Department of Living Standard, Labour- and Education Statistics

Final Quality Report

For EU-SILC 2009-2008-2007-2006 longitudinal operation

Hungary

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Introduction

The present final quality report follows the structure outlined in Commission Regulation (EC) No 28/2004. The regulation defines 3 chapters to ensure constant documentation on quality of EU-SILC instrument. The three chapters reports 3 dimensions of quality as accuracy, comparability and coherence. According to article 16 of EC regulation No 1177/2003 of European Parliament of the Council of 16th June 2003 concerning Community Statistics on Income and Living Conditions (EU-SILC) this report covers longitudinal indicators. The report is focused on the performance of R5 rotational group since this rotational group was traced during the four-year period. When necessary the report includes information on the full sample.

1. Common Longitudinal European Union Indicators

2009 was the fifth year of EU-SILC survey in Hungary as a part of a longitudinal sample. For the four-year panel of EU-SILC 2009-2008-2007-2006 the longitudinal indicators can be found here.

Persistent at risk of poverty occurs if a respondent is at risk of poverty in the last wave (2009) of the four-year panel and has been at risk of poverty at least two times during the preceding waves (2006, 2007, and 2008).

Table 1. Persistent at risk of poverty rate by age and gender

Age	Gender	%
Total	Total	8.6
	Male	9.2
	Female	8.1
0-17 years	Total	16.6
18-64 years	Total	7.8
	Male	8.1
	Female	7.5
65+ years	Total	3.2
	Male	2.0
	Female	3.9

2. Accuracy

2.1. Sample design

2.1.1. Type of sampling

EU-SILC is a longitudinal panel survey using rotational groups. In the first year of the survey households were selected into 4 rotational groups and in each subsequent year of the survey one rotational group was excluded while a new one was added. The longitudinal sample consists of the rotational groups remaining in the sample for 4 years in context of this report meaning the R5 component of the sample in 2006, 2007, 2008 and 2009. The four rotational groups were equivalent as for sample design. They differed only in sample size.

The EU-SILC survey was introduced as a new instrument in 2005 in Hungary. The second wave of EU-SILC was launched in 2006. In 2006 a new rotational group (R5) with 4103 dwellings was introduced with a sample design coinciding with the previous year sample design. The third wave of EU-SILC was launched in 2007. The panel element regarding this report (R5) had 2635 dwellings by that time and the newly introduced rotational group consisted of 6315 dwelling using the same selection method. By the third wave of the four-year panel section R5 rotational group had 2323 dwelling in the sample while a new rotational group of 4103 dwellings was introduced in 2008. The fifth wave of the survey was launched in 2009 and R5 rotational group had 2207 dwelling and the newly introduced rotational group consisted of 3837 dwellings.

2.1.2. Sampling units

In type I. sample design PSU-s are localities, SSU-s are dwellings. In type II. PSU-s are dwellings.

2.1.3. Stratification criteria
Localities of Hungary were stratified by size.

The micro census mother sample's stratification has an effect on the stratification of SILC sample. The micro census sample was designed to provide reliable estimates of the main demographic indicators for the 176 General Electoral Districts (GEDs) of the country. The GEDs were roughly of the same size, the average being 24000 in terms of dwellings. Each GED has a 2 % sample of its own, resulting in a self-weighting 2 % overall sample of the country. Some GEDs are towns or segments of major cities, other GEDs consist of a number of smaller localities. Localities within GEDs were stratified by size (number of dwellings). In strata with more than one locality, only one locality (PSU) was selected for micro census.

 Micro census has 806 localities in the sample, but EU-SILC could not allow more than 370, which resulted in collapsing some micro census strata together and consider them as EU-SILC strata. Collapsing micro census strata was carried out within county: 2, 3 or 4 micro census strata similar in size of localities were collapsed. Within these collapsed strata only one locality was selected for EU-SILC (one PSU per stratum).

Strata with more than one locality constitute the part of the population where we have one stage sample design (type II.), strata with one locality constitute the other part, where two stage sample design was applied (type I.).

2.1.4. Sample size and allocation criteria

4103 dwellings were selected in 2006 regarding the four-year longitudinal components. Based on the minimum effective sample size we took expected non-response rate at the first wave and attrition over time into account. Our aim was to achieve a nearly proportional allocation for the realized sample. We calculate higher non-response rate in urban area, and somewhat lower non-response rate in the rural area. 3710 household were contacted successfully in 2006. There were 2600 follow-up households plus 35 split off households in 2007 giving altogether 2635 households in the longitudinal R5 component in 2007. There were 2281 follow up households plus 42 split off households in 2008 giving altogether 2323 households in the longitudinal R5 component in 2008. There were 2168 follow up households plus 39 split off households in 2009 giving altogether 2207 households in the longitudinal R5 component in 2009.

Table 2. Sample size and household interviews, longitudinal R5 component

| | 2006 | | 2007 | | | | 2008 | | | | 2009 | | | |
| | follow-up households | | follow-up households | | split households | | follow-up households | | split households | | follow-up households | | split households | |
	nr	%	nr	%	nr	%	nr	%	nr	%	nr	%	nr	%
used address	4130	100.0	2600	100.0	35	100.0	2281	100.0	42	100.0	2168	100.0	39	100.0
address existed	3710	89.8	2600	100.0	35	100.0	2281	100.0	37	88.1	2168	100.0	37	94.9
address not existed	420	10.2	0	0.0	0	0.0	0	0.0	5	11.9	0	0.0	2	5.1
gross sample	3710	100.0	2600	100.0	35	100.0	2281	100.0	37	100.0	2168	100.0	37	100.0
addresses successfully contacted	3710	100.0	2541	97.7	35	100.0	2240	98.2	37	100.0	2090	96.4	36	97.3
addresses not successfully contacted	0	0.0	59	2.3	0	0.0	41	1.8	0	0.0	78	3.6	1	2.7
successfully contacted address	3710	100.0	2,541	100.0	35	100.0	2240	100.0	37	100.0	2090	100.0	36	100.0
household questionnaire completed	2600	70.1	2,246	88.4	29	82.9	2085	93.1	27	73.0	1882	90.0	23	63.9
refusal to co-operate	779	21.0	192	7.6	5	14.3	97	4.3	7	18.9	121	5.8	8	22.2
entire household away for the duration of the fieldwork	245	6.6	37	1.5	1	2.9	27	1.2	1	2.7	60	2.9	5	13.9
household unable to respond	41	1.1	21	0.8	0	0.0	11	0.5	0	0.0	27	1.3	0	0.0
other reason	45	1.2	45	1.8	0	0.0	20	0.9	2	5.4	0	0.0	0	0.0
successful household questionnaire	2600	100.0	2,246	100.0	29	100.0	2085	100.0	27	100.0	1882	100.0	23	100.0
interview accepted for the database	2600	100.0	2,246	100.0	29	100.0	2079	99.7	26	96.3	1853	88.7	23	63.9
interview rejected	0	0.0	0	0.0	0	0.0	6	0.3	1	3.7	0	0.0	0	0.0

Table 3. Households and persons in the longitudinal R5 component

	2006	2007	2008	2009	Total
Used address	4130	2635	2323	2207	11295
successfully contacted address	3710	2576	2277	2126	10689
successful and accepted interview	2600	2275	2105	1876	8856
persons	6535	5826	5430	4890	22681
personal interviews	5486	4823	4472	4036	18817

2.1.5. Sample selection shames

Localities were selected with pps, where size is measured by the number of dwellings. Dwellings in a selected locality were selected systematically. Before selection dwellings were sorted by the characteristic of area, enumeration district and serial number of dwellings.

2.1. 6. Sample distribution over time

The field work was carried out in May, June in 2006 with reference month of April 2006. The field work was carried out in April and May in 2007 with reference month of March 2007. The field work period covered nearly three months because of field work allocation and workload related reasons in 2008. The field work was carried out March, April, May and June in 2009.

Table 4. Number of successful and accepted interviews by date of interview in longitudinal R5 component

	2006	2007	2008	2009	Total
March	0	0	0	12	12
April	0	2197	2071	1821	6089
May	2504	78	34	64	2680
June	96	0	0	8	104
Total	2600	2275	2105	1905	

2.1.7. Sample distribution over time

2005 was the first year of EU-SILC in Hungary. The 13 975 selected dwellings were divided into 4 rotational groups, sized 2702, 3344, 3731 and 4198, where we took the expected attrition into account. In 2006 the first rotational group (of size 2702) was dropped out and 4130 new dwellings were introduced. In 2007 the second rotational group (of size 1697) was dropped and R6 component with 6315 households were introduced. In 2008 the third rotational group (of size 1716) was dropped and R7 component with 4103 households were introduced. In 2009 the fourth rotational group (of size of 1804) was dropped and R8 component with 3837 household were introduced.

Table 5. Size of rotational groups (selected sample)

	2005	2006	2007	2008	2009
Rotational group1	2702	-	-	-	-
Rotational group2	3344	1697	-	-	-
Rotational group3	3731	1910	1716	-	-
Rotational group4	4198	2116	1924	1804	
Rotational group5	-	4130	2635	2345	2207
Rotational group6	-	-	6315	3187	2674
Rotational group7	-	-	-	4103	2573
Rotational group8	-	-	-	-	3837
Total sample	13975	9853	12590	11440	11291

2.1.8. Weighting

This chapter describes the computation of weights of longitudinal EU-SILC 2009-2008-2007-2006.

