NSO

NATIONAL STATISTICS OFFICE • MALTA

Final Quality Report

EU-SILC 2009

National Statistics Office
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Contents

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	6.9	0	3.7
25 - 49	5.7	7	6.3
50 - 64	4.1	5.9	5.1
65+	6.9	7.4	7.2
Total	6.7	6.9	6.8

Figures presented in the above table refer to EU-SILC 2008. Latest European Union indicators shall be presented once available.

2. Accuracy

2.1. Sample design

2.1.1. Type of sample design

The sample design used in EU-SILC in all 4 years from 2006-2009 was a simple random sample of households. This sample was taken from the database of the Census of Population and Housing 2005, which is updated regularly by the National Statistics Office.

As recommended by Eurostat, the sample design used by Malta followed a 4-year rotational panel. The gross sample in the 2009 longitudinal wave consists of 817 households being surveyed for the fourth time (interviewed for the first time in 2006), 968 household being surveyed for the third time (interviewed for the first time and 2007) and 1,063 households being surveyed for the second time (interviewed for the first time in 2008). The composition of the longitudinal file by panel is shown below:

Panel	2006	2007	2008	2009
3				
4				
2				
1				
3				
4				
2				

2.1.2. Sampling units

The sampling units used in EU-SILC are persons living in private households who reside in Malta. In all 4 years, a simple random sample of households was selected from the updated Census of Population and Housing 2005 register. All persons living in these households were then interviewed. Selected households and persons are followed and re-interviewed for four consecutive years.

2.1.3. Stratification and substratification criteria

No stratification is used for EU-SILC in Malta.

2.1.4. Sample size and allocation criteria

All Member States are required to meet specified minimum effective sample sizes in order to be compliant with the Council Regulation governing the methodology of EU-SILC. In Malta's case, the minimum effective sample size required for the cross-sectional component is 3,000 households (and 7,000 eligible persons), while that for the longitudinal is 2,250 households (and 5,250 eligible persons), where eligible persons refers to persons aged 16 and over.

As can be seen from above, the gross sample size for the 2009 longitudinal component was 2,848 households. A number of factors contributed to this achieved sample size. The initial gross sample in the 2006 cross-sectional component was 4,136 households. In each subsequent year, the oldest panel was dropped and replaced by a new panel consisting of around 1,500 households. Further to this, split households created in 2006, 2007 and 2008 were also added to the sample.

2.1.5. Sample selection schemes

A one-stage simple random sampling design is used for the selection of a sample for EU-SILC in Malta. The sample contains a number of households, and all persons in the selected households are approached for interview.

2.1.6. Sample distribution over time

The below table illustrates the distribution of interviewed households, by year of survey and month of interview, in the 2009 longitudinal component.

Year of survey	Month of interview				
	June	July	August	September	October
2006	970	48	35	74	-
2007	845	337	209	688	1
2008	-	453	435	923	958
2009	-	33	503	1,113	770

From the above table, it can be seen that only 1 household exceeded the 4 months timeframe for data collection, in 2007. This was due to the fact that it was not possible for the household to be interviewed prior to this date.

2.1.7. Renewal of the sample: rotational groups

The 4-year rotational design recommended by Eurostat requires that, each year, one of the four panels is dropped and replaced by a new one.

2009 was the first year of the survey where the oldest panel, i.e. panel 2, which was the remaining panel from the 2005 cross-sectional component, was dropped. In previous years, since the survey had not yet been running for a full 4 years, it was decided to drop the panel with the lowest response rate.

2.1.8. Weightings

2.1.8.1. Design factor

The household design weight (DB080) is equal to the inverse of the inclusion probability of households, and is calculated for households in their first year of survey. So, in the EU-SILC 2009 longitudinal component, it was calculated for all households in 2006, and for those households in 2007 and 2008 that were included in the survey for the first time. When summing the design weights in each panel, the total will be equal to the total number of households in the cross-sectional file of the corresponding year.

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

It was necessary to adjust for non-response of households in the first wave of EU-SILC. This was done through post-stratification, following the computation of the design weights.

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

Household data was calibrated through the use of CALMAR software. The logit method was applied. The following variables were 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)

The personal base weight (RB060) is computed for all persons surveyed, for all years. For persons in the first wave of survey, it is equal to the cross-sectional weight of that wave, adjusted to reflect the total population for that year. Further to the base weight, three longitudinal weights were also computed; RB062, for persons who, in 2009, were in their second, third or fourth year or survey, RB063, for persons who, in 2009, were in their third or fourth year of survey, and RB064, for persons who, in 2009, were in their fourth year of survey. The longitudinal weights were only computed for 2009, the final year of the longitudinal component.

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

Each year, it is necessary to adjust the personal base weight for non-response, to compensate for panel attrition. This adjustment is done at individual level through post-stratification, using sex and 5-year age groups (according to age as at year of entry into the survey), and is performed separately for each panel. Persons entering the sample from non-sample households were assigned a weight of 0, while newborns were assigned the same weight as their mother. Finally, the weights are averaged at household level. This adjusted weight is then used in order to construct the final longitudinal weight.

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

As with the first wave of the longitudinal component, calibration of data was carried out at household level using CALMAR, applying the logit method. The same variables were used in order to calibrate, namely, sex, age group, household type, household size and district. In the case of 2nd, 3rd and 4th waves, the benchmarks refer to the situation as at the household's year of entry into the sample, and not to the year of interview as with the 1st wave.

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

For the other waves of the EU-SILC longitudinal component, the final base weight (RB060) is computed using the cross-sectional weight for the household's year of entry into the survey. This cross-sectional weight is adjusted in order to account for panel attrition. Finally, this weight is rescaled to reflect the total target population.

In order to compute the longitudinal weights (RB062, RB063 and RB064), it is necessary to calibrate the base weights using population benchmarks for 2006, 2007 and 2008. This calibration was also carried out using CALMAR, with the same benchmarks stated previously.

2.1.8.8. Final household cross-sectional weight

The final household cross-sectional weight was obtained by calibrating the base weights at household level. Once again, CALMAR was used for this.

2.1.9. Substitutions

No substitutions were made.

2.2. Sampling errors

The following tables are used to illustrate the mean, total number of observations and standard errors for each income component. It is important to note that these means are averaged over all households or over all persons aged 16 and over (depending on whether the income component is collected at household or personal level), irrespective of whether that household or person received some income in each particular component. Separate tables are shown for the 2009 cross-sectional component, and for each wave of the 2009 longitudinal component.

