is no departure from the common definition of this concept. A private household is defined as a person or group of persons living in the same private dwelling and share the expenses, including the joint provision of the essentials of living.

- **Household membership**

Any person living in the selected dwelling and sharing household expenses is considered as a household member. Persons that are temporarily not present in the household for less than 6 months for reasons such as travel, work, health, education or similar are also included.

- **Income reference period**

The income reference period for each wave refers to its previous calendar year.

- **Tax on income and social insurance contributions reference period**

The reference period for the tax on income and social insurance contribution is the same as that of the entire income reference period.

- **Taxes on wealth reference period**

The regular taxes on wealth variable is not applicable for Malta.

- **Lag between income reference period and current variables**

For 2007, data collection was carried out between June and September, while data collection for 2008, 2009 and 2010 was carried out between July and October. Therefore, the lag between the income reference periods varies by more than the limit interval of 8 months, depending on the date of interview.

- **Total duration of data collection of the sample**

For all the 4 waves in the 2010 longitudinal component, data collection was completed in the 4 month timeframe. Those households that were initially found to be temporarily away were re-contacted at a later stage.

- **Basic information on activity status during the income reference period**

The activity status of the respondent during the income reference period was collected by means of a question asking for the respondent's monthly activity status for the income reference period.

3.2. Components of income

3.2.1. Differences between the national definition and standard EU-SILC definitions

For the following income components, the standard EU-SILC definitions were used:

- Total household gross income
- Total disposable household income
- Total disposable household income before social transfers except old-age and survivors' benefits
- Total disposable household income before social transfers including old-age and survivors' benefits
- Income from rental of property or land
- Family/children related allowances
- Social exclusion not elsewhere classified

- Housing allowances
- Regular inter-household cash transfer received
- Interest, dividends, profit from capital investments in unincorporated business
- Interest paid on mortgage
- Income received by people aged under 16 (not included in the 2008 and 2009 waves due to problems encountered at the data collection stage)
- Regular inter-household cash transfer paid
- Tax on income and social insurance contributions
- Employee cash or near cash income
- Non-cash employee income
- Cash benefits or losses from self-employment (including royalties)
- Unemployment benefits
- Old-age benefits
- Survivors' benefits
- Sickness benefits
- Disability benefits
- Education-related allowances
- Imputed rent

The methodology used for other income components is described below.

- Value of goods for own consumption (in 2007 and 2008 only)

This variable was initially collected in 2007. However, in 2009, following consultation with Eurostat, it was decided that Malta will no longer collect this income component. Therefore this variable is only included in the 2007 and 2008 waves. The method of collection of this variable is illustrated in the Final Quality Report for the 2008 longitudinal component.

- Employer's social insurance contributions

In Malta, the employer's compulsory social insurance contribution is equivalent to that paid by the employee. Further details in the employer's optional social insurance contribution are given below.

- Optional employer's social insurance contributions (from 2008 onwards)

The employer's optional social insurance contribution consists of any subsidies paid by the employer on private health insurance, house insurance and life insurance. Employer's life insurance contributions were provided from 2008 onwards. Also included in this variable should be the employer's contribution to private retirement plans and other insurance schemes. However, these were not collected for the EU-SILC 2008 and 2009 cross-sectional components, and thus are not present in the longitudinal component.

The following income components have not been collected, the reasons specified below:

- Regular taxes on wealth

As already mentioned, this variable is not applicable for Malta.

- Repayments/receipts for tax adjustments

In the EU-SILC, Malta has collected a combination of gross or net values for income components. Therefore, the tax adjustments are included under the variable on tax on income and social contributions.

3.2.2. The source or procedure used for the collection of income variables

Since 2006, the NSO was granted access to the System of Social Assistance and Benefits Database (SABS), kept by the Ministry for Family and Social Solidarity (MFSS). This database provides information on all persons receiving any type of social benefits. By the use of ID card numbers, which is unique for all persons registered in Malta, it was possible to merge the SABS database with the EU-SILC dataset.

Due to the SABS database becoming the source for data on social benefits, questions relating to this data were phased out of the EU-SILC questionnaire. Social benefits obtained from the SABS database consist of the following:

- PY090G: Unemployment benefits
- PY100G: Old-age benefits
- PY110G: Survivor's benefits
- PY120G: Sickness benefits
- PY130G: Disability benefits
- HY050G: Family/Children related allowances
- HY060G: Social exclusion not elsewhere classified
- HY070G: Housing allowances (only energy benefits were obtained from SABS, from 2008 only onwards)

The variable on education related allowances (PY140G) is the only variable relating to social benefits which is not available from the SABS database. Consequently, this variable has been collected from interviewers for all the years present in the longitudinal component.

From 2008, water and electricity costs, which constitute part of the total housing costs, were calculated using data on consumption provided by the Water Services Corporation.

For 2009 and 2010, the NSO was able to access a database also owned by the MFSS, containing information on persons who received social benefits by means testing. Through this database, it was possible to obtain information on interests and dividends on these persons.

The values of goods for own consumption (PY070G) was included for the first time in the EU-SILC in 2007. Questions relating to whether respondents had grown or produced any goods such as vegetables, meat, fruit, other agricultural products and/or fish for their own consumption were included in the questionnaire. A percentage of what these products made of their total consumption was then asked.

However, following discussions with Eurostat, it was decided that this income component will no longer be collected by Malta from 2009 onwards. This is because this component did not constitute a significant proportion of the total disposable income. Therefore, this variable is only available for the 2007 and 2008 waves.

Questions relating to whether the respondents received any lump sum, and the reason for receiving such a sum, during 12 months of the previous year or before were also collected in the EU-SILC. This lump sum is included then with the relevant benefit as given by the reason, wherever it was applicable.

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

In all the 4 years included in the 2010 longitudinal component, information on income was collected through a series of questions for each income component, as listed below:

1. Number of payments during the 12 months
2. Gross income at each payment
3. Net income at each payment (provided only if gross was not available)
4. Tax paid per payment received
5. National Insurance paid per payment received

Notes describing each of the income components in detail were included in the questionnaire. In particular, an emphasis on the income reference year for these particular questions was made. It was also emphasised that, information on net income was only given when the respondent was unable to provide information on gross income.

3.2.4. The method used for obtaining income target variables in the required form (i.e. as gross values)

During the interviewers' briefing, they were strongly instructed that information on gross income was always preferred over net, and only accept net values whenever gross values were not possible to collect. In the case of the latter, net to gross conversion was performed using a table obtained from the Inland Revenue Department. This table showed the gross income values that corresponded to the relevant net income values given.

In order to improve the collection of data, the questions covering income (mainly income from employment) were slightly changed in EU-SILC 2008. The main change was that respondents were asked to differentiate between income earned from their primary job and that earned from any secondary jobs. The differencing between main and secondary jobs was essential since different tax bands apply depending on the type of job.

3.3. Tracing rules

Malta implemented its tracing rules in accordance to those specified in the EU-SILC methodology. To facilitate this, a question on whether the respondent is planning to move within the next year was included in the questionnaire.

4. Coherence

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

Cross checking of a large number of collected variables from the EU-SILC with other sources of data was carried out to ensure coherence. Sources used from within the same National Statistics Office included data from National Accounts, Government Finance and Labour Force Survey. Several external data sources were also used; figures for income from employment, interests and dividends are compared with aggregate figures held by the Department of Inland Revenue.

All data presented in this report is in accordance with latest data transmitted to Eurostat as at 30th December 2012.