2.1.8.1. Design factors

For the first wave of each subsample it was calculated by strata; in stratum j the design weight, the reciprocal of inclusion probability $w_j = L_j / l_j$, where L_j is the total number of dwellings in stratum j, and l_j is the number of selected dwellings.

2.1.8.2. Non-response adjustments

Non-response weights were introduced to reduce bias caused by unit non-response on household level. Non-response adjustment was applied by strata. Primary weight in stratum j, $w_j^{'} = L_j / l_j^{'}$, where $l_j^{'}$ is the number of observed dwellings.

2.1.8.3. Adjustment to external data

The aim of this adjustment was to improve the accuracy of data using socio-economical information available the constantly updated Census 2001 and other surveys. Iterative raking scale method was applied. For the integrative calibration the following controls were used:

- Population totals of sex*age*region groups defined by ages 0-14, 15-29, 30-59, 60 or more;

- Population totals for sex*age*type of locality groups defined by ages 0-14, 15-29, 30-59, 60 or more;

- Population totals for activity status*type of locality groups;

- Population totals of actives for education level*type of locality groups;

- Total number of households for household*type of locality groups;

Calibration was carried out with a self made SAS program.

2.1.8.4. Final longitudinal weights
For the second and following waves of EU-SILC longitudinal components the following information will be provided

Calculating RB064 four-year longitudinal weight for panel 2006-2007-2008-2009

1. RB060 base weight in the initial year of a panel

- The base weight for the initial year of a panel is equal to the final cross-sectional weight multiplied with a factor so that each sub sample represents the whole population.

2. Adjustment of RB060 for attrition between two consecutive years

· First all non-respondents were classified into class IN-SCOPE, OUT-OF-SCOPE or UNKNOWN.

· Using logistic regression model, non-respondents in class UNKNOWN were assigned to either IN-SCOPE or OUT-OF-SCOPE class.

· Within the frame of respondents and non-respondents IN-SCOPE we applied logistic regression model to calculate probability of remaining in the panel (**prob**). The following variables were used in the model:

   o region
   o type of locality
   o male
   o age group
   o whether they moved
   o size of household
   o activity
   o educational level
   o OECD1 income
   o poverty indicator
   o state of health
   o marital status.

For persons in the panel we calculated **RB060/max(0.5,prob),** that is **prob** was bounded with a lower bound of 0,5. This adjustment was applied for pairs 2006-7, 2007-8 and 2008-9 with probabilities prob67, prob78 and prob89, respectively.

3. Longitudinal weights

· The longitudinal weight for persons in a given panel is the product of the initial year's base weight RB060 and the corresponding probabilities described above. According to this, the four-year longitudinal weight is

RB064=(RB060 in 2006)*prob67*prob78*prob89,

the three-year longitudinal weight is

RB063=(RB060 in 2007)*prob78*prob89

and the two-year longitudinal weight is

RB062=(RB060 in 2008)*prob89.

The longitudinal weights are scaled so that the longitudinal sample with longitudinal weights represents the longitudinal population.

4. Calculating RB060 base weight in subsequent years

· For panel persons the base weight is equal to the previous year's base weight adjusted for panel attrition as described above.

For newly born children the base weight is equal to the mother's base weight.

2.1.8.5. Non-response adjustments

Non-response adjustments occur only in relation with panel attrition, where previous wave's base weights are adjusted.
This adjustment made in two steps:
- First all non-respondents were classified into class IN-SCOPE, OUT-OF-SCOPE or UNKNOWN.

- Using logistic regression model, non-respondents in class UNKONWN were put into either IN-SCOPE or OUT-OF-SCOPE class.

Within the frame of respondents and non-respondents IN-SCOPE we applied logistic regression model to calculate probability of remaining in the panel. The following variables were used in the model:

- region
- type of locality
- male
- age group
- whether they moved
- size of household
- activity
- educational level
- OECD1 income
- poverty indicator
- state of health
- marital status.

2.1.8.6. Adjustments to external data (level, variable used and sources)

Adjustment to external data occurs only in creation DB090 final cross sectional weight for the longitudinal database.

DB090 final cross-sectional weight in 2009

- It is based on RB060 base weight in 2009 (described in 2.1.8.4).

- GWSM was applied, resulted in a household cross-sectional weight.

- A final calibration was applied. Level, variable used and sources are described in 2.1.8.3.

2.1.8.7. Final longitudinal weight - see chapter 2.1.8.5

2.1.9. Substitution

There was no substitution in the survey.

2.2. Sampling errors

Table 6. Mean, total number of observation before and after imputation, standard error, effective sample size – unweighted –longitudinal R5 component in 2006

Income component		Mean	Nr of observation		Standard error	Effective sample size
			Before imputation	After imputation		
Gross income components on personal level						
PY010G	Employee cash or near-cash income	1297711	2163	2491	26361	1958
PY021G	Company car	35386	24	24	6999	16
PY050G	Cash benefit or losses from self-employment	776570	246	385	167629	217
PY070G	Value of goods produced by own-consumption		0	0	.	
PY080G	Pension from individual private plans	160640	25	25	61368	17
PY090G	Unemployment benefit	172405	311	311	13540	142
PY100G	Old-age benefit	767496	1523	1649	11288	948
PY110G	Survivor's benefit	319249	109	109	26647	73
PY120G	Sickness benefit	92463	281	281	10931	273
PY130G	Disability benefit	527936	418	427	17789	177
PY140G	Education related allowances	90937	119	119	9846	105
HY010	Total household gross income	2219377	2599	2599	45037	1861
HY020	Total disposable household income	1819678	2599	2599	35714	1738
HY022	Total disp.hhold income before soc.trans other than old-age benefit and survivor's benefit	1644971	2554	2554	36145	1788
HY023	Total disp.hhold income before soc.transfers including old-age and survivor's benefit	1414362	2051	2051	44992	1387
HY040G	Income from rental of a property or land	220953	43	43	62451	29
HY050G	Family/Children related allowances	254181	771	771	11870	497
HY060G	Social exclusion not elsewhere classified	52095	149	149	10680	118
HY070G	Housing allowances	42720	199	199	3281	143
HY080G	Regular interhousehold cash transfers received	265895	242	242	23587	180
HY090G	Interest, dividends, profit from capital investment	325063	32	32	94431	37
HY100G	Interest repayment on mortgage	264688	142	142	20283	128
HY110G	Income received by people under 16	23000	1	1	0	
HY120G	Regular taxes on wealth	14858	1221	1221	458	740
HY130G	Regular interhousehold cash transfers paid	292645	267	267	34990	198
HY140G	Tax on income and social contribution	576124	1636	1636	19008	1369

Table 7. Mean, total number of observation before and after imputation, standard error, effective sample size – unweighted-–longitudinal R5 component in 2007

Income component		Mean	Nr of observation		Standard error	Effective sample size
			Before imputation	After imputation		
Gross income components on personal level						
PY010G	Employee cash or near-cash income	1398174	2054	2197	43350	1250
PY021G	Company car	365313	16	16	77318	14
PY050G	Cash benefit or losses from self-employment	810725	463	470	86927	354
PY070G	Value of goods produced by own-consumption	42425	259	259	5362	146
PY080G	Pension from individual private plans	418600	5	5	186031	4
PY090G	Unemployment benefit	220970	289	289	13063	258
PY100G	Old-age benefit	854635	1423	1460	11366	872
PY110G	Survivor's benefit	410020	58	58	43432	54
PY120G	Sickness benefit	114749	298	298	18622	200
PY130G	Disability benefit	504677	436	444	15340	177
PY140G	Education related allowances	149559	70	70	22771	52
HY010	Total household gross income	2368733	2271	2271	53421	1552
HY020	Total disposable household income	1917785	2273	2273	35213	1604
HY022	Total disp.hhold income before soc.trans other than old-age benefit and survivor's benefit	1686971	2234	2234	35683	1493
HY023	Total disp.hhold income before soc.transfers including old-age and survivor's benefit	1340389	1863	1863	43029	1235
HY040G	Income from rental of a property or land	595089	36	36	253812	31
HY050G	Family/Children related allowances	358955	683	686	13567	471
HY060G	Social exclusion not elsewhere classified	45526	93	93	8295	65
HY070G	Housing allowances	47136	156	156	3581	117
HY080G	Regular interhousehold cash transfers received	116836	251	251	11108	241
HY090G	Interest, dividends, profit from capital investment	417944	18	18	108684	20
HY100G	Interest repayment on mortgage	239691	335	335	13269	252
HY110G	Income received by people under 16	466920	1	1	0	
HY120G	Regular taxes on wealth	14655	1345	1345	344	980
HY130G	Regular interhousehold cash transfers paid	90316	216	216	8874	180
HY140G	Tax on income and social contribution	697759	1406	1406	31662	871

Table 8. Mean, total number of observation before and after imputation, standard error, effective sample size –unweighted- longitudinal R5 component in 2008