– **2009 cross-sectional component:**

		Mean (€)		Number of observations		Standard error
		Weighted	**Un-weighted**	**Before imputation**	**After imputation**	
Total household income						
Total household gross income	HY010	24316	22722	2516	3646	321
Total disposable household income	HY020	20481	19299	2263	3646	236
Total disposable household income before social transfers other than old age and survivors' benefits	HY022	19104	17904	2209	3646	238
Total disposable household income before social transfers including old age and survivors' benefits	HY023	15744	14231	2169	3646	257
Gross income components at household level						
Income from rental of property or land	HY040G	139	124	204	238	21

Interest, dividends, profit from capital investments in unincorporated business	HY090G	1099	1176	2757	3646	49
Family/Children related allowances	HY050G	343	339	1173	1173	14
Social exclusion not elsewhere classified	HY060G	219	234	1859	1859	14
Housing allowances	HY070G	32	29	653	654	3
Regular inter-household cash transfer received	HY080G	49	49	53	55	9
Interest repayments on mortgage	HY100G	292	233	410	418	15
Income received by people aged under 16	HY110G	0	0	0	0	0
Regular inter-household cash transfer paid	HY130G	39	31	29	39	8
Tax on income and social contributions	HY140G	3795	3392	2869	2887	91
Gross income components at personal level						
Gross employee cash or near cash income	PY010G	6446	5869	3377	3420	101
Gross non-cash employee income	PY020G	83	74	441	654	5
Company car	PY021G	22	20	112	112	2
Contributions to individual private pension plans	PY035G	126	118	772	782	7
Cash benefits or losses from self-employment	PY050G	1259	1118	463	570	89
Value of goods produced for own consumption	PY070G	-	-	-	-	-
Pension from individual private plans	PY080G	37	41	57	60	8
Unemployment benefits	PY090G	97	87	160	190	14
Old-age benefits	PY100G	1354	1511	1671	1760	38
Survivors' benefits	PY110G	65	67	87	87	7
Sickness benefits	PY120G	42	44	672	674	3
Disability benefits	PY130G	124	139	259	261	9
Education-related allowances	PY140G	68	70	445	520	3

– **wave 2006 of 2009 longitudinal component:**

		Un-weighted mean (€)	Number of observations		Standard error
			Before imputation	After imputation	
Total household income					
Total household gross income	HY010	22515	590	1127	497
Total disposable household income	HY020	18739	389	1127	370
Total disposable household income before social transfers other than old age and survivors' benefits	HY022	17533	385	1127	380
Total disposable household income before social transfers including old age and survivors' benefits	HY023	14486	368	1127	413
Gross income components at household level					
Income from rental of property or land	HY040G	142	1126	1127	40
Interest, dividends, profit from capital investments in unincorporated business	HY090G	1294	656	1127	108
Family/Children related allowances	HY050G	297	1127	1127	20
Social exclusion not elsewhere classified	HY060G	205	1127	1127	25
Housing allowances	HY070G	40	1123	1127	7
Regular inter-household cash transfer received	HY080G	31	1126	1127	10
Interest repayments on mortgage	HY100G	266	1123	1127	28
Income received by people aged under 16	HY110G	8	1126	1127	3
Regular inter-household cash transfer paid	HY130G	40	1125	1127	16
Tax on income and social contributions	HY140G	3736	372	1127	141
Gross income components at personal level					
Gross employee cash or near cash income	PY010G	5808	2633	2710	167
Gross non-cash employee income	PY020G	58	2710	2710	10
Company car	PY021G	58	2710	2710	10
Contributions to individual private pension plans	PY035G	56	2704	2710	7
Cash benefits or losses from self-employment	PY050G	1089	2693	2710	93
Pension from individual private plans	PY080G	40	2710	2710	13
Unemployment benefits	PY090G	48	2710	2710	8
Old-age benefits	PY100G	1237	2710	2710	54
Survivors' benefits	PY110G	47	2710	2710	10
Sickness benefits	PY120G	31	2710	2710	4
Disability benefits	PY130G	158	2710	2710	17
Education-related allowances	PY140G	48	2709	2710	5

		Un-weighted mean (€)	Number of observations		Standard error
			Before imputation	After imputation	
Total household income					
Total household gross income	HY010	22027	1203	2080	348
Total disposable household income	HY020	18346	1059	2080	257
Total disposable household income before social transfers other than old age and survivors' benefits	HY022	17090	1060	2080	264
Total disposable household income before social transfers including old age and survivors' benefits	HY023	14344	629	2080	290
Gross income components at household level					
Income from rental of property or land	HY040G	117	2074	2080	22
Interest, dividends, profit from capital investments in unincorporated business	HY090G	1060	1165	2080	52
Family/Children related allowances	HY050G	293	2080	2080	17
Social exclusion not elsewhere classified	HY060G	216	2080	2080	20
Housing allowances	HY070G	17	2065	2080	3
Regular inter-household cash transfer received	HY080G	57	2075	2080	14
Interest repayments on mortgage	HY100G	247	2074	2080	20
Income received by people aged under 16	HY110G	9	2073	2080	4
Regular inter-household cash transfer paid	HY130G	39	2074	2080	9
Tax on income and social contributions	HY140G	3642	1842	2080	100
Gross income components at personal level					
Gross employee cash or near cash income	PY010G	5775	4768	4979	120
Gross non-cash employee income	PY020G	50	4979	4979	4
Company car	PY021G	19	4979	4979	3
Contributions to individual private pension plans	PY035G	98	4937	4979	7
Cash benefits or losses from self-employment	PY050G	1158	4899	4979	83
Value of goods produced for own consumption	PY070G	23	4979	4979	3
Pension from individual private plans	PY080G	25	4979	4979	7
Unemployment benefits	PY090G	44	4979	4979	6
Old-age benefits	PY100G	1148	4979	4979	39
Survivors' benefits	PY110G	58	4979	4979	9
Sickness benefits	PY120G	38	4979	4979	3
Disability benefits	PY130G	161	4979	4979	12
Education-related allowances	PY140G	63	4976	4979	7

– **wave 2008 of 2009 longitudinal component:**

		Un-weighted mean (€)	Number of observations		Standard error
			Before imputation	After imputation	
Total household income					
Total household gross income	HY010	22111	1920	2769	333
Total disposable household income	HY020	18645	1897	2769	248
Total disposable household income before social transfers other than old age and survivors' benefits	HY022	17404	1929	2769	253
Total disposable household income before social transfers including old age and survivors' benefits	HY023	14095	1945	2769	275
Gross income components at household level					
Income from rental of property or land	HY040G	160	2742	2769	26
Interest, dividends, profit from capital investments in unincorporated business	HY090G	1201	2148	2769	41
Family/Children related allowances	HY050G	267	2768	2769	16
Social exclusion not elsewhere classified	HY060G	232	2769	2769	18
Housing allowances	HY070G	23	2756	2769	2
Regular inter-household cash transfer received	HY080G	50	2755	2769	10
Interest repayments on mortgage	HY100G	217	2764	2769	17
Income received by people aged under 16	HY110G	0	0	0	0
Regular inter-household cash transfer paid	HY130G	21	2756	2769	6
Tax on income and social contributions	HY140G	3445	1945	2769	91
Gross income components at personal level					
Gross employee cash or near cash income	PY010G	5789	6228	6454	112
Gross non-cash employee income	PY020G	59	6174	6454	4
Company car	PY021G	21	6454	6454	3
Contributions to individual private pension plans	PY035G	70	6435	6454	5
Cash benefits or losses from self-employment	PY050G	1119	6369	6454	68
Value of goods produced for own consumption	PY070G	22	6454	6454	2
Pension from individual private plans	PY080G	23	6444	6454	6
Unemployment benefits	PY090G	49	6451	6454	6
Old-age benefits	PY100G	1356	6434	6454	39
Survivors' benefits	PY110G	63	6454	6454	8
Sickness benefits	PY120G	39	6454	6454	3
Disability benefits	PY130G	143	6453	6454	10
Education-related allowances	PY140G	64	6436	6454	4

