Department of Living Standard, Labour- and Education Statistics

Final Quality Report

For EU-SILC 2010-2009-2008-2007 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

2010 was the sixth year of EU-SILC survey in Hungary as a part of a longitudinal sample. For the four-year panel of EU-SILC 2010-2009-2008-2007 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 (2010) of the four-year panel and has been at risk of poverty at least two times during the preceding waves (2007, 2008, and 2009).

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

Age	Gender	%
Total	Total	5.7
	Male	6.2
	Female	5.4
0-17 years	Total	9.0
18-64 years	Total	6.0
	Male	5.9
	Female	6.0
65+ years	Total	1.2
	Male	0.6
	Female	1.6

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 R6 component of the sample in 2007, 2008, 2009 and 2010. 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 third wave of EU-SILC was launched in 2007. In 2007 a new rotational group (R6) with 6315 dwellings was introduced with a sample design coinciding with the previous year sample design. The fourth wave of EU-SILC was launched in 2008. The panel element regarding this report (R6) had 3185 dwellings by that time and the newly introduced rotational group consisted of 4103 dwelling using the same selection method. By the third year of the four-year panel section R6 rotational group had 2674 dwelling in the sample while a new rotational group of 3837 dwellings was introduced in 2009. The next wave of the survey was launched in 2010 and R6 rotational group had 2444 dwellings and the newly introduced rotational group consisted of 3204 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

6315 dwellings were selected in 2007 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. 6108 household were contacted successfully in 2007. There were 3148 follow-up households plus 37 split off households in 2008 giving altogether 3185 households in the longitudinal R6 component in 2008. There were 2634 follow up households plus 40 split off households in 2009 giving altogether 2674 households in the longitudinal R6 component in 2009. There were 2410 follow up households plus 34 split off households in 2010 giving altogether 2474 households in the longitudinal R6 component in 2010.

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

	2007		2008				2009				2010			
	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	6315	100,0	3148	100,0	37	100,0	2634	100,0	40	100,0	2410	100,0	34	100,0
address existed	6108	96,7	3148	100,0	37	100,0	2631	99,9	37	92,5	2410	100,0	31	91,2
address not existed	207	3,3	0	0,0	0	0,0	3	0,1	3	7,5	0	0,0	3	8,8
gross sample	6108	100,0	3148	100,0	0	0,0	2631	100,0	37	100,0	2410	100,0	31	100,0
addresses successfully contacted	6108	100,0	3057	97,1	0	0,0	2 519	95,7	36	97,3	2410	100,0	31	100,0
addresses not successfully contacted	0	0,0	91	2,9	0	0,0	112	4,3	1	2,7	0	0,0	0	0,0
successfully contacted address	6108	100,0	3094	100,0	37	100,0	2 559	100,0	36	100,0	2 365	100,0	31	100,0
successful household questionnaire	3148	100,0	2 501	100,0	27	100,0	2 204	100,0	16	100,0	2 094	100,0	24	100,0
interview accepted for the database	3148	100,0	2 493	99,7	27	100,0	2 203	100,0	16	100,0	2 094	100,0	24	100,0
interview rejected	0	0,0	8	0,3	0	0,0	1	0,0	0	0,0	0	0,0	0	0,0

Table 3. Households and persons in the longitudinal R6 component

	2007	2008	2009	2010
Used address	6 315	3 185	2 674	2 444
successfully contacted address	6 108	3 094	2 559	2 365
successful and accepted interview	3 148	2 493	2 203	2 094
persons	7 985	6 482	5 724	5 366
personal interviews	6 529	5 205	4 605	4 386

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 March, April and May in 2007, 2008 and 2010 with reference month of March 2007. The field work period with the reference month of March covered nearly four months because of field work allocation and workload related reasons in 2009and in 2010.

Table 4. Number of successful and accepted interviews by date of interview in longitudinal R6 component

	2007	2008	2009	2010	Total
March	3125	2414	1591	1341	8471
April	23	57	571	728	1379
May	0	22	27	16	65
June	0	0	14	9	23
Total	3148	2493	2203	2094	9938

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 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. In 2010 rotational group R9 with 3204 dwellings was introduced while rotational group 5 was dropped.

Table 5. Size of rotational groups (selected sample)

	2005	2006	2007	2008	2009	2010
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	3185	2674	2444
Rotational group7	-	-	-	4103	2573	2341
Rotational group8	-	-	-	-	3837	3384
Rotational group9	-	-	-	-	-	3204
Total sample	13975	9853	12590	11438	11291	11373

2.1.8. Weighting

This chapter describes the computation of weights of longitudinal EU-SILC 2010-2009-2008-2007.

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 2007-2008-2009-2010

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:
    - 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.

  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 2007)*prob67*prob78*prob89*,

  the three-year longitudinal weight is

  *RB063=(RB060 in 2008)*prob78*prob89*

  and the two-year longitudinal weight is

  *RB062=(RB060 in 2009)*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 2010