Income component		Mean	Nr of observation		Standard error	Effective sample size
			Before imputation	After imputation		
Gross income components on personal level						
PY010G	Employee cash or near-cash income	1502209	1957	2034	35424	1647
PY021G	Company car	311114	28	28	67292	24
PY050G	Cash benefit or losses from self-employment	867457	378	409	91143	332
PY070G	Value of goods produced by own-consumption	45103	201	201	6040	162
PY080G	Pension from individual private plans	571222	12	12	195288	10
PY090G	Unemployment benefit	260932	231	231	16950	178
PY100G	Old-age benefit	937271	1371	1396	12633	989
PY110G	Survivor's benefit	472237	62	62	55647	43
PY120G	Sickness benefit	97719	311	311	9598	265
PY130G	Disability benefit	583717	361	399	18091	209
PY140G	Education related allowances	147153	63	63	18665	70
HY010	Total household gross income	2583819	2104	2104	49228	1904
HY020	Total disposable household income	2042801	2105	2105	32144	1891
HY022	Total disp.hhold income before soc.trans other than old-age benefit and survivor's benefit	1781903	2077	2077	33158	1827
HY023	Total disp.hhold income before soc.transfers including old-age and survivor's benefit	1370825	1724	1724	39921	1423
HY040G	Income from rental of a property or land	637212	33	33	284529	22
HY050G	Family/Children related allowances	383291	638	638	15070	439
HY060G	Social exclusion not elsewhere classified	117465	103	103	22526	61
HY070G	Housing allowances	47143	222	222	2447	142
HY080G	Regular interhousehold cash transfers received	171853	199	199	31058	160
HY090G	Interest, dividends, profit from capital investment	1101545	22	22	339615	16
HY100G	Interest repayment on mortgage	189458	266	266	5736	211
HY110G	Income received by people under 16	61900	4	4	11954	3
HY120G	Regular taxes on wealth	14566	1279	1279	430	823
HY130G	Regular interhousehold cash transfers paid	130069	191	191	15369	158
HY140G	Tax on income and social contribution	834825	1309	1309	29975	1060

Table 9. Mean, total number of observation before and after imputation, standard error, effective sample size –unweighted- longitudinal R5 component in 2009

Income component		Mean	Nr of observation		Standard error	Effective sample size
			Before imputation	After imputation		
Gross income components on personal level						
PY010G	Employee cash or near-cash income	1582448	1724	1800	43491	1312
PY021G	Company car	295467	24	24	68626	16
PY050G	Cash benefit or losses from self-employment	918156	373	411	94953	319
PY070G	Value of goods produced by own-consumption	25284	1477	1477	1874	1008
PY080G	Pension from individual private plans	440333	6	6	305486	7
PY090G	Unemployment benefit	246048	226	226	15085	125
PY100G	Old-age benefit	1043887	1240	1268	17715	957
PY110G	Survivor's benefit	573058	49	49	82616	36
PY120G	Sickness benefit	109636	229	244	12962	225
PY130G	Disability benefit	654198	312	352	44541	127
PY140G	Education related allowances	163047	57	57	19724	39
HY010	Total household gross income	2744658	1788	1905	59623	1411
HY020	Total disposable household income	2168478	1788	1905	39070	1353
HY022	Total disp.hhold income before soc.trans other than old-age benefit and survivor's benefit	1909630	1798	1866	39637	1320
HY023	Total disp.hhold income before soc.transfers including old-age and survivor's benefit	1419538	1509	1558	46587	1092
HY040G	Income from rental of a property or land	663183	36	36	297005	19
HY050G	Family/Children related allowances	394908	569	571	16675	374
HY060G	Social exclusion not elsewhere classified	148539	87	87	24468	55
HY070G	Housing allowances	47931	151	151	2655	105
HY080G	Regular interhousehold cash transfers received	156083	217	217	16197	138
HY090G	Interest, dividends, profit from capital investment	1031128	18	18	323636	16
HY100G	Interest repayment on mortgage	227380	0	222	7415	189
HY110G	Income received by people under 16	98400	1	1	0	
HY120G	Regular taxes on wealth	15409	0	1063	434	736
HY130G	Regular interhousehold cash transfers paid	167313	284	284	21023	166
HY140G	Tax on income and social contribution	892682	1158	1158	35387	

Table 10. Mean, total number of observation before and after imputation, standard error –weighted- longitudinal R5 component in 2006

Income component		Mean	Nr of observation		Standard error
			Before imputation	After imputation	
Gross income components on personal level					
PY010G	Employee cash or near-cash income	1302303	3410045	3978737	27105
PY021G	Company car	32215	39717	39717	7374
PY050G	Cash benefit or losses from self-employment	785355	373138	628651	246266
PY070G	Value of goods produced by own-consumption	.	0	0	.
PY080G	Pension from individual private plans	125910	33499	33499	53036
PY090G	Unemployment benefit	170318	484101	484101	12847
PY100G	Old-age benefit	772613	1975019	2134489	10337
PY110G	Survivor's benefit	301531	148287	148287	25707
PY120G	Sickness benefit	79992	446545	446545	7969
PY130G	Disability benefit	522586	563633	575126	17114
PY140G	Education related allowances	90642	154768	154768	10744
Gross income components on household level					
HY010	Total household gross income	2340878	3813942	3813942	57250
HY020	Total disposable household income	1906968	3813942	3813942	49796
HY022	Total disp.hhold income before soc.trans other than old-age benefit and survivor's benefit	1727650	3760283	3760283	50372
HY023	Total disp.hhold income before soc.transfers including old-age and survivor's benefit	1538932	3122115	3122115	60673
HY040G	Income from rental of a property or land	217121	65404	65404	58290
HY050G	Family/Children related allowances	255232	1267748	1267748	12792
HY060G	Social exclusion not elsewhere classified	49389	187085	187085	9713
HY070G	Housing allowances	41950	275209	275209	3175
HY080G	Regular interhousehold cash transfers received	285310	380089	380089	31658
HY090G	Interest, dividends, profit from capital investment	295061	53521	53521	90709
HY100G	Interest repayment on mortgage	288278	240301	240301	26808
HY110G	Income received by people under 16	23000	918	918	0
HY120G	Regular taxes on wealth	15346	1817488	1817488	530
HY130G	Regular interhousehold cash transfers paid	311694	396321	396321	43431
HY140G	Tax on income and social contribution	577890	2601679	2601679	20009

Table 11. Mean, total number of observation before and after imputation, standard error – weighted- longitudinal R5 component in 2007

Income component		Mean	Nr of observation		Standard error
			Before imputation	After imputation	
Gross income components on personal level					
PY010G	Employee cash or near-cash income	1404619	3739206	4005928	45004
PY021G	Company car	343399	28367	28367	60061
PY050G	Cash benefit or losses from self-employment	960707	789644	807515	113970
PY070G	Value of goods produced by own-consumption	47918	369963	369963	5657
PY080G	Pension from individual private plans	316984	8903	8903	212040
PY090G	Unemployment benefit	219740	501359	501359	16158
PY100G	Old-age benefit	867392	2024369	2081459	27184
PY110G	Survivor's benefit	453115	88828	88828	42947
PY120G	Sickness benefit	108670	574654	574654	11674
PY130G	Disability benefit	500095	640926	650718	20176
PY140G	Education related allowances	158297	93656	93656	25636
Gross income components on household level					
HY010	Total household gross income	2476004	1597715	1597715	55457
HY020	Total disposable household income	1982095	1598367	1598367	38910
HY022	Total disp.hhold income before soc.trans other than old-age benefit and survivor's benefit	1732251	1573139	1573139	39657
HY023	Total disp.hhold income before soc.transfers including old-age and survivor's benefit	1444017	1347193	1347193	46534
HY040G	Income from rental of a property or land	560605	21730	21730	191553
HY050G	Family/Children related allowances	370910	531127	534074	16512
HY060G	Social exclusion not elsewhere classified	46686	71696	71696	10179
HY070G	Housing allowances	44993	104222	104222	3434
HY080G	Regular interhousehold cash transfers received	118135	169252	169252	11396
HY090G	Interest, dividends, profit from cap.investment	369407	15699	15699	95969
HY100G	Interest repayment on mortgage	244860	276502	276502	15457
HY110G	Income received by people under 16	466920	319	319	0
HY120G	Regular taxes on wealth	15276	964487	964487	454
HY130G	Regular interhousehold cash transfers paid	99858	146348	146348	14579
HY140G	Tax on income and social contribution	698800	1085410	1085410	28970

Table 12. Mean, total number of observation before and after imputation, standard error – weighted- longitudinal R5 component in 2008