		Un-weighted mean (€)	Number of observations		Standard error
			Before imputation	After imputation	
Total household income					
Total household gross income	HY010	22345	1556	2419	407
Total disposable household income	HY020	19012	1405	2419	297
Total disposable household income before social transfers other than old age and survivors' benefits	HY022	17572	1379	2419	301
Total disposable household income before social transfers including old age and survivors' benefits	HY023	13823	1355	2419	324
Gross income components at household level					
Income from rental of property or land	HY040G	148	2388	2419	29
Interest, dividends, profit from capital investments in unincorporated business	HY090G	1007	1711	2419	50
Family/Children related allowances	HY050G	345	2419	2419	17
Social exclusion not elsewhere classified	HY060G	255	2419	2419	18
Housing allowances	HY070G	30	2418	2419	3
Regular inter-household cash transfer received	HY080G	59	2417	2419	13
Interest repayments on mortgage	HY100G	208	2418	2419	17
Income received by people aged under 16	HY110G	0	0	0	0
Regular inter-household cash transfer paid	HY130G	34	2409	2419	10
Tax on income and social contributions	HY140G	3299	1364	2419	118
Gross income components at personal level					
Gross employee cash or near cash income	PY010G	5741	5556	5594	119
Gross non-cash employee income	PY020G	67	5498	5594	5
Company car	PY021G	17	5594	5594	3
Contributions to individual private pension plans	PY035G	111	5593	5594	7
Cash benefits or losses from self-employment	PY050G	1136	5531	5594	126
Pension from individual private plans	PY080G	47	5592	5594	9
Unemployment benefits	PY090G	70	5581	5594	14
Old-age benefits	PY100G	1324	5529	5594	45
Survivors' benefits	PY110G	298	5594	5594	19
Sickness benefits	PY120G	73	5592	5594	4
Disability benefits	PY130G	141	5592	5594	11
Education-related allowances	PY140G	67	5568	5594	4

The tables below sum up the mean (weighted and unweighted), total number of observations (before and after imputation) and the standard error – disaggregated by household size, age and sex – of the equivalised disposable income. The means are averaged over all persons Separate tables are shown for the 2009 cross-sectional component, and for each wave of the 2009 longitudinal component.

– **2009 cross-sectional component:**

	Mean (€)		Number of observations		Standard error
	Weighted	**Un-weighted**	**Before imputation**	**After imputation**	
Subclasses by household size					
1 household member	8549	8472	539	671	175
2 household members	10856	10075	1740	2084	135
3 household members	12491	12029	1875	2214	149
4 or more	10964	10564	4529	5244	95
Population by age group					
<25	10795	10353	2590	3026	139
25-34	12987	12567	1038	1193	174
35-44	11422	10942	996	1200	220
45-54	11877	11567	1375	1569	168
55-64	11226	10657	1356	1587	149
65+	8857	8669	1328	1638	102
Population by sex					
Male	11278	10783	4234	5001	94
Female	11011	10511	4449	5212	93

- **wave 2006 of 2009 longitudinal component:**

	Un-weighted mean (€)	Number of observations		Standard error
		Before imputation	After imputation	
Subclasses by household size				
1 household member	8202	152	154	382
2 household members	9435	604	606	326
3 household members	10458	756	768	186
4 or more	9885	1848	1848	104
Population by age group				
<25	9308	1099	1104	134
25-34	11946	394	394	446
35-44	9931	424	426	261
45-54	10082	522	527	198
55-64	10392	468	470	257
65+	8502	453	455	189
Population by sex				
Male	10055	1652	1661	137
Female	9667	1708	1715	129

- **wave 2007 of 2009 longitudinal component:**

	Un-weighted mean (€)	Number of observations		Standard error
		Before imputation	After imputation	
Subclasses by household size				
1 household member	7974	303	303	285
2 household members	9215	1092	1096	172
3 household members	10434	1452	1455	139
4 or more	9836	3288	3297	78
Population by age group				
<25	9505	1977	1980	103
25-34	11441	737	740	206
35-44	10017	764	768	183
45-54	10297	953	955	153
55-64	9652	902	906	176
65+	8192	802	802	155
Population by sex				
Male	9905	3029	3038	91
Female	9648	3106	3113	88

– **wave 2008 of 2009 longitudinal component:**

	Un-weighted mean (€)	Number of observations		Standard error
		Before imputation	**After imputation**	
Subclasses by household size				
1 household member	7730	477	482	216
2 household members	9476	1546	1554	164
3 household members	11535	1719	1725	171
4 or more	10181	4115	4128	73
Population by age group				
<25	9880	2455	2460	103
25-34	11979	859	865	203
35-44	10388	961	963	218
45-54	11153	1199	1206	178
55-64	10299	1203	1211	172
65+	8264	1180	1184	126
Population by sex				
Male	10354	3856	3873	94
Female	10029	4001	4016	89

– **wave 2009 of 2009 longitudinal component:**

	Un-weighted mean (€)	Number of observations		Standard error
		Before imputation	**After imputation**	
Subclasses by household size				
1 household member	8081	343	451	186
2 household members	9794	1106	1410	163
3 household members	11885	1137	1404	166
4 or more	10647	2993	3483	129
Population by age group				
<25	10365	1703	2004	187
25-34	12710	634	747	228
35-44	11042	636	769	303
45-54	11381	878	1017	178
55-64	10579	868	1062	184
65+	8407	860	1149	113
Population by sex				
Male	10742	2712	3292	121
Female	10377	2867	3456	116

2.3. Non-sampling errors

2.3.1. Sampling frame and coverage errors

In all four years included in the 2009 longitudinal component of EU-SILC, the database from the Census of Population and Housing 2005 was used as a sampling frame. Since the Census in 2005, this database is updated on an annual basis through the use of register data, and thus provides a comprehensive count of all persons living in Malta and Gozo at a particular point in time. However, even though the yearly updating exercise carried out is as exhaustive as possible, there were still some households which were found to be ineligible in the EU-SILC sample.

2.3.2. Measurement and processing errors

Below is a summary of the main sources of measurement and processing errors.

Questionnaire

Every year, before starting data collection, the EU-SILC questionnaire from the previous year is thoroughly checked for errors and misinterpretations, and improvements are subsequently made as necessary. However, despite our best efforts, a few minor errors (mostly involving wording) were noticed after the data collection stage had started. When this happened, interviewers were informed straight away in order to reduce the risk of the relevant questions being misinterpreted. These errors are then taken note of and corrected in the EU-SILC questionnaire the following year.