- It is based on RB060 base weight in 2010 (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 R6 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	1512857	2872	3296	30 344	1 850
PY021G	Company car	145466	32	32	16 769	19
PY050G	Cash benefit or losses from self-employment	765680	694	716	76 600	257
PY070G	Value of goods produced by own-consumption	47593	382	382	8 029	84
PY080G	Pension from individual private plans	292273	9	9	48 444	7
PY090G	Unemployment benefit	230324	324	324	16 675	149
PY100G	Old-age benefit	867605	1656	1671	10 985	886
PY110G	Survivor's benefit	487305	100	100	61 623	64
PY120G	Sickness benefit	112627	388	388	11 348	285
PY130G	Disability benefit	524186	629	633	17 756	141
PY140G	Education related allowances	101613	105	105	16 675	31
HY010	Total household gross income	2 574 530	3147	3147	45 514	1 637
HY020	Total disposable household income	2 042 708	3147	3147	31 118	1 515
HY022	Total disp.hhold income before soc.trans other than old-age benefit and survivor's benefit	1 764 834	3121	3121	32 794	1 427
HY023	Total disp.hhold income before soc.transfers including old-age and survivor's benefit	1 440 729	2782	2783	36 537	1 401
HY040G	Income from rental of a property or land	516 195	69	69	219 162	35
HY050G	Family/Children related allowances	394 058	1116	1116	14 875	533
HY060G	Social exclusion not elsewhere classified	37 952	205	205	7 374	72
HY070G	Housing allowances	54 260	234	234	5 025	144
HY080G	Regular interhousehold cash transfers received	101 620	725	725	10 383	377
HY090G	Interest, dividends, profit from capital investment	796 567	39	39	128 532	21
HY100G	Interest repayment on mortgage		0	0	.	
HY110G	Income received by people under 16	67 175	4	4	34 299	3
HY120G	Regular taxes on wealth	12 827	1767	1767	316	700
HY130G	Regular interhousehold cash transfers paid	60 062	576	576	3 876	294
HY140G	Tax on income and social contribution	745 385	2169	2169	22 781	1 155

Table 7. Mean, total number of observation before and after imputation, standard error, effective sample size – unweighted-–longitudinal R6 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	1510788	2565	2620	29 543	1 772
PY021G	Company car	191985	34	34	48 776	28
PY050G	Cash benefit or losses from self-employment	729114	604	610	79 778	233
PY070G	Value of goods produced by own-consumption	54198	377	377	9 939	116
PY080G	Pension from individual private plans	619378	9	9	288 288	9
PY090G	Unemployment benefit	235801	235	235	17 352	154
PY100G	Old-age benefit	952224	1396	1405	12 982	936
PY110G	Survivor's benefit	491698	96	96	49 483	49
PY120G	Sickness benefit	101033	405	405	9 397	382
PY130G	Disability benefit	573875	492	494	19 772	194
PY140G	Education related allowances	140865	80	80	20 639	34
HY010	Total household gross income	2 695 184	2492	2492	51 032	1 550
HY020	Total disposable household income	2 099 569	2493	2493	34 997	1 374
HY022	Total disp.hhold income before soc.trans other than old-age benefit and survivor's benefit	1 803 625	2468	2468	36 294	1 329
HY023	Total disp.hhold income before soc.transfers including old-age and survivor's benefit	1 396 934	2195	2195	38 980	1 226
HY040G	Income from rental of a property or land	320 188	55	55	55 895	34
HY050G	Family/Children related allowances	393 060	899	899	14 546	531
HY060G	Social exclusion not elsewhere classified	108 294	195	195	19 280	73
HY070G	Housing allowances	48 208	359	359	2 395	222
HY080G	Regular interhousehold cash transfers received	151 647	491	491	13 273	293
HY090G	Interest, dividends, profit from capital investment	1 721 204	27	27	1 819 456	12
HY100G	Interest repayment on mortgage	170 401	296	296	6 682	159
HY110G	Income received by people under 16	87 250	4	4	47 169	3
HY120G	Regular taxes on wealth	13 084	1484	1484	382	692
HY130G	Regular interhousehold cash transfers paid	83 046	398	398	6 357	227
HY140G	Tax on income and social contribution	856 117	1670	1670	26 391	1 078

Table 8. Mean, total number of observation before and after imputation, standard error, effective sample size –unweighted- longitudinal R6 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	1588217	2190	2264	33 514	1 608
PY021G	Company car	156368	19	19	42 788	15
PY050G	Cash benefit or losses from self-employment	715575	549	557	72 852	316
PY070G	Value of goods produced by own-consumption	45297	2079	2079	2 781	816
PY080G	Pension from individual private plans	408462	13	13	173 573	10
PY090G	Unemployment benefit	278166	209	209	27 540	93
PY100G	Old-age benefit	1061202	1268	1282	13 209	1 105
PY110G	Survivor's benefit	489011	69	69	46 354	39
PY120G	Sickness benefit	111533	295	308	12 495	209
PY130G	Disability benefit	647319	402	403	19 700	184
PY140G	Education related allowances	123572	65	65	15 290	36
HY010	Total household gross income	2 829 616	2201	2203	50 150	1 555
HY020	Total disposable household income	2 220 697	2194	2203	33 042	1 411
HY022	Total disp.hhold income before soc.trans other than old-age benefit and survivor's benefit	1 920 296	2159	2175	34 556	1 305
HY023	Total disp.hhold income before soc.transfers including old-age and survivor's benefit	1 438 698	1920	1934	38 243	1 297
HY040G	Income from rental of a property or land	451 282	41	41	195 492	62
HY050G	Family/Children related allowances	411 148	778	778	14 797	563
HY060G	Social exclusion not elsewhere classified	135 098	158	158	19 755	77
HY070G	Housing allowances	53 472	242	242	3 741	192
HY080G	Regular interhousehold cash transfers received	180 216	491	491	13 289	294
HY090G	Interest, dividends, profit from capital investment	1 018 568	19	19	384 442	23
HY100G	Interest repayment on mortgage	202 917	0	319	7 105	210
HY110G	Income received by people under 16	279 600	1	1	0	
HY120G	Regular taxes on wealth	14 514	1123	1123	390	748
HY130G	Regular interhousehold cash transfers paid	115 284	551	551	6 808	406
HY140G	Tax on income and social contribution	874 916	1442	1442	28 004	1 003