Income component		Mean	Nr of observation		Standard error
			Before imputation	After imputation	
Gross income components on personal level					
PY010G	Employee cash or near-cash income	1513730	3842113	4003961	102982
PY021G	Company car	335919	56642	56642	86970
PY050G	Cash benefit or losses from self-employment	1030968	689906	758434	232233
PY070G	Value of goods produced by own-consumption	55335	307709	307709	6527
PY080G	Pension from individual private plans	518280	32126	32126	212207
PY090G	Unemployment benefit	266524	416087	416087	30398
PY100G	Old-age benefit	956425	2063643	2102674	26455
PY110G	Survivor's benefit	483509	99977	99977	66205
PY120G	Sickness benefit	104230	619740	619740	15409
PY130G	Disability benefit	583340	578405	632541	23443
PY140G	Education related allowances	148251	100893	100893	18251
Gross income components on household level					
HY010	Total household gross income	2698994	1121103	1121103	56874
HY020	Total disposable household income	2099120	1121741	1121741	36915
HY022	Total disp.hhold income before soc.trans other than old-age benefit and survivor's benefit	1810897	1104437	1104437	38033
HY023	Total disp.hhold income before soc.transfers including old-age and survivor's benefit	1460089	948094	948094	44774
HY040G	Income from rental of a property or land	620200	15196	15196	238144
HY050G	Family/Children related allowances	386060	389245	389245	17058
HY060G	Social exclusion not elsewhere classified	99743	60785	60785	19331
HY070G	Housing allowances	46815	119050	119050	2485
HY080G	Regular interhousehold cash transfers received	148361	108817	108817	23456
HY090G	Interest, dividends, profit from cap.investment	1161189	13248	13248	338391
HY100G	Interest repayment on mortgage	194410	166364	166364	6049
HY110G	Income received by people under 16	58028	2683	2683	10784
HY120G	Regular taxes on wealth	15018	698481	698481	512
HY130G	Regular interhousehold cash transfers paid	134706	102056	102056	20929
HY140G	Tax on income and social contribution	852539	758845	758845	32415

Table 13. Mean, total number of observation before and after imputation, standard error – weighted- longitudinal R5 component in 2009

Income component		Mean	Nr of observation		Standard error
			Before imputation	After imputation	
Gross income components on personal level					
PY010G	Employee cash or near-cash income	1625254	3747610	3926391	66512
PY021G	Company car	313627	64223	64223	81833
PY050G	Cash benefit or losses from self-employment	1136286	698285	796813	223093
PY070G	Value of goods produced by own-consumption	26600	2632343	2632343	3439
PY080G	Pension from individual private plans	530449	9737	9737	442914
PY090G	Unemployment benefit	250446	438193	438193	17046
PY100G	Old-age benefit	1067962	2068292	2121750	38725
PY110G	Survivor's benefit	605361	90535	90535	82676
PY120G	Sickness benefit	109080	491691	530145	19175
PY130G	Disability benefit	655195	533743	591224	28043
PY140G	Education related allowances	172438	121120	121120	20163
Gross income components on household level					
HY010	Total household gross income	2956570	1065657	1147010	69294
HY020	Total disposable household income	2283514	1065657	1147010	46761
HY022	Total disp.hhold income before soc.trans other than old-age benefit and survivor's benefit	2003664	1080404	1129300	46835
HY023	Total disp.hhold income before soc.transfers including old-age and survivor's benefit	1575046	933424	972596	55025
HY040G	Income from rental of a property or land	585371	18533	18533	224845
HY050G	Family/Children related allowances	407296	383566	386693	18035
HY060G	Social exclusion not elsewhere classified	136955	59386	59386	24537
HY070G	Housing allowances	47721	80509	80509	2692
HY080G	Regular interhousehold cash transfers received	164734	128087	128087	20218
HY090G	Interest, dividends, profit from cap.investment	1079938	12087	12087	353185
HY100G	Interest repayment on mortgage	226774	0	153456	7993
HY110G	Income received by people under 16	98400	495	495	0
HY120G	Regular taxes on wealth	16127	0	657728	481
HY130G	Regular interhousehold cash transfers paid	174863	155775	155775	21091
HY140G	Tax on income and social contribution	948877	773710	773710	38051

*Table 14. Mean, number of observation, Standard error for Disposable Income –
longitudinal R5 component in 2006- weighted*

Disposable income	Mean	Number of observation	Standard error
Equivalised disposable income By household size			
1 household member	978551	670	40895
2 household member	1227321	1680	46885
3 household member	1242844	1488	97580
4 and more household member	980174	2697	31422
Population by age groups			
Under 25	973024	1760	35177
25-34	1184976	911	41952
35-44	1134317	804	60210
45-54	1212518	981	63029
55-64	1190803	939	55134
65+	1021459	1140	26752
Population by gender			
Male	1101662	3012	31482
Female	1092065	3523	29187
Total	1096603	6535	27280

*Table 15. Mean, number of observation, Standard error for Disposable Income –
longitudinal R5 components in 2007- weighted*

disposable income	Mean	Number of observation	Standard error
Equivalised disposable income by household size			
1 household member	983704	564	28187
2 household member	1258941	1458	45665
3 household member	1230886	1311	36531
4 and more household member	1056589	2493	33610
Population by age groups	1014830	1543	27868
Under 25	1297543	819	66609
25-34	1121159	707	37662
35-44	1169326	833	37209
45-54	1218707	855	31181
55-64	1110630	1069	22746
65+			
Population by gender	1142010	2709	22947
Male	1128166	3117	21516
Female			
Total	1134703	5826	19630

Table 16. Mean, number of observation, Standard error for Disposable Income –
longitudinal R5 components in 2008- weighted

disposable income	Mean	Number of observation	Standard error
Equivalised disposable income by household size			
1 household member	1064857	517	86222
2 household member	1329821	1344	30441
3 household member	1322771	1227	50703
4 and more household member	1098758	2342	30101
Population by age groups			
Under 25	1052778	1432	27098
25-34	1298109	714	45586
35-44	1201242	671	60107
45-54	1242220	765	32500
55-64	1345168	799	41913
65+	1204899	1049	24033
Population by gender			
Male	1203327	2531	24921
Female	1191184	2899	20168
Total	1196925	5430	23581

Table 17. Mean, number of observation, Standard error for Disposable Income –
longitudinal R5 components in 2009- weighted

disposable income	Mean	Number of observation	Standard error
Equivalised disposable income by household size			
1 household member	1150341	491	37802
2 household member	1420838	1158	37044
3 household member	1404045	1146	46566
4 and more household member	1185131	2095	49670
Population by age groups			
Under 25	1144784	1289	33740
25-34	1377044	626	
35-44	1308627	609	47753
45-54	1307108	678	43534
55-64	1444990	709	52953
65+	1268512	979	43230
Population by gender			44832
Male	1296958	2281	27313
Female	1267985	2609	
			31003
Total	1281558	4890	24946

2.3. Non-sampling errors

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

2.3.1. Sampling frame and coverage errors

The frame is an updated dataset of addresses used in the 2001 population and housing
census, thus the under-coverage is due to the new buildings completed after the last
updating.

The under-coverage in percentages amounts to about 30,000 / 4,260,000 ≈ 0.7 %

2.3.2. Measurement and processing errors

AS EU-SILC is an integrated model, both the cross sectional and the longitudinal component are in the same survey, issues on measurement errors (questionnaires, fieldwork monitoring and data controlling, etc.) reported in the intermediate report are valid, hence not reported again.

2.3.3. Non-response errors

2.3.3.1. Achieved sample size

Table 18. Sample size and accepted interviews by rotational groups-longitudinal R5 component

2006	R5
Accepted household interviews	2600
Accepted personal interviews	5486
Number of persons aged 16 years and older	5486
Sample persons	5632
Co-resident	903
2007	
Accepted household interviews	2275
Accepted personal interviews	4823
Number of persons aged 16 years and older	4823
Sample persons	4987
Co-resident	839
2008	
Accepted household interviews	2105
Accepted personal interviews	4472
Number of persons aged 16 years and older	4472
Sample persons	4608
Co-resident	822
2009	
Accepted household interviews	1905
Accepted personal interviews	4036
Number of persons aged 16 years and older	4036
Sample persons	4098
Co-resident	792

2.3.3.2. Unit non-response

Longitudinal response rates give the dynamics of the survey units change over time. Household response rates and personal response rates are presented here to show each panel and wave of EU-SILC longitudinal components.