The preferred data collection method used in Malta is Computer Assisted Personal Interviewing (CAPI). Through experience, we have found that this method produces better results than the PAPI method, since it allows for a number of automatic validations in the program. This means that any queries are dealt with immediately during the data collection phase, and thus helps to avoid data entry errors and any other human errors. The CAPI method also shortens the average length of interview considerably, reducing the burden on responding households.

The Maltese EU-SILC team is confident that any problems in the questionnaire are minimal, and do not effect the quality of the data provided. However, we feel that there is always room for improvement, and are constantly striving to develop the questionnaire further.

Interviewers

Having well-prepared interviewers is an essential part of collecting complete and reliable data. Therefore, two separate briefing sessions were organised every year – one for interviewers who were participating in EU-SILC for the first time, and the other for interviewers who had already participated in previous years. The first briefing covered the EU-SILC questionnaire in detail, while the second briefing mainly highlighted any changes made and errors found since the previous year. Both sessions also included a brief presentation summarising how the data collection should be conducted, and covering some key points about the survey. New interviewers were also given a second briefing, where they were able to familiarise themselves with the data entry program before commencing data collection. It was made clear to all interviewers that, in the event of any difficulty, they should contact the office immediately for clarification.

To ensure that interviewers were conducting their work appropriately, the office carried out regular audits where a sample of households was re-contacted and asked a short set of questions. Although, the majority of the time, this was found to be the case, it was observed that a small number of interviewers were not complying fully, and it was thus necessary to take disciplinary action.

Respondents

On the whole, the response rate for EU-SILC in Malta is considered to be reasonably satisfactory, especially taking into consideration that the burden on respondents is relatively high, even more so for those households which are responding for the fourth time. It is important to bear in mind that the effective sample size for Malta is rather large when compared to the total population, which means that the possibility of persons being selected for other surveys apart from EU-SILC is quite high. This factor quite likely contributes to the fact that the level of attrition is rather high in some panels.

When looking at data from other countries, it can be observed that Malta has a high level of proxy interviews in comparison. This is mainly due to the fact that it is very difficult for all persons living in the same household to be available at the same time for interview, and in this case, proxy information is preferred to having no information at all. However, when fixing an appointment with the household, interviewers were instructed to ask the household to prepare any relevant data (such as payslips and tax returns) beforehand for those persons who will not be present during the interview. Further to this, if the respondent was not able to answer any question for the person they were responding on behalf of, interviewers were allowed to contact that person at a later date by telephone to gather the missing data.

The nature of the questions in EU-SILC, particularly those related to income, is also thought to affect the response rate negatively. One must keep in mind that Malta is a small country, where many people are scared of others finding out what their income is, and thus might be more likely to refuse to answer such questions. Further to this, the EU-SILC questionnaire is rather long and intense, and respondents' attention, interest and thus level of co-operation are more likely to dwindle with time, leading to more bias and non-response in questions which are positioned towards the end of the survey.

In an attempt to improve the response rate for old households, the NSO organised a lottery for all households that were taking part in the survey for the second, third or fourth time. Respondents stood a chance of winning a holiday for two, including flights and accommodation.

Data collection and data entry

The method used for the data collection of EU-SILC in Malta is the CAPI method. When visiting households, interviewers make use of a laptop which has the EU-SILC data entry program installed. This program is built on Blaise software, and contains a number of built-in validations and automated routing in order to avoid, as much as possible, certain data entry and human errors. The CAPI method also contributes to speeding up the data collection process.

Since the CAPI system is used, a basic requirement for interviewers is that they are computer literate. As mentioned previously, specialised training sessions are organised for new interviewers, where they can familiarise themselves with usage of the laptop as well as the data entry program. Further to this, each interviewer is assigned a number of fictitious 'test' households, where they can experiment with inputting data before starting to interview actual households.

In 2006, the first year of the 2009 longitudinal component, both CAPI and PAPI methods were used. However, from 2007 onwards, the PAPI system was dropped and CAPI alone was used. For households which were participating in EU-SILC for the 2nd, 3rd or 4th 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 start of data collection.

2.3.3. Non-response errors

2.3.3.1. Achieved sample size

The below table illustrates the number of households in the 2009 EU-SILC longitudinal component, as well as 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+)
2006	1127	2710	-
2007	2080	5008	33
2008	2769	6528	51
2009	2419	5554	126
Total	**8395**	**19800**	**210**

2.3.3.2. Unit non-response

- **Household non-response rate** *(wave 2006)*

The address contact rate (R_a) is given by:

$$R_a = \frac{\sum[DB120 = 11]}{\sum[DB120 = all] - \sum[DB120 = 23]} = \frac{1320}{1500 - 78} = 0.928$$

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

$$R_h = \frac{\sum[DB135 = 1]}{\sum[DB130 = all]} = \frac{1127}{1320} = 0.85$$

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

$$NR_h = (1 - (R_a * R_h)) * 100 = (1 - (0.928 * 0.85)) * 100 = 21.1\%$$

- **Individual non-response rate** *(wave 2006)*

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

$$R_p = \frac{\sum[RB250 = 11 + 12 + 13]}{\sum[RB245 = 1 + 2 + 3]} = \frac{2710}{2710} = 1$$

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

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

This zero individual non-response rate makes sense, since, when a household was selected and one or more of the members were not able to respond, responding members provided proxy answers for these individuals.

– **Overall individual non-response rate** *(wave 2006)*

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

$$NR_p = (1 - (R_a * R_h * R_p)) * 100 = (1 - (0.928 * 0.85 * 1)) * 100 = 21.1\%$$

The following information refers to the 2007, 2008 and 2009 wave of the EU-SILC longitudinal component:

– **Response rate for households**

- **Wave response rate**

  - **Wave 2007:** where t-1 = 2006 and t = 2007
    Wave response rate=100* (number of households with DB135=1 and DB010=2007 / number of households with DB010=2007)
    =100*(2080/2656)
    =78.31%

  - **Wave 2008:** where t-1 = 2007 and t = 2008
    Wave response rate=100* (number of households with DB135=1 and DB010=2008 / number of households with DB010=2008)
    =100*(2769/3638)
    =76.11%

  - **Wave 2009:** where t-1 = 2008 and t = 2009
    Wave response rate=100* (number of households with DB135=1 and DB010=2009 / number of households with DB010=2009)
    =100*(2419/2848)
    =84.94%

- **Longitudinal follow-up rate**

  - **Wave 2008:** where t-1 = 2007, t = 2008 and t+1 = 2009
    Longitudinal follow-up rate=100* (number of households with DB010=2009 and DB075 = 1 or 3 / number of households with DB010=2007)
    =100*(1785/2656)
    =67.21%

- **Follow-up ratio**

  - **Wave 2007:** where t-1 = 2006 and t = 2007
    Number of households passed on from 2006 to 2007
    = number of households with DB010=2007 and DB075 = 1
    = 1149