Table 9. Mean, total number of observation before and after imputation, standard error, effective sample size –unweighted- longitudinal R6 component in 2010

	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	1604757	2039	2089	35 747	1 657
PY021G	Company car	131667	18	18	17 539	16
PY050G	Cash benefit or losses from self-employment	788595	414	424	89 005	239
PY070G	Value of goods produced by own-consumption		0	0	.	
PY080G	Pension from individual private plans	289250	4	4	100 509	4
PY090G	Unemployment benefit	268973	287	287	16 908	161
PY100G	Old-age benefit	1068101	1296	1304	12 879	978
PY110G	Survivor's benefit	405552	83	83	34 020	49
PY120G	Sickness benefit	101992	253	253	11 955	207
PY130G	Disability benefit	612524	309	316	21 141	154
PY140G	Education related allowances	186404	67	67	30 546	48
HY010	Total household gross income	2 782 949	2093	2094	50 528	1 498
HY020	Total disposable household income	2 191 617	2080	2094	33 011	1 346
HY022	Total disp.hhold income before soc.trans other than old-age benefit and survivor's benefit	1 907 870	2061	2079	33 802	1 273
HY023	Total disp.hhold income before soc.transfers including old-age and survivor's benefit	1 387 219	1806	1831	39 206	1 263
HY040G	Income from rental of a property or land	291 142	42	42	63 077	24
HY050G	Family/Children related allowances	395 153	714	714	15 539	430
HY060G	Social exclusion not elsewhere classified	114 176	174	174	16 355	90
HY070G	Housing allowances	58 951	199	199	4 924	117
HY080G	Regular interhousehold cash transfers received	189 174	377	377	14 540	265
HY090G	Interest, dividends, profit from capital investment	331 219	17	17	85 292	19
HY100G	Interest repayment on mortgage	202 501	0	334	6 190	255
HY110G	Income received by people under 16		0	0	.	
HY120G	Regular taxes on wealth	14 394	1023	1023	407	656
HY130G	Regular interhousehold cash transfers paid	124 272	442	442	7 586	399
HY140G	Tax on income and social contribution	864 347	1352	1352	27 908	1 113

Table 10. Mean, total number of observation before and after imputation, standard error –weighted- longitudinal R6 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	1472541	3615547	4143360	34 228
PY021G	Company car	157553	35465	35465	29 628
PY050G	Cash benefit or losses from self-employment	876528	915632	947426	98 859
PY070G	Value of goods produced by own-consumption	48954	445732	445732	8 107
PY080G	Pension from individual private plans	272942	11790	11790	42 835
PY090G	Unemployment benefit	232156	436096	436096	18 202
PY100G	Old-age benefit	865389	2067217	2084617	11 498
PY110G	Survivor's benefit	485104	106802	106802	66 970
PY120G	Sickness benefit	109517	498449	498449	13 111
PY130G	Disability benefit	525587	748017	752934	17 720
PY140G	Education related allowances	100194	120385	120385	16 153
Gross income components on household level					
HY010	Total household gross income	2 643 860	3811271	3811271	51 760
HY020	Total disposable household income	2 103 236	3811271	3811271	34 881
HY022	Total disp.hhold income before soc.trans other than old-age benefit and survivor's benefit	1 828 709	3783811	3783811	36 867
HY023	Total disp.hhold income before soc.transfers including old-age and survivor's benefit	1 497 225	3380119	3381048	41 382
HY040G	Income from rental of a property or land	542 670	88550	88550	203 047
HY050G	Family/Children related allowances	381 572	1337618	1337618	13 462
HY060G	Social exclusion not elsewhere classified	37 887	227984	227984	7 724
HY070G	Housing allowances	57 940	250908	250908	9 051
HY080G	Regular interhousehold cash transfers received	107 179	822262	822262	14 180
HY090G	Interest, dividends, profit from capital investment	835 929	48726	48726	176 283
HY100G	Interest repayment on mortgage		0	0	.
HY110G	Income received by people under 16	75 899	2706	2706	38 123
HY120G	Regular taxes on wealth	13 013	2188210	2188210	379
HY130G	Regular interhousehold cash transfers paid	61 076	666382	666382	4 303
HY140G	Tax on income and social contribution	750 015	2655716	2655716	26 720

Table 11. Mean, total number of observation before and after imputation, standard error – weighted- longitudinal R6 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	1480535	4059845	4164510	34 034
PY021G	Company car	205998	48607	48607	48 695
PY050G	Cash benefit or losses from self-employment	854354	958570	970705	86 013
PY070G	Value of goods produced by own-consumption	58576	504650	504650	10 220
PY080G	Pension from individual private plans	448900	15057	15057	239 133
PY090G	Unemployment benefit	231038	386686	386686	19 982
PY100G	Old-age benefit	952108	2141663	2152192	14 367
PY110G	Survivor's benefit	501135	116712	116712	43 339
PY120G	Sickness benefit	111304	660263	660263	10 952
PY130G	Disability benefit	571398	711741	713720	20 358
PY140G	Education related allowances	143921	103288	103288	20 838
Gross income components on household level					
HY010	Total household gross income	2 747 845	1883423	1883423	57 884
HY020	Total disposable household income	2 144 185	1883916	1883916	39 087
HY022	Total disp.hhold income before soc.trans other than old-age benefit and survivor's benefit	1 843 323	1865575	1865575	41 767
HY023	Total disp.hhold income before soc.transfers including old-age and survivor's benefit	1 436 934	1670446	1670446	45 945
HY040G	Income from rental of a property or land	346 168	43201	43201	83 565
HY050G	Family/Children related allowances	380 744	666744	666744	15 556
HY060G	Social exclusion not elsewhere classified	124 350	142199	142199	25 735
HY070G	Housing allowances	48 690	253845	253845	2 592
HY080G	Regular interhousehold cash transfers received	162 199	353622	353622	22 658
HY090G	Interest, dividends, profit from cap.investment	1 429 869	27599	27599	1 494 240
HY100G	Interest repayment on mortgage	180 021	221421	221421	7 206
HY110G	Income received by people under 16	88 079	2384	2384	46 263
HY120G	Regular taxes on wealth	13 519	1122717	1122717	438
HY130G	Regular interhousehold cash transfers paid	79 478	284704	284704	6 089
HY140G	Tax on income and social contribution	857 693	1280289	1280289	30 535