Table 19. Household response rate: Comparison of result codes between wave 2 and wave 1

Sample outcome in wave 1=2006	Sample outcome in wave 2=2007											
	DB130=11 DB135=1	DB135=2	DB120=22	DB130=22	DB130=23	DB130=24	DB130=21	DB120=21	NC (DB100=3-7)	DB110=10	DB120=23	Total
DB130=11 & DB135=1	2246	0	0	37	21	45	192	0	59	0	0	2600
DB130=11 & DB135=2	0	0	0	0	0	0	0	0	0	0	0	0
DB120=21												
DB120=22												
DB120=23												
DB130=21												
DB130=22												
DB130=23												
DB130=24												
Total	2246	0	0	37	21	45	192	0	59	0	0	2600
New households in wave 2=2007												
DB110=8	29	0	0	1	0	0	5	0	0	0	0	35
DB110=9	0	0	0	0	0	0	0	0	0	0	0	0
Total (16.row+19+20.row)	2275	0	0	38	21	45	197	0	59	0	0	2635
Reference	A	B	C	D	E	F	G	H	I	J	K	T

Wave response rate= A/ (T-K) =   0.8638
Refusal rate = G/(T-K) =   0.0738
No-contacted and others = (B+C+D+F+H+I+J)/(T-K)=   0.0542
Longitudinal follow-up rate=   0.9035
Follow-up ratio=   0.9150
Achieved sample size ratio=   0.8750

Table 20.: Household response rate: Comparison of result codes between wave 3 and wave 2

Sample outcome in wave 2=2007	Sample outcome in wave 3=2008											
	DB130=11 DB135=1	DB135=2	DB120=22	DB130=22	DB130=23	DB130=24	DB130=21	DB120=21	NC	DB110=10	DB120=23	Total
DB130=11 & DB135=1	2079	3	0	27	11	18	96	0	41	0	0	2275
DB130=11 & DB135=2	0	0	0	0	0	0	0	0	0	0	0	0
DB120=21	0	0	0	0	0	0	0	0	0	0	0	0
DB120=22	0	0	0	0	0	0	0	0	0	0	0	0
DB120=23	0	0	0	0	0	0	0	0	0	0	0	0
DB130=21	0	0	0	0	0	0	0	0	0	0	0	0
DB130=22	0	0	0	0	0	0	0	0	0	0	0	0
DB130=23	0	0	0	0	0	0	0	0	0	0	0	0
DB130=24	0	0	0	0	0	2	1	0	6	0	0	9
Total	2079	3	0	27	11	20	97	0	47	0	0	2284
New households in wave 3=2008												
DB110=8	26	1	0	1	0	2	7	3	0	0	2	42
DB110=9	0	0	0	0	0	0	0	0	0	0	0	0
Total	2105	4	0	28	11	22	104	3	47	0	2	2326
Reference	A	B	C	D	E	F	G	H	I	J	K	T

Wave response rate= A/ (T-K) =   0.9102
Refusal rate = G/(T-K) =   0.0425
No-contacted and others = (B+C+D+F+H+I+J)/(T-K)=   0.0425
Longitudinal follow-up rate=   0.9398
Follow-up ratio=   0.9530
Achieved sample size ratio=   0.9216

Table 21.: Household response rate: Comparison of result codes between wave 4 and wave 3

Sample outcome in wave 3=2008	Sample outcome in wave 4=2009											
	DB130=11 DB135=1	DB135=2	DB120=22	DB130=22	DB130=23	DB130=24	DB130=21	DB120=21	NC	DB110=10	DB120=23	Total
DB130=11 & DB135=1	1864	0	0	48	25	0	109	0	54	0	5	2105
DB130=11 & DB135=2	1	0	0	0	0	0	0	0	0	0	1	2
DB120=21	0	0	0	0	0	0	0	0	0	0	0	0
DB120=22	0	0	0	0	0	0	0	0	0	0	0	0
DB120=23	0	0	0	0	0	0	0	0	0	0	0	0
DB130=21	0	0	0	0	0	0	0	0	0	0	0	0
DB130=22	14	0	0	7	0	0	5	0	28	0	0	54
DB130=23	3	0	0	1	2	0	0	2	11	0	0	19
DB130=24	0	0	0	2	0	0	0	4	10	0	1	17
Total	1882	0	0	58	27	0	114	6	103	0	7	2197
New households in wave 4=2009												
DB110=8	23	0	0	5	0	0	8	0	0	0	2	38
DB110=9	0	0	0	0	0	0	0	0	0	0	0	0
Total	1905	0	0	63	27	0	122	6	103	0	9	2235
Reference	A	B	C	D	E	F	G	H	I	J	K	T

Wave response rate= A/ (T-K) =   0.8594
Refusal rate = G/(T-K) =   0.0521
No-contacted and others = (B+C+D+F+H+I+J)/(T-K)=   0.0763
Longitudinal follow-up rate=   0.9198
Follow-up ratio=   0.9331
Achieved sample size ratio=   0.8699

Table 22.: Personal interview response rates in wave 2

		2007										
		RB250=11,12,13	Not completed because of									Total
			RB250=21	RB250=22	RB250=23	RB250=31	RB250=32	RB250=33	HH nc	PN	Pl	
Sample persons (RB100=1 and RB245=1-3) from the sample forwarded from last wave(2006)												
(1) RB110=1-2		4653	0	0	0	0	0	0	0	0	0	4653
(2) RB110=6		0	0	0	0	0	0	0	0	33	0	33
(3) RB110=-1		0	0	0	0	0	0	0	0	0	0	0
(4) RB120=2		0	0	0	0	0	0	0	0	0	0	0
(5) RB120=3		0	0	0	0	0	0	0	0	7	0	7
(6) RB120=4		0	0	0	0	0	0	0	0		0	0
(7) DB135=2 or -1, or DB110=7, or DB 120=21-23 or -1, or DB 130=21-24 or -1		0	0	0	0	0	0	0	57	0	0	57
(8) DB110=3-6		0	0	0	0	0	0	0	40	0	0	40
New sample persons												
(9) reached age 16		69	0	0	0	0	0	0	0	0	0	69
(10) sample addtions		65	0	0	0	0	0	0	0	0	0	65
Non sampe persons 16+												
(11) this wave 2007	from wave 1	0	0	0	0	0	0	0	0	0	0	0
	no in wave 1	0	0	0	0	0	0	0	0	0	0	0
(12) earlier wave (2006)	from wave 1	0	0	0	0	0	0	0	0	0	0	0
	no in wave 1	0	0	0	0	0	0	0	0	0	0	0
Sample persons from sample not forwarded from last wave (2006) (excluded, died or not eligible according to tacking rules)												
(13) from 2006												53
Sum of rows:												
(1) (3) (6) (7) (9) (10)		4787	0	0	0	0	0	0	57	0	0	4844
(1) (3) (6) (7) (9) (10) (13)		4787	0	0	0	0	0	0	57	0	0	4897
(1) (3) (6) (7) (9) (10) (11)		4787	0	0	0	0	0	0	57	0	0	4844
Reference		A	B	C	D	E	F	G	H	J	K	T

Wave response rate of sample persons =   0.9882
Wave response rate of co-residents=   0.0000
Longitudinal follow-up rate=   0.9775
R(RB250=23)=   0.0000
R(RB250=31)=   0.0000
R R(RB250=32)=   0.0000

Achieved sample size ratio for sample persons=   0.8791
Achieved sample size ratio for sampler persons and co-residents=   0.8791
Achieved sample size ratio for co-residents in first wave=   0.0000
Response rate for non-sample persons=   0.0000

Table 23.: Personal interview response rates in wave 3

	2008										
		Not completed because of									
	RB250=11,12,13	RB250=21	RB250=22	RB250=23	RB250=31	RB250=32	RB250=33	HH nc	PN	Pl	Total
Sample persons (RB100=1 and RB245=1-3) from the sample forwarded from last wave(2007)											
(1) RB110=1-2	4310	0	0	0	0	0	0	0	0	0	4310
(2) RB110=6	0	0	0	0	0	0	0	0	62	0	62
(3) RB110=-1	0	0	0	0	0	0	0	0	0	0	0
(4) RB120=2	0	0	0	0	0	0	0	0	2	0	2
(5) RB120=3	0	0	0	0	0	0	0	0	6	0	6
(6) RB120=4	0	0	0	0	0	0	0	0	0	0	0
(7) DB135=2 or -1, or DB110=7, or DB 120=21-23 or -1, or DB 130=21-24 or -1	0	0	0	0	0	0	0	22	0	0	22
(8) DB110=3-6	0	0	0	0	0	0	0	35	0	0	35
New sample persons											
(9) reached age 16	62	0	0	0	0	0	0	0	0	0	62
(10) sample addtions	69	0	0	0	0	0	0	0	0	0	69
Non sampe persons 16+											
(11) this wave 2008 — from wave 1	0	0	0	0	0	0	0	0	0	0	0
(11) this wave 2008 — no in wave 1	0	0	0	0	0	0	0	0	0	0	0
(12) earlier wave (2007) — from wave 1	0	0	0	0	0	0	0	0	0	0	0
(12) earlier wave (2007) — no in wave 1	0	0	0	0	0	0	0	0	0	0	0
Sample persons from sample not forwarded from last wave (2007) (excluded, died or not eligible according to tacking rules)											
(13) from 2007											63
Sum of rows:											
(1) (3) (6) (7) (9) (10)	4441	0	0	0	0	0	0	22	0	0	4463
(1) (3) (6) (7) (9) (10) (13)	4441	0	0	0	0	0	0	22	0	0	4526
(1) (3) (6) (7) (9) (10) (11)	4441	0	0	0	0	0	0	22	0	0	4463

Wave response rate of sample persons =   0.9951
Wave response rate of co-residents=   0.0000
Longitudinal follow-up rate=   0.9812
R(RB250=23)=   0.0000
R(RB250=32=   0.0000
R R(RB250=33)=   0.0000

Achieved sample size ratio for sample persons=   0.9272
Achieved sample size ratio for sampler persons and co-residents=   0.9272
Achieved sample size ratio for co-residents in first wave=   0.0000
Response rate for non-sample persons=   0.0000