  - **Wave 2008:** where t = 2007 and t+1 = 2008
    Number of households passed on from 2007 to 2008 (that were originally in 2006)
    = number of households with DB010=2008 and DB075 = 1
    = 939

- **Wave 2009:** where t = 2008 and t+1 = 2009
  Number of households passed on from 2008 to 2009 (that were originally in 2006)
  = number of households with DB010=2009 and DB075 = 1
  = 817

  Follow-up ratio = 817/1149 = 0.71

- **Achieved sample size ratio**

  - **Wave 2007:** where t-1 = 2006 and t = 2007
    Achieved sample size ratio = number of households with DB135=1 and DB010=2007 / number of households with DB135=1 and DB010=2006
    =2080/1127
    =1.85

  - **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
    =2769/2080
    =1.33

  - **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
    =2419/2769
    =0.87

– **Response rate for persons**

- **Wave response rate for sample persons**

  - **Wave 2007:** where t-1 = 2006 and t = 2007
    Wave response rate for sample persons=100*(number of persons with RB100=1 & RB250=11,12,13 & RB010=2007 / number of persons with RB100=1 & RB010=2007)
    =100 * (4946/5141)
    =96.21%

  - **Wave 2008:** where t-1 = 2007 and t = 2008
    Wave response rate for sample persons=100*(number of persons with RB100=1 & RB250=11,12,13 & RB010=2008 / number of persons with RB100=1 & RB010=2008)
    =100 * (6405/6655)
    =96.24%

  - **Wave 2009:** where t-1 = 2008 and t = 2009
    Wave response rate for sample persons=100*(number of persons with RB100=1 & RB250=11,12,13 & RB010=2009 / number of persons with RB100=1 & RB010=2009)
    =100 * (5468/5588)
    =97.85%

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

    - **Wave 2007:** where t-1 = 2006 and t = 2007
    Wave response rate for co-residents =100*(number of persons with RB100=2 & RB250=11,12,13 & RB010=2007 / number of persons with RB100=2 & RB010=2007)
    =100 * (33/1078)
    =3.06%

    - **Wave 2008:** where t-1 = 2007 and t = 2008
    Wave response rate for co-residents =100*(number of persons with RB100=2 & RB250=11,12,13 & RB010=2008 / number of persons with RB100=2 & RB010=2008)
    =100 * (49/1372)
    =3.57%

    - **Wave 2009:** where t-1 = 2008 and t = 2009
    Wave response rate for co-residents =100*(number of persons with RB100=2 & RB250=11,12,13 & RB010=2009 / number of persons with RB100=2 & RB010=2009)
    =100 * (126/1255)
    =10.04%

- **Longitudinal follow-up rate**

    - **Wave 2007:** where t-1 = 2006 and t = 2007
    Longitudinal follow-up rate =100*(number of persons with RB100=1 & RB250=11,12,13 & RB010=2007 / number of persons with RB100=1 & RB110<5 & RB010=2007)
    = 100 *(4946/5078)
    =97.40%

    - **Wave 2008:** where t-1 = 2007 and t = 2008
    Longitudinal follow-up rate =100*(number of persons with RB100=1 & RB250=11,12,13 & RB010=2008 / number of persons with RB100=1 & RB110<5 & RB010=2008)
    = 100 *(6405/6532)
    =98.06%

    - **Wave 2009:** where t-1 = 2008 and t = 2009
    Longitudinal follow-up rate =100*(number of persons with RB100=1 & RB250=11,12,13 & RB010=2009 / number of persons with RB100=1 & RB110<5 & RB010=2009)
    = 100 *(5468/5500)
    =99.42%

- **Achieved sample size ratio**

  ▪ **Wave 2007:** where t-1 = 2006 and t = 2007
  Achieved sample size ratio = number of persons with RB250=11,12,13 & RB010=2007 / number of persons with RB250=11,12,13 & RB010=2006
  =4979/2710
  =1.84

  ▪ **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
  =6454/4979
  =1.30

  ▪ **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
  =5594/6454
  =0.87

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

  ▪ **Wave 2007:**
  Response rate for non-sample persons = number of persons aged 16+ and with RB100=2 & RB250=11,12,13 & RB010=2007 / number of persons aged 16+ and with RB100=2 & RB010=2007
  =33/33
  =1

  ▪ **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
  =49/51
  =0.96

  ▪ **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
  =126/126
  =1

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)

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

	2006		2007		2008		2009	
	Count	% of total	Count	% of total	Count	% of total	Count	% of total
At the same address as last interview	0	0.0	1038	39.1	1987	54.6	2667	93.6
Entire household moved to a private household within the country	0	0.0	16	0.6	54	1.5	45	1.6
Entire household moved to a collective household or institution within the country	0	0.0	1	0.0	1	0.0	9	0.3
Household moved outside the country	0	0.0	2	0.1	3	0.1	3	0.1
Entire household died	0	0.0	3	0.1	1	0.0	5	0.2
Household does not contain sample person	0	0.0	1	0.0	3	0.1	0	0.0
Household unable to access	0	0.0	0	0.0	0	0.0	14	0.5
Split-off household	0	0.0	22	0.8	54	1.5	77	2.7
New address added to the sample this wave or first wave	1500	100.0	1507	56.7	1504	41.3	0	0.0
Lost household	0	0.0	66	2.5	31	0.9	28	1.0
Total	**1500**	**100.0**	**2656**	**100.0**	**3638**	**100.0**	**2848**	**100.0**

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

	2006			2007			2008			2009		
	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	1320	88.0	88.0	1400	52.7	90.6	1432	39.4	88.8	94	3.3	77.0
Address cannot be located	102	6.8	6.8	37	1.4	2.4	69	1.9	4.3	26	0.9	21.3
Address unable to access	0	0.0	0.0	51	1.9	3.3	81	2.2	5.0	2	0.1	1.6
Address does not exist or is non-residential address or is unoccupied or not principal residence	78	5.2	5.2	57	2.1	3.7	30	0.8	1.9	0	0.0	0.0
Sub-total	**1500**	**100.0**	**100.0**	**1545**	**58.2**	**100.0**	**1612**	**44.3**	**100.0**	**122**	**4.3**	**100.0**
N\A (DB110 not = 2,8 or 9)	0	0.0		1111	41.8		2026	55.7		2726	95.7	
Total	**1500**	**100.0**		**2656**	**100.0**		**3638**	**100.0**		**2848**	**100.0**	

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

	2006			2007			2008			2009		
	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	1127	75.1	85.4	2080	78.3	85.3	2769	76.1	81.0	2419	84.9	87.6
Refusal to co-operate	148	9.9	11.2	236	8.9	9.7	349	9.6	10.2	209	7.3	7.6
Entire household temporarily away for duration of fieldwork	11	0.7	0.8	0	0.0	0.0	39	1.1	1.1	15	0.5	0.5
Household unable to respond (illness, incapacity,...)	20	1.3	1.5	31	1.2	1.3	45	1.2	1.3	18	0.6	0.7
Other reasons	14	0.9	1.1	91	3.4	3.7	217	6.0	6.3	100	3.5	3.6
Sub-total	**1320**	**88.0**	**100.0**	**2438**	**91.8**	**100.0**	**3419**	**94.0**	**100.0**	**2761**	**96.9**	**100.0**
N\A (DB120 not = 11 or DB110 not = 1)	180	12.0		218	8.2		219	6.0		87	3.1	
Total	**1500**	**100.0**		**2656**	**100.0**		**3638**	**100.0**		**2848**	**100.0**	