Table 12. Mean, total number of observation before and after imputation, standard error – weighted- longitudinal R6 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	1599130	3933348	4087011	36 160
PY021G	Company car	153531	33570	33570	34 043
PY050G	Cash benefit or losses from self-employment	855205	941152	957850	91 456
PY070G	Value of goods produced by own-consumption	45214	3535914	3535914	2 922
PY080G	Pension from individual private plans	438538	15846	15846	154 892
PY090G	Unemployment benefit	278714	345386	345386	22 220
PY100G	Old-age benefit	1064308	2147653	2171965	14 058
PY110G	Survivor's benefit	463528	106263	106263	40 243
PY120G	Sickness benefit	123817	544908	559293	13 637
PY130G	Disability benefit	658194	658946	661323	20 027
PY140G	Education related allowances	120822	95890	95890	13 693
Gross income components on household level					
HY010	Total household gross income	2 965 778	1 082 310	1083065	56 379
HY020	Total disposable household income	2 310 564	1 079 250	1083065	36 479
HY022	Total disp.hhold income before soc.trans other than old-age benefit and survivor's benefit	2 008 028	1 064 528	1071917	37 411
HY023	Total disp.hhold income before soc.transfers including old-age and survivor's benefit	1 513 699	956 970	963877	42 031
HY040G	Income from rental of a property or land	699 658	21 958	21958	399 231
HY050G	Family/Children related allowances	432 634	375 785	375785	19 395
HY060G	Social exclusion not elsewhere classified	125 395	72 611	72611	20 822
HY070G	Housing allowances	53 722	114 430	114430	4 234
HY080G	Regular interhousehold cash transfers received	185 958	227 052	227052	14 194
HY090G	Interest, dividends, profit from cap.investment	1 325 938	13 279	13279	622 053
HY100G	Interest repayment on mortgage	206 949	0	155425	7 834
HY110G	Income received by people under 16	279 600	344	344	0
HY120G	Regular taxes on wealth	15 044	574108	574108	444
HY130G	Regular interhousehold cash transfers paid	120 772	264 863	264863	7 049
HY140G	Tax on income and social contribution	917 141	729 456	729456	32 200

Table 13. Mean, total number of observation before and after imputation, standard error – weighted- longitudinal R6 component in 2010

	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	1611010	3891457	3998785	39 084
PY021G	Company car	139666	35547	35547	22 305
PY050G	Cash benefit or losses from self-employment	950272	756061	776781	109 753
PY070G	Value of goods produced by own-consumption		0	0	.
PY080G	Pension from individual private plans	258985	6684	6684	101 494
PY090G	Unemployment benefit	276586	450078	450078	25 553
PY100G	Old-age benefit	1061227	2233142	2240648	13 945
PY110G	Survivor's benefit	400954	133708	133708	31 241
PY120G	Sickness benefit	111156	530004	530004	10 219
PY130G	Disability benefit	617565	530140	542379	23 229
PY140G	Education related allowances	187153	116609	116609	36 625
Gross income components on household level					
HY010	Total household gross income	2 899 735	1141811	1142276	57 736
HY020	Total disposable household income	2 265 046	1134028	1142276	37 158
HY022	Total disp.hhold income before soc.trans other than old-age benefit and survivor's benefit	1 971 991	1123368	1135484	39 048
HY023	Total disp.hhold income before soc.transfers including old-age and survivor's benefit	1 457 594	998584	1016050	44 109
HY040G	Income from rental of a property or land	331 196	22744	22744	109 427
HY050G	Family/Children related allowances	418 816	395364	395364	19 416
HY060G	Social exclusion not elsewhere classified	118 595	92390	92390	17 655
HY070G	Housing allowances	63 571	101887	101887	10 209
HY080G	Regular interhousehold cash transfers received	209 198	204007	204007	17 741
HY090G	Interest, dividends, profit from cap.investment	441 004	10466	10466	96 809
HY100G	Interest repayment on mortgage	205 918	0	181859	7 297
HY110G	Income received by people under 16		0	0	.
HY120G	Regular taxes on wealth	14 933	578112	578112	489
HY130G	Regular interhousehold cash transfers paid	134 651	230032	230032	8 766
HY140G	Tax on income and social contribution	885 498	774009	774009	31 779

Table 14. Mean, number of observation, Standard error for Disposable Income – longitudinal R6 component in 2007- weighted