Table 24.: Personal interview response rates in wave 4

	RB250=11,12,13	RB250=21	RB250=22	RB250=23	RB250=31	RB250=32	RB250=33	HH nc	PN	Pl	Total
		2009									
		Not completed because of									
Sample persons (RB100=1 and RB245=1-3) from the sample forwarded from last wave(2008)											
(1) RB110=1-2	3865	0	0	0	0	0	0	0	0	0	3865
(2) RB110=6	0	0	0	0	0	0	0	0	46	0	46
(3) RB110=-1	0	0	0	0	0	0	0	0	0	0	0
(4) RB120=2	0	0	0	0	0	0	0	0	0	0	0
(5) RB120=3	0	0	0	0	0	0	0	0	8	0	8
(6) RB120=4	0	0	0	0	0	0	0	0		0	0
(7) DB135=2 or -1, or DB110=7, or DB 120=21-23 or -1, or DB 130=21-24 or -1	0	0	0	0	0	0	0	9	0	0	9
(8) DB110=3-6	0	0	0	0	0	0	0	19	0	0	19
New sample persons											
(9) reached age 16	0	0	0	0	0	0	0	0	0	0	0
(10) sample addtions	53	0	0	0	0	0	0	0	0	0	53
Non sampe persons 16+											
(11) this wave 2009 — from wave 1	0	0	0	0	0	0	0	0	0	0	0
(11) this wave 2009 — no in wave 1	0	0	0	0	0	0	0	0	0	0	0
(12) earlier wave (2008) — from wave 1	0	0	0	0	0	0	0	0	0	0	0
(12) earlier wave (2008) — no in wave 1	0	0	0	0	0	0	0	0	0	0	0
Sample persons from sample not forwarded from last wave (2008) (excluded, died or not eligible according to tacking rules)											
(13) from 2008											62
Sum of rows:											
(1) (3) (6) (7) (9) (10)	3918	0	0	0	0	0	0	9	0	0	3927
(1) (3) (6) (7) (9) (10) (13)	3918	0	0	0	0	0	0	9	0	0	3989
(1) (3) (6) (7) (9) (10) (11)	3918	0	0	0	0	0	0	9	0	0	3927

Wave response rate of sample persons =   0.9977
Wave response rate of co-residents=   0.0000
Longitudinal follow-up rate=   0.9822
R(RB250=23)=   0.0000
R(RB250=32=   0.0000
R R(RB250=33)=   0.0000

Achieved sample size ratio for sample persons=   0.9025
Achieved sample size ratio for sampler persons and co-residents=   0.9025
Achieved sample size ratio for co-residents in first wave=   0.0000
Response rate for non-sample persons=   0.0000

2.3.3.3. *Distribution of households by "household status" (DB110) "record of contact address"(DB120), by "household questionnaire result" (DB130) and by "household interview acceptance" (DB135)for the longitudinal R5 component*

Table 25.Distribution of households by DB110 – longitudinalR5 component

							DB110=					
	1	2	3	4	5	6	7	8	9	10	11	Total
2006												
Total	0	0	0	0	0	0	0	0	4,130	0	0	0
%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0
2007												
Total	2486	55	7	6	19	0	27	35	0	0	0	2486
%	94.3	2.1	0.3	0.2	0.7	0.0	1.0	1.3	0.0	0.0	0.0	94.3
2008												
Total	2187	53	6	1	12	10	12	42	0	0	0	2187
%	94.1	2.3	0.3	0.0	0.5	0.4	0.5	1.8	0.0	0.0	0.0	94.1
2009												
Total	2048	49	1	0	21	1	5	39	0	0	43	2048
%	92.8	2.2	0.0	0.0	1.0	0.0	0.2	1.8	0.0	0.0	1.9	92.8

Table 26. Distribution of households by DB120 – longitudinal R5 component

			DB120=			
	11	21	22	23	24	Missing
2006						
Total	3710	45	0	375	0	0
%	89.8	1.1	0.0	9.1	0.0	0.0
2007						
Total	90	0	0	0	0	2545
%	100.0	0.0	0.0	0.0	0.0	96.6
2008						
Total	90	3	0	2	0	2228
%	94.7	3.2	0.0	2.1	0.0	95.9
2009						
Total	79	0	0	9	0	2119
%	89.8	0.0	0.0	10.2	0.0	96.0

Table 27. Distribution of households by DB130

	DB130=					
	11	21	22	23	24	Missing
2006						
Total	2600	779	245	41	45	420
%	70.1	21.0	6.6	1.1	1.2	10.2
2007						
Total	2275	197	38	21	45	59
%	88.3	7.6	1.5	0.8	1.7	2.2
2008						
Total	2112	104	28	11	22	46
%	92.8	4.6	1.2	0.5	1.0	2.0
2009						
Total	1905	129	65	27	0	81
%	89.6	6.1	3.1	1.3	0.0	3.6

2.3.3.4. Distribution of persons for membership status (RB110)

Table 28.Distribution of households by RB110

	Current household members RB110=				Not current household members RB110=		
	1	2	3	4	5	6	7
2006							
Total	6535	0	0	0	0	0	0
%	100.0	0.0	0.0	0.0	0.0	0.0	0.0
2007							
Total	5562	42	82	35	69	33	3
%	95.5	0.7	1.4	0.6	1.2	0.6	0.1
2008							
Total	5114	35	96	33	87	62	3
%	94.2	0.6	1.8	0.6	1.6	1.1	0.1
2009							
Total	4622	32	68	33	85	49	1
%	94.5	0.7	1.4	0.7	1.7	1.0	0.0

2.3.3.5. Item non-response

The item non-response is covered by the following tables about completeness of information regarding each income item on household level and personal level as well.

Table 29 .Item non-response on household level by income items-longitudinal R5 component in 2006

Income items		Household having received an amount		Full information		Partial information		Missing	
		count	%	count	%	count	%	count	%
HY010	Total household gross income	2599	100.0	2599	100.0	0	0	0	0
HY020	Total disposable household income	2599	100.0	2599	100.0	0	0	0	0
HY022	Total disp.hhold income before soc.trans other than old-age benefit and survivor's benefit	2554	98.2	2554	98.2	0	0	0	0
HY023	Total disp.hhold income before soc.transfers including old-age and survivor's benefit	2051	78.9	2051	78.9	0	0	0	0
HY040G	Income from rental of a property or land	43	1.7	43	1.7	0	0	0	0
HY050G	Family/Children related allowances	771	29.7	771	29.7	0	0	0	0
HY060G	Social exclusion not elsewhere classified	149	5.7	149	5.7	0	0	0	0
HY070G	Housing allowances	199	7.7	199	7.7	0	0	0	0
HY080G	Regular interhousehold cash transfers received	242	9.3	242	9.3	0	0	0	0
HY090G	Interest, dividends, profit from capital investment	32	1.2	32	1.2	0	0	0	0
HY100G	Interest repayment on mortgage	142	5.5	142	5.5	0	0	0	0
HY110G	Income received by people under 16	1	0.0	1	0.0	0	0	0	0
HY120G	Regular taxes on wealth	1221	47.0	1221	47.0	0	0	0	0
HY130G	Regular interhousehold cash transfers paid	267	10.3	267	10.3	0	0	0	0
HY140G	Tax on income and social contribution	1636	62.9	1636	62.9	0	0	0	0

Table 30 .Item non-response on household level by income items-longitudinal R5 component in 2007

Income items		Household having received an amount		Full information		Partial information		Missing	
		count	%	count	%	count	%	count	%
HY010	Total household gross income	2271	99.8	2271	99.8	0	0	0	0
HY020	Total disposable household income	2273	99.9	2273	99.9	0	0	0	0
HY022	Total disp.hhold income before soc.trans other than old-age benefit and survivor's benefit	2234	98.2	2234	98.2	0	0	0	0
HY023	Total disp.hhold income before soc.transfers including old-age and survivor's benefit	1863	81.9	1863	81.9	0	0	0	0
HY040G	Income from rental of a property or land	36	1.6	36	1.6	0	0	0	0
HY050G	Family/Children related allowances	686	30.2	683	30.0	3	0.1	0	0
HY060G	Social exclusion not elsewhere classified	93	4.1	93	4.1	0	0	0	0
HY070G	Housing allowances	156	6.9	156	6.9	0	0	0	0
HY080G	Regular interhousehold cash transfers received	251	11.0	251	11.0	0	0	0	0
HY090G	Interest, dividends, profit from capital investment	18	0.8	18	0.8	0	0	0	0
HY100G	Interest repayment on mortgage	335	14.7	335	14.7	0	0	0	0
HY110G	Income received by people under 16	1	0.0	1	0.0	0	0	0	0
HY120G	Regular taxes on wealth	1345	59.1	1345	59.1	0	0	0	0
HY130G	Regular interhousehold cash transfers paid	216	9.5	216	9.5	0	0	0	0
HY140G	Tax on income and social contribution	1406	61.8	1406	61.8	0	0	0	0

Table 31 .Item non-response on household level by income items-longitudinal R5 component in 2008