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

	2006		2007		2008		2009	
	Count	% of total	Count	% of total	Count	% of total	Count	% of total
Interview accepted for database	1127	75.1	2080	78.3	2769	76.1	2419	84.9
N\A (DB130 not = 11)	373	24.9	576	21.7	869	23.9	429	15.1
Total	**1500**	**100.0**	**2656**	**100.0**	**3638**	**100.0**	**2848**	**100.0**

2.3.3.4. Distribution of persons by membership status (RB110)

Distribution of persons by membership status (RB110) for 2007, 2008 and 2009 waves of the EU-SILC longitudinal component:

	2007		2008		2009	
	Count	% of total	Count	% of total	Count	% of total
Was in this household in previous wave or current household member	6074	97.7	7802	97.2	6565	95.9
Moved into this household from another sample household since previous wave	8	0.1	17	0.2	39	0.6
Moved into this household from outside sample since previous wave	50	0.8	40	0.5	85	1.2
Newly born into this household since last wave	19	0.3	30	0.4	59	0.9
Moved out since previous wave or last interview if not contacted in previous wave	55	0.9	101	1.3	59	0.9
Died	13	0.2	33	0.4	35	0.5
Lived in the household for at least three months during the income reference period and was not recorded in the register	0	0.0	4	0.0	1	0.0
Total	**6219**	**100.0**	**8027**	**100.0**	**6843**	**100.0**

2.3.3.5. Item non-response

The following information on item non-response refers to income components collected at 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 2006 of 2009 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	1127	100.0	590	52.4	530	47.0	7	0.6
Total disposable household income	HY020	1127	100.0	389	34.5	731	64.9	7	0.6
Total disposable household income before social transfers except old age and survivors' benefits	HY022	1127	100.0	385	34.2	702	62.3	40	3.5
Total disposable household income before social transfers including old age and survivors' benefits	HY023	1127	100.0	368	32.7	615	54.6	144	12.8
Gross income components at household level									
Income from rental of property or land	HY040G	52	4.6	51	98.1	0	0.0	1	1.9
Interest, dividends, profit from capital investments in unincorporated business	HY090G	1127	100.0	656	58.2	0	0.6	471	41.8
Family/Children related allowances	HY050G	353	31.3	353	100.0	0	0.0	0	0.0
Social exclusion not elsewhere classified	HY060G	239	21.2	239	100.0	0	0.0	0	0.0
Housing allowances	HY070G	57	5.1	53	93.0	0	0.0	4	7.0
Regular inter-household cash transfer received	HY080G	15	1.3	14	93.3	0	0.0	1	6.7
Interest repayments on mortgage	HY100G	147	13.0	143	97.3	0	0.0	4	2.7
Income received by people aged under 16	HY110G	11	1.0	10	90.9	0	0.0	1	9.1
Regular inter-household cash transfer paid	HY130G	31	2.8	29	93.5	0	0.0	2	6.5

– **wave 2007 of 2009 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	2080	100.0	1203	57.8	875	42.1	2	0.1
Total disposable household income	HY020	2080	100.0	1059	50.9	1016	48.8	5	0.2
Total disposable household income before social transfers except old age and survivors' benefits	HY022	2080	100.0	1060	51.0	1018	48.9	2	0.1
Total disposable household income before social transfers including old age and survivors' benefits	HY023	2079	100.0	629	30.3	1446	69.6	4	0.2
Gross income components at household level									
Income from rental of property or land	HY040G	84	4.0	78	92.9	0	0.0	6	7.1
Interest, dividends, profit from capital investments in unincorporated business	HY090G	2079	100.0	1164	56.0	915	44.0	0	0.0
Family/Children related allowances	HY050G	557	26.8	557	100.0	0	0.0	0	0.0
Social exclusion not elsewhere classified	HY060G	420	20.2	420	100.0	0	0.0	0	0.0
Housing allowances	HY070G	56	2.7	41	73.2	0	0.0	15	26.8
Regular inter-household cash transfer received	HY080G	29	1.4	24	82.8	0	0.0	5	17.2
Interest repayments on mortgage	HY100G	253	12.2	247	97.6	0	0.0	6	2.4
Income received by people aged under 16	HY110G	12	0.6	5	41.7	0	0.0	7	58.3
Regular inter-household cash transfer paid	HY130G	36	1.7	30	83.3	0	0.0	6	16.7

– **wave 2008 of 2009 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	2769	100.0	1920	69.3	823	29.7	26	0.9
Total disposable household income	HY020	2769	100.0	1897	68.5	858	31.0	14	0.5
Total disposable household income before social transfers except old age and survivors' benefits	HY022	2769	100.0	1929	69.7	772	27.9	68	2.5
Total disposable household income before social transfers including old age and survivors' benefits	HY023	2769	100.0	1945	70.2	642	23.2	182	6.6
Gross income components at household level									
Income from rental of property or land	HY040G	131	4.7	104	79.4	0	0.0	27	20.6
Interest, dividends, profit from capital investments in unincorporated business	HY090G	2769	100.0	2148	77.6	0	0.0	621	22.4
Family/Children related allowances	HY050G	702	25.4	701	99.9	0	0.0	1	0.1
Social exclusion not elsewhere classified	HY060G	579	20.9	579	100.0	0	0.0	0	0.0
Housing allowances	HY070G	488	17.6	475	97.3	0	0.0	13	2.7
Regular inter-household cash transfer received	HY080G	46	1.7	32	69.6	0	0.0	14	30.4
Interest repayments on mortgage	HY100G	295	10.7	290	98.3	0	0.0	5	1.7
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	24	0.9	11	45.8	0	0.0	13	54.2

– **wave 2009 of 2009 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	2419	100.0	1556	64.3	835	34.5	28	1.2
Total disposable household income	HY020	2419	100.0	1405	58.1	551	22.8	463	19.1
Total disposable household income before social transfers except old age and survivors' benefits	HY022	2419	100.0	1379	57.0	951	39.3	89	3.7
Total disposable household income before social transfers including old age and survivors' benefits	HY023	2419	100.0	1355	56.0	976	40.3	88	3.6
Gross income components at household level									
Income from rental of property or land	HY040G	172	7.1	141	82.0	0	0.0	31	18.0
Interest, dividends, profit from capital investments in unincorporated business	HY090G	2419	100.0	1711	70.7	0	0.0	708	29.3
Family/Children related allowances	HY050G	771	31.9	771	100.0	0	0.0	0	0.0
Social exclusion not elsewhere classified	HY060G	1261	52.1	1261	100.0	0	0.0	0	0.0
Housing allowances	HY070G	453	18.7	452	99.8	0	0.0	1	0.2
Regular inter-household cash transfer received	HY080G	41	1.7	39	95.1	0	0.0	2	4.9
Interest repayments on mortgage	HY100G	243	10.0	242	99.6	0	0.0	1	0.4
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	23	1.0	13	56.5	0	0.0	10	43.5