Disposable income	Mean	Number of observation	Standard error
Equivalised disposable income By household size			
1 household member	1 065 840	918 393	49 765
2 household member	1 294 479	2 318 450	40 199
3 household member	1 284 624	2 120 010	54 245
4 and more household member	1 182 946	4 556 105	29 699
Population by age groups			
Under 25	1 137 239	2 924 058	28 789
25-34	1 356 893	1 418 522	48 020
35-44	1 222 293	1 434 530	31 367
45-54	1 247 583	1 400 975	42 871
55-64	1 333 598	1 323 318	52 094
65+	1 117 159	1 411 555	33 025
Population by gender			
Male	1 233 866	4 688 124	24 891
Female	1 207 421	5 224 834	22 037
Total	1 219 927	9912958	22 682

Table 15. Mean, number of observation, Standard error for Disposable Income – longitudinal R6 components in 2008- weighted

disposable income	Mean	Number of observation	Standard error
Equivalised disposable income by household size			
1 household member	1 118 275	860 245	47 461
2 household member	1 351 846	2 160 466	38 451
3 household member	1 259 869	2 127 230	47 892
4 and more household member	1 207 539	4 689 194	49 550
Population by age groups			
Under 25	1 150 359	2 862 679	29 240
25-34	1 352 440	1 371 791	50 882
35-44	1 271 789	1 471 719	61 919
45-54	1 232 027	1 356 876	37 728
55-64	1 359 891	1 383 930	48 998
65+	1 187 818	1 390 140	28 913
Population by gender			
Male	1 252 654	4 635 647	27 936
Female	1 233 909	5 201 488	25 152
Total	1 242 742	9837135	23 712

Table 16. Mean, number of observation, Standard error for Disposable Income – longitudinal R6 components in 2009- weighted

disposable income	Mean	Number of observation	Standard error
Equivalised disposable income by household size			
1 household member	1 197 623	858 560	56 399
2 household member	1 442 678	2 122 362	39 901
3 household member	1 401 509	2 134 738	46 958
4 and more household member	1 272 325	4 672 906	35 506
Population by age groups			
Under 25	1 240 534	2 827 836	33 268
25-34	1 464 013	1 368 543	52 773
35-44	1 351 854	1 455 270	43 540
45-54	1 336 601	1 313 020	39 334
55-64	1 415 694	1 398 465	42 030
65+	1 272 415	1 425 432	29 354
Population by gender			
Male	1 337 946	4 606 059	25 630
Female	1 324 604	5 182 507	21 184
Total	1 330 882	9788566	22 636

Table 17. Mean, number of observation, Standard error for Disposable Income – longitudinal R6 components in 2010- weighted

disposable income	Mean	Number of observation	Standard error
Equivalised disposable income by household size			
1 household member	1 184 056	890 369	56 104
2 household member	1 415 414	2 118 743	44 054
3 household member	1 381 164	2 090 333	40 442
4 and more household member	1 245 107	4 625 288	30 863
Population by age groups			
Under 25	1 208 653	2 784 111	31 707
25-34	1 447 150	1 286 895	53 662
35-44	1 312 422	1 487 796	38 430
45-54	1 303 519	1 247 072	37 190
55-64	1 400 638	1 439 045	47 014
65+	1 269 133	1 479 814	22 183
Population by gender			
Male	1 308 853	4 557 288	24 603
Female	1 303 236	5 167 445	21 673
Total	1 305 868	9724733	22 780

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 R6 component

2007	R6
Accepted household interviews	3148
Accepted personal interviews	6529
Number of persons aged 16 years and older	6529
Sample persons	6747
Co-resident	1238
2008	
Accepted household interviews	2493
Accepted personal interviews	5205
Number of persons aged 16 years and older	5205
Sample persons	5422
Co-resident	1060
2009	
Accepted household interviews	2203
Accepted personal interviews	4599
Number of persons aged 16 years and older	4605
Sample persons	4747
Co-resident	977
2010	
Accepted household interviews	2094
Accepted personal interviews	4384
Number of persons aged 16 years and older	4386
Sample persons	4425
Co-resident	941

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 2=2008											
Sample outcome in wave 1=2007	DB130=11 DB135=1	DB130=11 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	2466	8	0	58	30	57	438	0	91	0	0	3148
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	2466	8	0	58	30	57	438	0	91	0	0	3148
New households in wave 2=2008												
DB110=8	27	0	0	2	0	0	8	0	0	0	0	37
DB110=9	0	0	0	0	0	0	0	0	0	0	0	0
Total (16.row+19+20.row)	2493	8	0	60	30	57	446	0	91	0	0	3185
Reference	A	B	C	D	E	F	G	H	I	J	K	T

Wave response rate= A/ (T-K) =	0.7884
Refusal rate = G/(T-K) =	0.1391
No-contacted and others = (B+C+D+F+H+I+J)/(T-K)=	0.0680
Longitudinal follow-up rate=	0.8320
Follow-up ratio=	0.8412
Achieved sample size ratio=	0.7919

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

	Sample outcome in wave 3=2009											
Sample outcome in wave 2=2008	DB130=11		DB120=22	DB130=22	DB130=23	DB130=24	DB130=21	DB120=21	NC	DB110=10	DB120=23	Total
	DB135=1	DB135=2										
DB130=11 & DB135=1	2126	1	0	58	13	0	207	0	32	0	1	2438
DB130=11 & DB135=2	7	0	0	0	0	0	0	0	0	0	0	7
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	25	0	0	13	1	0	14	0	56	0	0	109
DB130=23	16	0	0	1	3	0	5	0	30	0	0	55
DB130=24	13	0	0	3	0	0	12	0	34	0	2	64
Total	2187	1	0	75	17	0	238	0	152	0	3	2673
New households in wave 3=2009	16	0	0	5	0	0	15	1	0	0	2	39
DB110=8	0	0	0	0	0	0	0	0	0	0	0	0
DB110=9	2203	1	0	80	17	0	253	1	152	0	5	2712
Total	16	0	0	5	0	0	15	1	0	0	2	39