Income items		Household having received an amount		Full information		Partial information		Missing	
		count	%	count	%	count	%	count	%
HY010	Total household gross income	2104	100.0	2104	100.0	0	0	0	0
HY020	Total disposable household income	2105	100.0	2105	100.0	0	0	0	0
HY022	Total disp.hhold income before soc.trans other than old-age benefit and survivor's benefit	2077	98.7	2077	98.7	0	0	0	0
HY023	Total disp.hhold income before soc.transfers including old-age and survivor's benefit	1724	81.9	1724	81.9	0	0	0	0
HY040G	Income from rental of a property or land	33	1.6	33	1.6	0	0	0	0
HY050G	Family/Children related allowances	638	30.3	638	30.3	0	0	0	0
HY060G	Social exclusion not elsewhere classified	103	4.9	103	4.9	0	0	0	0
HY070G	Housing allowances	222	10.5	222	10.5	0	0	0	0
HY080G	Regular interhousehold cash transfers received	199	9.5	199	9.5	0	0	0	0
HY090G	Interest, dividends, profit from capital investment	22	1.0	22	1.0	0	0	0	0
HY100G	Interest repayment on mortgage	266	12.6	266	12.6	0	0	0	0
HY110G	Income received by people under 16	4	0.2	4	0.2	0	0	0	0
HY120G	Regular taxes on wealth	1279	60.8	1279	60.8	0	0	0	0
HY130G	Regular interhousehold cash transfers paid	191	9.1	191	9.1	0	0	0	0
HY140G	Tax on income and social contribution	1309	62.2	1309	62.2	0	0	0	0

Table 32 .Item non-response on household level by income items-longitudinal R5 component in 2009

Income items		Household having received an amount		Full information		Partial information		Missing	
		count	%	count	%	count	%	count	%
HY010	Total household gross income	1905	100.0	1788	93.9	117	6.1	0	0
HY020	Total disposable household income	1905	100.0	1788	93.9	117	6.1	0	0
HY022	Total disp.hhold income before soc.trans other than old-age benefit and survivor's benefit	1866	98.0	1798	94.4	68	3.6	0	0
HY023	Total disp.hhold income before soc.transfers including old-age and survivor's benefit	1558	81.8	1509	79.2	49	2.6	0	0
HY040G	Income from rental of a property or land	36	1.9	36	1.9	0	0	0	0
HY050G	Family/Children related allowances	571	30.0	569	29.9	2	0.1	0	0
HY060G	Social exclusion not elsewhere classified	87	4.6	87	4.6	0	0	0	0
HY070G	Housing allowances	151	7.9	151	7.9	0	0	0	0
HY080G	Regular interhousehold cash transfers received	217	11.4	217	11.4	0	0	0	0
HY090G	Interest, dividends, profit from capital investment	18	0.9	18	0.9	0	0	0	0
HY100G	Interest repayment on mortgage	0	0	0	0.0	0	0	0	0
HY110G	Income received by people under 16	1	0.1	1	0.1	0	0	0	0
HY120G	Regular taxes on wealth	0	0.0	0	0.0	0	0	0	0
HY130G	Regular interhousehold cash transfers paid	284	14.9	284	14.9	0	0	0	0
HY140G	Tax on income and social contribution	1158	60.8	1158	60.8	0	0	0	0

Table 33. Item non-response on personal level by personal income items-longitudinal R5 component in 2006

Personal income items		Household having received an amount		Full information		Partial information		Missing	
		count	%	count	%	count	%	count	%
PY010G	Employee cash or near-cash income	2491	45.4	2163	39.4	328	6.0	0	0
PY021G	Company car	242	4.4	242	4.4	0	0	0	0
PY050G	Cash benefit or losses from self-employment	385	7.0	246	4.5	139	2.5	0	0
PY070G	Value of goods produced by own-consumption	0	0	0	0	0	0	0	0
PY080G	Pension from individual private plans	42	0.8	25	0.5	0	0	17	0.3
PY090G	Unemployment benefit	311	5.7	311	5.7	0	0	0	0
PY100G	Old-age benefit	1649	30.1	1523	27.8	126	2.3	0	0
PY110G	Survivor's benefit	109	2.0	109	2.0	0	0	0	0
PY120G	Sickness benefit	281	5.1	281	5.1	0	0	0	0
PY130G	Disability benefit	427	7.8	418	7.6	9	0.2	0	0
PY140G	Education related allowances	119	2.2	119	2.2	0	0	0	0

Table 34. Item non-response on personal level by personal income items-longitudinal R5 component in 2007

Personal income items		Household having received an amount		Full information		Partial information		Missing	
		count	%	count	%	count	%	count	%
PY010G	Employee cash or near-cash income	2197	45.6	2054	42.6	143	3.0	0	0
PY021G	Company car	16	0.3	16	0.3	0	0	0	0
PY050G	Cash benefit or losses from self-employment	470	9.7	463	9.6	7	0.1	0	0
PY070G	Value of goods produced by own-consumption	259	5.4	259	5.4	0	0	0	0
PY080G	Pension from individual private plans	5	0.1	5	0.1	0	0	0	0
PY090G	Unemployment benefit	289	6.0	289	6.0	0	0	0	0
PY100G	Old-age benefit	1460	30.3	1423	29.5	37	0.8	0	0
PY110G	Survivor's benefit	58	1.2	58	1.2	0	0	0	0
PY120G	Sickness benefit	298	6.2	298	6.2	0	0	0	0
PY130G	Disability benefit	444	9.2	436	9.0	8	0.2	0	0
PY140G	Education related allowances	70	1.5	70	1.5	0	0	0	0

Table 35. Item non-response on personal level by personal income items-longitudinal R5 component in 2008

Personal income items		Household having received an amount		Full information		Partial information		Missing	
		count	%	count	%	count	%	count	%
PY010G	Employee cash or near-cash income	2034	45.5	1957	43.8	77	1.7	0	0
PY021G	Company car	28	0.6	28	0.6	0	0	0	0
PY050G	Cash benefit or losses from self-employment	409	9.1	378	8.5	31	0.7	0	0
PY070G	Value of goods produced by own-consumption	201	4.5	201	4.5	0	0	0	0
PY080G	Pension from individual private plans	12	0.3	12	0.3	0	0	0	0
PY090G	Unemployment benefit	231	5.2	231	5.2	0	0	0	0
PY100G	Old-age benefit	1396	31.2	1371	30.7	25	0.6	0	0
PY110G	Survivor's benefit	62	1.4	62	1.4	0	0	0	0
PY120G	Sickness benefit	311	7.0	311	7.0	0	0	0	0
PY130G	Disability benefit	399	8.9	361	8.1	38	0.8	0	0
PY140G	Education related allowances	63	1.4	63	1.4	0	0	0	0

Table 36. Item non-response on personal level by personal income items-longitudinal R5 component in 2009

Personal income items		Household having received an amount		Full information		Partial information		Missing	
		count	%	count	%	count	%	count	%
PY010G	Employee cash or near-cash income	1800	44.6	1724	42.7	76	1.9	0	0
PY021G	Company car	24	0.6	24	0.6	0	0	0	0
PY050G	Cash benefit or losses from self-employment	411	10.2	373	9.2	38	0.9	0	0
PY070G	Value of goods produced by own-consumption	1477	36.6	1477	36.6	0	0	0	0
PY080G	Pension from individual private plans	6	0.1	6	0.1	0	0	0	0
PY090G	Unemployment benefit	226	5.6	226	5.6	0	0	0	0
PY100G	Old-age benefit	1268	31.4	1240	30.7	28	0.7	0	0
PY110G	Survivor's benefit	49	1.2	49	1.2	0	0	0	0
PY120G	Sickness benefit	244	6.0	229	5.7	15	0.4	0	0
PY130G	Disability benefit	352	8.7	312	7.7	40	1.0	0	0
PY140G	Education related allowances	57	1.4	57	1.4	0	0	0	0

2.4. Mode of data collection

Distribution of persons aged 16 or over by "data status" (RB250)and by "type of interview"(RB260)

Table 37. Distribution of RB250- longitudinal R5 component

RB250- Data status	2006	2007	2008	2009
Information completed only from interview(11)	5486	4823	4472	4036
From register…no reason (12-33)	0	0	0	0
Total	5486	4823	4472	4036

Table 38. Distribution of RB260- longitudinal R5 component

RB260- Contact address	2006	2007	2008	2009
PAPI (1)	4728	3912	3800	3662
CAPI, CATI, Other(2,3,4)	0	0	0	0
Proxy(5)	758	911	672	374
missing	0	0	0	0
Total	5486	4823	4472	4036

2.5. Imputation procedure

According to the principles of the detailed methodology of EU-SILC (Doc. 065/04) we applied imputation for the case of item non-response. The aim was to insert a value where the original data is missing due to item non-response. The inserted value was estimated on the basis of following procedures:
  i.   deterministic method
  ii.   stochastic method

Deterministic method was covering the cases, when the missing value can be determined by several available background information at the given record. Practically it was used for social incomes and benefits. Most of the benefit income items had got fixed amount according to the corresponding governmental measures and regulations. When the respondents were not able to give us the exact value of childcare benefit (*Családi pótlék)*, we imputed the value of childcare benefit according to the information about the number, age and activity status of the children at the household. Similar imputation was done, when the respondent did not report the value of his unemployment benefit. In this case we imputed the value the official unemployment benefit minimum to this variable.