The following information on item non-response refers to income components collected at personal level for every 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 2006 of 2009 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	1163	42.9	1086	93.4	0	0.0	77	6.6
Gross non-cash employee income	PY020G	47	1.7	47	100.0	0	0.0	0	0.0
Company car	PY021G	47	1.7	47	100.0	0	0.0	0	0.0
Contributions to individual private pension plans	PY035G	151	5.6	145	96.0	0	0.0	6	4.0
Cash benefits or losses from self-employment	PY050G	173	6.4	109	63.0	47	27.2	17	9.8
Pension from individual private plans	PY080G	18	0.7	18	100.0	0	0.0	0	0.0
Unemployment benefits	PY090G	61	2.3	61	100.0	0	0.0	0	0.0
Old-age benefits	PY100G	534	19.7	534	100.0	0	0.0	0	0.0
Survivors' benefits	PY110G	22	0.8	22	100.0	0	0.0	0	0.0
Sickness benefits	PY120G	179	6.6	179	100.0	0	0.0	0	0.0
Disability benefits	PY130G	97	3.6	97	100.0	0	0.0	0	0.0
Education-related allowances	PY140G	119	4.4	118	99.2	0	0.0	1	0.8

– **wave 2007 of 2009 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	2057	41.3	1846	89.7	0	0.0	211	10.3
Gross non-cash employee income	PY020G	424	8.5	424	100.0	0	0.0	0	0.0
Company car	PY021G	74	1.5	74	100.0	0	0.0	0	0.0
Contributions to individual private pension plans	PY035G	361	7.3	319	88.4	0	0.0	42	11.6
Cash benefits or losses from self-employment	PY050G	325	6.5	245	75.4	0	0.0	80	24.6
Value of goods produced for own consumption	PY070G	150	3.0	150	100.0	0	0.0	0	0.0
Pension from individual private plans	PY080G	17	0.3	17	100.0	0	0.0	0	0.0
Unemployment benefits	PY090G	81	1.6	81	100.0	0	0.0	0	0.0
Old-age benefits	PY100G	851	17.1	851	100.0	0	0.0	0	0.0
Survivors' benefits	PY110G	48	1.0	48	100.0	0	0.0	0	0.0
Sickness benefits	PY120G	370	7.4	370	100.0	0	0.0	0	0.0
Disability benefits	PY130G	184	3.7	184	100.0	0	0.0	0	0.0
Education-related allowances	PY140G	218	4.4	215	98.6	0	0.0	3	1.4

– **wave 2008 of 2009 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	2591	40.1	2365	91.3	0	0.0	226	8.7
Gross non-cash employee income	PY020G	500	7.7	187	37.4	33	6.6	280	56.0
Company car	PY021G	89	1.4	89	100.0	0	0.0	0	0.0
Contributions to individual private pension plans	PY035G	371	5.7	352	94.9	0	0.0	19	5.1
Cash benefits or losses from self-employment	PY050G	407	6.3	322	79.1	0	0.0	85	20.9
Value of goods produced for own consumption	PY070G	236	3.7	236	100.0	0	0.0	0	0.0
Pension from individual private plans	PY080G	27	0.4	17	63.0	0	0.0	10	37
Unemployment benefits	PY090G	127	2.0	124	97.6	0	0.0	3	2.4
Old-age benefits	PY100G	1274	19.7	1254	98.4	0	0.0	20	1.6
Survivors' benefits	PY110G	66	1.0	66	100.0	0	0.0	0	0.0
Sickness benefits	PY120G	492	7.6	492	100.0	0	0.0	0	0.0
Disability benefits	PY130G	205	3.2	204	99.5	0	0.0	1	0.5
Education-related allowances	PY140G	345	5.3	301	87.2	26	7.5	18	5.2

– **wave 2009 of 2009 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	2253	40.3	2215	98.3	0	0.0	38	1.7
Gross non-cash employee income	PY020G	418	7.5	288	68.9	34	8.1	96	23.0
Company car	PY021G	70	1.3	70	100.0	0	0.0	0	0.0
Contributions to individual private pension plans	PY035G	542	9.7	541	99.8	0	0	1	0.2
Cash benefits or losses from self-employment	PY050G	343	6.1	280	81.6	0	0.0	63	18.4
Pension from individual private plans	PY080G	46	0.8	44	95.7	0	0.0	2	4.3
Unemployment benefits	PY090G	118	2.1	105	89.0	0	0.0	13	11.0
Old-age benefits	PY100G	1023	18.3	958	93.6	0	0.0	65	6.4
Survivors' benefits	PY110G	250	4.5	250	100.0	0	0.0	0	0.0
Sickness benefits	PY120G	582	10.4	580	99.7	0	0.0	2	0.3
Disability benefits	PY130G	178	3.2	176	98.9	0	0.0	2	1.1
Education-related allowances	PY140G	324	5.8	280	86.4	18	5.6	26	8.0

2.4. Mode of data collection

Data was collected for all household members residing in households whose interview was accepted for the database. Data for persons aged 16 and over was completed through interview only.

The following table gives the distribution of household members aged 16 and over by type of interview, broken down by whether the person is a sample person or co-resident. Separate tables for each wave of the 2009 longitudinal component are given.

	Sample person		Co-resident		Total	
	Count	%	Count	%	Count	%
2006						
Face to face interview: PAPI	161	0.0	0	0.0	0	0.0
Face to face interview: CAPI	1924	71.3	0	0.0	1924	71.3
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	774	28.7	0	0.0	774	28.7
Total	**2698**	**100.0**	**0**	**0.0**	**2698**	**100.0**
2007						
Face to face interview: PAPI	0	0.0	0	0.0	0	0.0
Face to face interview: CAPI	3435	69.5	21	63.6	3456	69.5
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	1507	30.5	12	36.4	1519	30.5
Total	**4942**	**100.0**	**33**	**100.0**	**4975**	**100.0**
2008						
Face to face interview: PAPI	0	0.0	0	0.0	0	0.0
Face to face interview: CAPI	5074	80.1	28	57.1	5102	79.9
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	1259	19.9	21	42.9	1280	20.1
Total	**6333**	**100.0**	**49**	**100.0**	**6382**	**100.0**
2009						
Face to face interview: PAPI	0	0.0	0	0.0	0	0.0
Face to face interview: CAPI	3735	68.3	60	47.6	3795	67.8
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	1733	31.7	66	52.4	1799	32.2
Total	**5468**	**100.0**	**126**	**100.0**	**5594**	**100.0**

2.5. Imputation procedure

At times, it is necessary to impute missing values for variables which are considered crucial. This imputation is normally done by using existing information, and various methods are used. In the case of respondents taking part for the second, third or fourth time, imputation was performed using data collected in previous years. This method was the preferred method since it ensures consistency with past data. In the case of new respondents, or when information from previous years was not available, supplementary information from other persons or households having similar characteristics was used. However, when neither of these methods was feasible, mathematical imputation methods such as hot deck imputation or regression based techniques had to be used.