Reference	A	B	C	D	E	F	G	H	I	J	K	T

Wave response rate= A/ (T-K) =	0.8191
Refusal rate = G/(T-K) =	0.0891
No-contacted and others = (B+C+D+F+H+I+J)/(T-K)=	0.0854
Longitudinal follow-up rate=	0.9018
Follow-up ratio=	0.9104
Achieved sample size ratio=	0.8251

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

	Sample outcome in wave 4=2010											
Sample outcome in wave 3=2009	DB130=11		DB120=22	DB130=22	DB130=23	DB130=24	DB130=21	DB120=21	NC	DB110=10	DB120=23	Total
	DB135=1	DB135=2										
DB130=11 & DB135=1	1939	0	0	50	10	0	135	0	42	1	0	2177
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	29	0	0	7	1	0	14	0	54	0	0	105
DB130=23	1	0	0	1	4	0	5	0	13	0	0	24
DB130=24	0	0	0	0	0	0	0	0	0	0	0	0
Total	1969	0	0	58	15	0	154	0	109	1	0	2306
New households in wave 4=2010												
DB110=8	24	0	0	1	0	0	6	1	0	0	2	34
DB110=9	0	0	0	0	0	0	0	0	0	0	0	0
Total	1993	0	0	59	15	0	160	1	109	1	2	2340

Reference	A	B	C	D	E	F	G	H	I	J	K	T

Wave response rate= A/ (T-K) =	0.8539
Refusal rate = G/(T-K) =	0.0668
No-contacted and others = (B+C+D+F+H+I+J)/(T-K)=	0.0729
Longitudinal follow-up rate=	0.9182
Follow-up ratio=	0.9297
Achieved sample size ratio=	0.8643

Table 22.: Personal interview response rates in wave 2

		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	5018	0	0	0	0	0	0	0	0	0	5018	5018
(2) RB110=6	0	0	0	0	0	0	0	0	39	0	39	0
(3) RB110=-1	0	0	0	0	0	0	0	0	0	0	0	0
(4) RB120=2	0	0	0	0	0	0	0	0	1	0	1	0
(5) RB120=3	0	0	0	0	0	0	0	0	9	0	9	0
(6) RB120=4	0	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	47	0	0	47	0
(8) DB110=3-6	0	0	0	0	0	0	0	102	0	0	102	0
New sample persons												
(9) reached age 16	90	0	0	0	0	0	0	0	0	0	90	90
(10) sample addtions	73	0	0	0	0	0	0	0	0	0	73	73
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 (2007) (excluded, died or not eligible according to tacking rules)												
(13) from 2007		0	0	0	0	0	0	0	0	0	0	77
Sum of rows:		5181	0	0	0	0	0	0	47	0	0	5228
(1) (3) (6) (7) (9) (10)		5181	0	0	0	0	0	0	47	0	0	5305
(1) (3) (6) (7) (9) (10) (13)		5181	0	0	0	0	0	0	47	0	0	5228
(1) (3) (6) (7) (9) (10) (11)		5181	0	0	0	0	0	0	47	0	0	5228
Reference		A	B	C	D	E	F	G	H	J	K	T

Wave response rate of sample persons =	0.9910
Wave response rate of co-residents=	0.0000
Longitudinal follow-up rate=	0.9766
R(RB250=23)=	0.0000
R(RB250=31)=	0.0000
R R(RB250=32)=	0.0000

Achieved sample size ratio for sample persons=	0.7972
Achieved sample size ratio for sampler persons and co-residents=	0.7972
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

		2009										
			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(2008)												
(1) RB110=1-2		4319	0	0	0	0	0	0	0	0	0	4319
(2) RB110=6		0	0	0	0	0	0	0	0	34	0	34
(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	4	0	4
(5) RB120=3		0	0	0	0	0	0	0	0	11	0	11
(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	15	0	0	15
(8) DB110=3-6		0	0	0	0	0	0	0	32	0	0	32
New sample persons												
(9) reached age 16		74	0	0	0	0	0	0	0	0	0	74
(10) sample addtions		77	0	0	0	0	0	0	0	0	0	77
Non sampe persons 16+												
(11) this wave 2009	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 (2008)	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 (2007) (excluded, died or not eligible according to tacking rules)												
(13) from 2008		0	0	0	0	0	0	0	0	0	0	84
Sum of rows:												
(1) (3) (6) (7) (9) (10)		4470	0	0	0	0	0	0	15	0	0	4485
(1) (3) (6) (7) (9) (10) (13)		4470	0	0	0	0	0	0	15	0	0	4569
(1) (3) (6) (7) (9) (10) (11)		4470	0	0	0	0	0	0	15	0	0	4485

Wave response rate of sample persons =	0.9967
Wave response rate of co-residents=	0.0000
Longitudinal follow-up rate=	0.9783
R(RB250=23)=	0.0000
R(RB250=32=	0.0000
R R(RB250=33)=	0.0000

Achieved sample size ratio for sample persons=	0.8836
Achieved sample size ratio for sampler persons and co-residents=	0.8836
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