Stochastic method was covering the cases of item non-response for work related income items. The estimations were based on linear or logarithmic regression models built up for the income items. We tested several models and chose the ones with the highest R^2. If we could not assign a regression model to describe the missing information, the mean value of the group was used.

2.6. Imputed rent

Imputed rent was not calculated for EU-SILC 2009-2008-2007-2006 longitudinal components.

2.7. Company car

A question was used to determine the value of private use of company car in on the questionnaire. It was answered by the respondents reporting use of company cars. The respondent had to estimate this value and this estimation was used in the database. The variable was compulsory from 2007 but the Hungarian data collection collected this information from the first wave of the survey since 2005. To ensure the comparability of corresponding information PY021G variable was created for the four year longitudinal data and presented among tables of standard error calculation as well.

3. Comparability

This chapter will report the differences between Eurostat definitions and definitions Hungary applied in EU-SILC 2009-2008-2007-2006.

3.1. Basic concepts and definitions

   i.   *Reference population*
          No difference to common definition
   ii.   *Private household definition*
          No difference to common definition
   iii.   *Household membership*
          No difference to common definition
   iv.   *Income reference period*
          Fixed twelve month period was used, which was the previous calendar year 2006, 2007, 2008, 2009
   v.   *Period for taxes on income and social insurance*
          No difference to common definition
   vi.   *Reference period for taxes on wealth*
          The reference period for taxes on wealth was the same as income tax period. We included the tax on motorcars and property tax. Tax was imposed on motorcars on the basis of it's' weight and it was compulsory for the owner. Property tax was could be imposed by the local municipality. It was not used in every settlement, and had several options for reductions for the property owners.
   vii.   *The lag between the income reference period and the current variables*
          The lag between the income reference period and the current variables is 3 months since the reference time of interviewing was 1 March in 2007, in 2008 and in 2009 as well. While the previous year resulted the lag equals to 4 months since the reference data of the data collections was 1 April in 2006.
   viii. *Total duration of data collection of the sample*
          The data collection lasted 13 weeks.
   ix.   *Basic information on activity during the income reference period*
          Activity information was asked for each month of the income reference period in the questionnaire.

3.2. Components of income

3.2.1. Differences between the national definitions and standard EU-SILC definitions and assessment of consequences of the differences

   i.   *Total household gross income*
          No difference to common definitions.
   ii.   *Total disposable household income*

No difference to the common methodology.

iii. *Total disposable household income, before social transfers other than old-age benefit and survivors' benefit*
No difference to the common methodology.

iv. *Total disposable household income, before social transfers including old-age and survivors' benefit*
No difference to the common methodology.

v. *Imputed rent*
Imputed rent was not calculated.

vi. *Income from rental of property or land*
No difference to the common methodology.

vii. *Family/children related allowances*
The sophisticated child related allowance system of Hungary was covered here. For the age of 6 moths of the baby, the mother can stay at home with the baby on a *Child birth leave* receiving the amount of a normal sickpay, about 80 % of her former salary. For the age of 2 years of the child the mother or the father of the child can stay home receiving *Child care allowance(Gyed)*, which is equals to 75 % of her/his former salary, but not higher than 101 100 HUF (about 340 Euro/months). Until the age of 3 of the child the parent can stay home receiving *Child care aid (Gyes),* which equals to the minimum old age pension (about 105 Euro). This allowance can be passed to the any of grandparents who is responsible for the daily care of the child if the parent goes back to work again. If the family has got 3 or more children and the mother does not work full time (max. 20 hours a week) or does not work at all she can receive *Child care benefit (Gyet),* which equals to the minimum old-age pension until the youngest child does not fulfill the age of 8.

viii. *Social exclusion payment not elsewhere classified*
No difference to common methodology

3.2.2. The source or procedure used for collecting income variables

All the income variables were collected from the respondents. The income target variables were grouped into more detailed sub-components according to Hungarian tax and benefit system.

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

Gross income data were collected for the income items but in case of certain benefits according to tax law which were not considered to be belonging to the taxable income net value were asked, like old-age pension or family allowance.

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

The income items were divided into sub-components according to the Hungarian tax regulations and benefit practice in the questionnaire. The personal and household incomes were separated. Gross income items were asked for work related incomes and other incomes belonging to the personal tax system and net income items were asked for benefits and other allowances. The following steps were taken to obtain income target variables in the required form.

i. The subcomponents were summed up to obtain the income items on personal income level.

ii. While Hungary has a personal income tax system, the household type incomes had to be connected to household members. It was done on the basis of the income type, eg. Agricultural income was connected to the household

    member(s) reporting agricultural activity. Obviously just adult members were involved.

iii.   The value of taxable income was calculated for each household member.

iv.   The total household gross income was calculated for the household including all income types on basis of the process listed at i. and ii.

v.   On the basis of value of taxable income for each household member, the value of personal income tax and social insurance fee was calculated. The deductions were summed up for total of the household.

vi.   The total disposable income on household level was calculated as difference between the total household gross income and the total tax deductions.

3.3. Tracking rules

No difference to common methodology.

4. Coherence

Coherence refers to comparison of target variables and common cross-sectional indicators with external sources.

Current study focus on the comparison of the target variables on the basis of the first EU-SILC wave (2006) second EU-SILC wave (2007) third EU-SILC wave (2008) and fourth EU-SILC wave (2009) databases meaning the comparison of cross sectional variables in each year.

The income items reflect the changes of the economic situation of Hungarian households well. In a country of a rapid social and economic transition it is quite plausible to see a certain restructuring among the income items even on a very short period of two year. There is an increase on the employment cash income and self-employment related income while the non-cash income has been narrowed by the income tax regulations. Governmental measures also were taken to encourage unemployed persons to find new job opportunities the decrease of unemployment related allowances is acceptable as well. At certain items – like income of household members under 16 – the number of observations was small.

*Table 39. Comparison of **cross sectional income target variables** EU-SILC 2006, 2007, 2008 and 2009 (weighted)*

weighted		**2006**		**2007**		**2008**		**2009**	
		mean	standard error	mean	mean	standard error	standard error	mean	standard error
PY010G	Employee cash or near-cash income	1 378 174	21 143	1 410 237	15 474	1 489 381	13 517	1621374	7 862
PY020G	Non-cash employee income	70 510	4 241	98 653	15 256	76 487	225	74810	196
PY050G	Cash benefit or losses from self-employment	1 861 218	99 261	893 234	58 792	942 774	12 658	1074571	4 951
PY070G	Value of goods produced by own-consumption	0	0	49 644	411 281	48 988	342	40484	587
PY080G	Pension from individual private plans	171 382	32 102	388 738	139 349	444 017	254	569888	396
PY090G	Unemployment benefit	185 629	13 192	247 210	18 395	263 042	915	267210	692
PY100G	Old-age benefit	796 206	7 538	861 340	5 508	949 236	21 543	1048213	2 482
PY110G	Survivor's benefit	316 294	18 156	439 261	29 782	410 948	579	482880	540
PY120G	Sickness benefit	81 945	5 346	104 599	7 263	103 112	519	111630	433
PY130G	Disability benefit	526 610	9 731	521 900	10 406	588 141	2 267	677155	1 655
PY140G	Education related allowances	88 714	6 017	112 671	8 121	152 376	233	162289	193
Income components on household level									
HY010	Total household gross income	2 447 399	34 664	2 510 148	26 020	2 697 270	41 069	2 944 966	20 246
HY020	Total disposable household income	1 968 043	27 270	1 998 043	17 298	2 101 591	23 423	227 5418	12 487
HY022	Total disp.hhold income before soc.trans other than old-age benefit and survivor's benefit	1 784 588	28 050	1 737 966	17 327	1 810 434	16 776	1 985 007	12 943
HY023	Total disp.hhold income before soc.transfers including old-age and survivor's benefit	1 595 723	33 000	1 430 903	20 136	1 440 865	34 012	1 521 096	14 391
HY040G	Income from rental of a property or land	278 499	69 557	599 990	113 058	599 283	122 817	563 642	83 555
HY050G	Family/Children related allowances	268 548	5 755	371 931	7 173	388 899	7 460	417 322	4 556
HY060G	Social exclusion not elsewhere classified	42 755	8 259	49 203	3 903	105 051	10 562	126 209	10 041
HY070G	Housing allowances	49 010	2 854	49 971	2 393	50 098	1 980	50 041	1 677
HY080G	Regular interhousehold cash transfers received	311 243	34 887	111 141	5 479	161 739	10 332	189 354	7 224
HY090G	Interest, dividends, profit from cap.investment	338 028	66 443	783 803	123 903	1 238 220	308 293	1 208 454	228 152
HY100G	Interest repayment on mortgage	249 095	12 549	222 814	7 997	188 086	3 560	217 108	3 496
HY110G	Income received by people under 16	45 581	26 574	184 734	85 902	72 508	14 864	147 857	43 615
HY120G	Regular taxes on wealth	15 778	359	14 552	183	14 583	223	15 335	224
HY130G	Regular interhousehold cash transfers paid	277 097	21 319	79 198	3 731	118 197	12 587	134 562	6 005
HY140G	Tax on income and social contribution	649 140	18 330	720 485	13 738	**851 769**	**17 561**	929010	14008