In order to decrease the need for imputation, a number of measures were taken during the questionnaire design stage. For example, it was noted from other surveys that non-response in certain variables such as income from self-employment and income from interests and/or dividends was somewhat high. In order to increase response for these questions, respondents were given the option to provide their answer in the form of an income bracket rather than an exact amount. When this was the case, these respondents were then assigned the mean of that income bracket during the data analysis stage.

2.6. Imputed rent

Imputed rent became mandatory from 2007, and thus is only included from this year onwards in the 2009 longitudinal component (i.e. for 2007, 2008 and 2009). In Malta, the number of dwellings rented at market value is quite low, so estimation of imputed rent values was not possible through EU-SILC data, since the low sample counts would not provide sufficiently reliable data for the estimation of rent figures. Instead, imputed rents were assigned based on average values estimated for National Accounts purposes, according to dwelling size and type.

2.7. Company cars

In the 2006 wave of the longitudinal component, the non-cash employee income component related to the provision of a company car, van or other vehicle available for private use was estimated through the use of insurance registers. Respondents were asked to provide details relating to the vehicle's make, model and year of registration, which enabled the calculation of the car fringe benefit through the registers.

From the 2007 wave onwards, respondents were asked to provide the vehicle's make, model, year of registration and engine type. These details served to provide an estimate of the market value of the car, through the use of insurance registers. The market value was then used to estimate the value of the fringe benefit, applying the methodology applied by the Inland Revenue Department for tax purposes. This method uses the market value of the car to estimate car use value, maintenance value, fuel value and private use value; the latter figure being the value of the fringe benefit.

3. Comparability

In order to ensure maximum comparability, the EU-SILC team in Malta made sure that, as much as possible, national concepts match those used in EU-SILC. However, despite our best efforts, there were some cases where these differed slightly. The following section highlights these differences.

3.1. Basic concepts and definitions

– **Reference population**

No departure from the common definition. The reference population is made up of all private households and their inhabitants, who were residing in Malta at the time of data collection. Persons living in collective households or institutions were excluded from the target population.

– **Private household definition**

No departure from the common definition. A private household is defined as a person living alone, or a group of people living together in the same private dwelling and sharing expenditures, including the joint provision of the essentials of living.

– **Household membership**

A household member is considered to be anyone living in the selected dwelling and sharing household expenses. Persons who are temporarily absent for reasons such as travel, work, health, education or similar are included, as long as their absence will not exceed 6 months.

– **Income reference period**

The income reference period for each wave is the preceding calendar year.

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

The tax on income and social insurance contributions reference period is the same as the income reference period.

– **Taxes on wealth reference period**

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

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

Data collection was carried out between June and September for the 2006 and 2007 waves, and between July and October for the 2008 and 2009 waves. Therefore the lag between the income reference period and the data collection period varies between 5 and 10 months, depending on the date the household was interviewed. It was not possible to limit this interval to 8 months, due to problems encountered during the data collection stage.

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

It can be said that the data collection phase for all 4 waves was completed in 4 months. The only exception was in 2007, where one household had to be interviewed at a later date, since it was not possible for this household to conduct the interview any earlier. Households that were initially found to be temporarily away from home were also re-contacted at a later stage, which might have contributed to a slightly longer duration of data collection.

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

Information on the activity status of the respondent during the income reference period was collected by means of a question requesting the respondent's activity status for every month of 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 (in 2006 this only incorporated company car)
– 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 (from 2007 onwards)

The methodology used for other income components is described below.

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

This variable was first collected in 2007. In 2009, following consultation with Eurostat, it was decided that Malta will no longer collect this income component, so it is only included in the 2007 and 2008 waves.

The methodology for the collection of this variable is described in the Final Quality Report for the 2008 longitudinal component.

– Employer's social insurance contributions (2007 onwards)

In Malta, the employer's compulsory social insurance contribution is equal to that paid by the employee. Details on the employer's optional social insurance contribution are provided below.

– Optional employer's social insurance contributions (2008 onwards)

The employer's optional social insurance contribution is made up of any subsidies paid by the employer on private health insurance, house insurance and life insurance. The latter variable was provided from 2008 onwards. Employers' contributions to private retirement plans and other insurance schemes should also be included; however they 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 for the reasons specified below:

– Regular taxes on wealth

This variable is not applicable for Malta.

– Repayments/receipts for tax adjustments

Since Malta has collected a combination of gross and net values for income components, 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

From the 2006 cross-sectional component onwards, the NSO was able to 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 at personal level of all persons receiving any type of social benefit. Merging this database with the EU-SILC dataset was possible through the use of the ID card number, which is unique for all persons registered in Malta.

From 2006 onwards, the source for data on social benefits is the SABS database, and the questions relating to this data were phased out of the EU-SILC questionnaire. Social benefits that are obtained from the SABS database are:

- 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)

PY140G, education related allowances, is the only variable relating to social benefits which is not available in the SABS database. Therefore, this variable has been collected from interviews for all years in the longitudinal component.

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

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

PY070G, value of good for own consumption, was included in EU-SILC for the first time in 2007. New questions were introduced in the questionnaire, asking whether respondents had grown or produced any goods such as vegetables, meat, fruit, other agricultural products and/or fish for their own consumption. They were then asked what percentage these products made of their total consumption.

In 2009, following discussions with Eurostat, it was decided that this income component will no longer be collected by Malta, since it does not constitute a significant proportion of the total disposable household income. Therefore it is only included for the 2007 and 2008 waves.

The EU-SILC questionnaire also collects information from respondents about whether they received a lump sum, and for what reason, during the 12 months of the previous year or before. The lump sum is then included with the relevant benefit where applicable.

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

For all 4 years included in the 2009 longitudinal component, information on income was collected through a number of questions for each component, as illustrated 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 were included in the questionnaire, where a description of each component was given in detail. It was also emphasized that the income reference year for these questions was the preceding year. Interviewers were instructed that information on net income should only be given when the respondent was unable to provide information on gross income.

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

As stated above, it was stressed during interviewers' briefing sessions that information on gross income was always preferred over net, with net being given only when gross was not available. Where this was the case, a net to gross conversion was performed using a table obtained from the Department of Inland Revenue, which showed the gross income values that corresponded to the relevant net income values.

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

3.3. Tracing rules

The tracing rules specified in the EU-SILC methodology have been implemented in Malta. In order to make this as easy as possible, a question has been included in the questionnaire where the respondent is asked whether s/he intends to move house within the following 12 months.

4. Coherence

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

A large number of variables collected from EU-SILC are compared with other data sources to check for coherence. Such sources include data from National Accounts, Government Finance and the Labour Force Survey within the National Statistics Office. Various external data sources are 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 2011