		2010										
			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(2009)												
(1) RB110=1-2		3976	0	0	0	0	0	0	0	0	0	3976
(2) RB110=6		0	0	0	0	0	0	0	0	23	0	23
(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	3	0	3
(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	9	0	0	9
(8) DB110=3-6		0	0	0	0	0	0	0	56	0	0	56
New sample persons												
(9) reached age 16		0										0
(10) sample addtions		55										55
Non sampe persons 16+												
(11) this wave 2010	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 (2009)	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 (2009) (excluded, died or not eligible according to tacking rules)												
(13) from 2009												56
Sum of rows:												
(1) (3) (6) (7) (9) (10)		4031	0	0	0	0	0	0	9	0	0	4040
(1) (3) (6) (7) (9) (10) (13)		4031	0	0	0	0	0	0	9	0	0	4096
(1) (3) (6) (7) (9) (10) (11)		4031	0	0	0	0	0	0	9	0	0	4040

Wave response rate of sample persons =	0.9978
Wave response rate of co-residents=	0.0000
Longitudinal follow-up rate=	0.9841
R(RB250=23)=	0.0000
R(RB250=32=	0.0000
R R(RB250=33)=	0.0000

Achieved sample size ratio for sample persons=	0.9533
Achieved sample size ratio for sampler persons and co-residents=	0.9533
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 R6 component*

Table 25.Distribution of households by DB110 – longitudinalR6 component

		DB110=											
		1	2	3	4	5	6	7	8	9	10	11	Total
	2007												
Total		6315	0	0	0	0	0	0	0	0	0	0	6315
%		100,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	100,0
	2008												
Total		2988	69	7	11	24	20	29	37	0	0	0	3185
%		93,8	2,2	,2	,3	,8	,6	,9	1,2	0,0	0,0	0,0	100,0
	2009												
Total		2461	61	0	2	24	7	11	40	0	0	68	2674
%		92,0	2,3	0,0	,1	,9	,3	,4	1,5	0,0	0,0	2,5	100,0
	2010												
Total		2313	18	6	6	16	12	8	34	0	1	30	2444
%		94,6	,7	,2	,2	,7	,5	,3	1,4	0,0	,0	1,2	100,0

Table 26. Distribution of households by DB120 – longitudinal R6 component

		DB120=					
		11	21	22	23	24	Missing
	2007						
Total		6108	2	0	205	0	0
%		96,7	,0	0,0	3,2	0,0	0,0
	2008						
Total		3185	0	0	0	0	0
%		100,0	0,0	0,0	0,0	0,0	0,0
	2009						
Total		2668	1	0	5	0	0
%		94,1	1,0	0,0	5,0	0,0	0,0
	2010						
Total		2441	1	0	2	0	0
%		94,2	1,9	0,0	3,8	0,0	0,0

Table 27. Distribution of households by DB130

		DB130=					
		11	21	22	23	24	Missing
	2007						
Total		3148	1743	742	194	281	0
%		51,5	28,5	12,1	3,2	4,6	0,0
	2008						
Total		2501	446	60	30	57	0
%		80,8	14,4	1,9	1,0	1,8	0,0
	2009						
Total		2204	254	80	17	0	1
%		86,3	9,9	3,1	,7	0,0	,0
	2010						
Total		2094	190	63	15	0	0
%		88,7	8,0	2,7	,6	0,0	0,0

2.3.3.4. Distribution of persons for membership status (RB110)

Table 28.Distribution of households by RB110

		Current household members				Not current household members		
		RB110=				RB110=		
		1	2	3	4	5	6	7
	2007							
Total		7985	0	0	0	0	0	0
%		100,0	0,0	0,0	0,0	0,0	0,0	0,0
	2008							
Total		6155	35	105	41	104	39	3
%		95,0	,5	1,6	,6	1,6	,6	,0
	2009							
Total		5414	22	91	40	119	38	0
%		94,6	,4	1,6	,7	2,1	,7	0,0
	2010							
Total		5114	37	73	27	79	31	5
%		95,3	,7	1,4	,5	1,5	,6	,1

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 R6 component in 2007

Income items		Household having received an amount		Full information		Partial information		Missing	
		count	%	count	%	count	%	count	%
HY010	Total household gross income	3147	100,0	3147	100,0	0	0,0	0	0,0
HY020	Total disposable household income	3147	100,0	3147	100,0	0	0,0	0	0,0
HY022	Total disp.hhold income before soc.trans other than old-age benefit and survivor's benefit	3121	99,1	3121	100,0	0	0,0	0	0,0
HY023	Total disp.hhold income before soc.transfers including old-age and survivor's benefit	2783	88,4	2782	100,0	1	0,0	0	0,0
HY040G	Income from rental of a property or land	69	2,2	69	100,0	0	0,0	0	0,0
HY050G	Family/Children related allowances	1116	35,5	1116	100,0	0	0,0	0	0,0
HY060G	Social exclusion not elsewhere classified	205	6,5	205	100,0	0	0,0	0	0,0
HY070G	Housing allowances	234	7,4	234	100,0	0	0,0	0	0,0
HY080G	Regular interhousehold cash transfers received	725	23,0	725	100,0	0	0,0	0	0,0
HY090G	Interest, dividends, profit from capital investment	39	1,2	39	100,0	0	0,0	0	0,0
HY100G	Interest repayment on mortgage	0	0,0	0	0,0	0	0,0	0	0,0
HY110G	Income received by people under 16	4	0,1	4	100,0	0	0,0	0	0,0
HY120G	Regular taxes on wealth	1767	56,1	1767	100,0	0	0,0	0	0,0
HY130G	Regular interhousehold cash transfers paid	576	18,3	576	100,0	0	0,0	0	0,0
HY140G	Tax on income and social contribution	2169	68,9	2169	100,0	0	0,0	0	0,0

Table 30 .Item non-response on household level by income items-longitudinal R6 component in 2008

Income items		Household having received an amount		Full information		Partial information		Missing	
		count	%	count	%	count	%	count	%
HY010	Total household gross income	2492	100,0	2492	100,0	0	0,0	0	0,0
HY020	Total disposable household income	2493	100,0	2493	100,0	0	0,0	0	0,0
HY022	Total disp.hhold income before soc.trans other than old-age benefit and survivor's benefit	2468	99,0	2468	100,0	0	0,0	0	0,0
HY023	Total disp.hhold income before soc.transfers including old-age and survivor's benefit	2195	88,0	2195	100,0	0	0,0	0	0,0
HY040G	Income from rental of a property or land	55	2,2	55	100,0	0	0,0	0	0,0
HY050G	Family/Children related allowances	899	36,1	899	100,0	0	0,0	0	0,0
HY060G	Social exclusion not elsewhere classified	195	7,8	195	100,0	0	0,0	0	0,0
HY070G	Housing allowances	359	14,4	359	100,0	0	0,0	0	0,0
HY080G	Regular interhousehold cash transfers received	491	19,7	491	100,0	0	0,0	0	0,0
HY090G	Interest, dividends, profit from capital investment	27	1,1	27	100,0	0	0,0	0	0,0
HY100G	Interest repayment on mortgage	296	11,9	296	0,0	0	0,0	0	0,0
HY110G	Income received by people under 16	4	0,2	4	100,0	0	0,0	0	0,0
HY120G	Regular taxes on wealth	1484	59,5	1484	100,0	0	0,0	0	0,0
HY130G	Regular interhousehold cash transfers paid	398	16,0	398	100,0	0	0,0	0	0,0
HY140G	Tax on income and social contribution	1670	67,0	1670	100,0	0	0,0	0	0,0

Table 31 .Item non-response on household level by income items-longitudinal R6 component in 2009

Income items		Household having received an amount		Full information		Partial information		Missing	
		count	%	count	%	count	%	count	%
HY010	Total household gross income	2203	100,0	2103	95,5	100	4,8	0	0,0
HY020	Total disposable household income	2203	100,0	2102	95,4	101	4,8	0	0,0
HY022	Total disp.hhold income before soc.trans other than old-age benefit and survivor's benefit	2175	98,7	2118	97,4	57	2,7	0	0,0
HY023	Total disp.hhold income before soc.transfers including old-age and survivor's benefit	1934	87,8	1892	97,8	42	2,2	0	0,0
HY040G	Income from rental of a property or land	41	1,9	41	100,0	0	0,0	0	0,0
HY050G	Family/Children related allowances	778	35,3	778	100,0	0	0,0	0	0,0
HY060G	Social exclusion not elsewhere classified	158	7,2	158	100,0	0	0,0	0	0,0
HY070G	Housing allowances	242	11,0	242	100,0	0	0,0	0	0,0
HY080G	Regular interhousehold cash transfers received	491	22,3	491	100,0	0	0,0	0	0,0
HY090G	Interest, dividends, profit from capital investment	19	0,9	19	100,0	0	0,0	0	0,0
HY100G	Interest repayment on mortgage	319	14,5	0	0,0	0	0,0	0	0,0
HY110G	Income received by people under 16	1	0,0	1	100,0	0	0,0	0	0,0
HY120G	Regular taxes on wealth	1123	51,0	0	0,0	0	0,0	0	0,0
HY130G	Regular interhousehold cash transfers paid	551	25,0	551	100,0	0	0,0	0	0,0
HY140G	Tax on income and social contribution	1442	65,5	1442	100,0	0	0,0	0	0,0

Table 32 .Item non-response on household level by income items-longitudinal R6 component in 2010

Income items		Household having received an amount		Full information		Partial information		Missing	
		count	%	count	%	count	%	count	%
HY010	Total household gross income	2094	100,0	2006	95,8	88	4,4	0	0.0
HY020	Total disposable household income	2094	100,0	2004	95,7	90	4,5	0	0.0
HY022	Total disp.hhold income before soc.trans other than old-age benefit and survivor's benefit	2079	99,3	1995	96,0	84	4,2	0	0.0
HY023	Total disp.hhold income before soc.transfers including old-age and survivor's benefit	1831	87,4	1751	95,6	80	4,6	0	0.0
HY040G	Income from rental of a property or land	42	2,0	42	100,0	0	0,0	0	0.0
HY050G	Family/Children related allowances	714	34,1	714	100,0	0	0,0	0	0.0
HY060G	Social exclusion not elsewhere classified	174	8,3	174	100,0	0	0,0	0	0.0
HY070G	Housing allowances	199	9,5	199	100,0	0	0,0	0	0.0
HY080G	Regular interhousehold cash transfers received	377	18,0	377	100,0	0	0,0	0	0.0
HY090G	Interest, dividends, profit from capital investment	17	0,8	17	100,0	0	0,0	0	0.0
HY100G	Interest repayment on mortgage	334	16,0	0	0,0	0	0,0	0	0.0
HY110G	Income received by people under 16	0	0,0	0	0,0	0	0,0	0	0.0
HY120G	Regular taxes on wealth	1023	48,9	0	0,0	0	0,0	0	0.0
HY130G	Regular interhousehold cash transfers paid	442	21,1	442	100,0	0	0,0	0	0.0
HY140G	Tax on income and social contribution	1352	64,6	1352	100,0	0	0,0	0	0.0

Table 33. Item non-response on personal level by personal income items-longitudinal R6 component in 2007

Personal income items		Household having received an amount		Full information		Partial information		Missing /Imputed	
		count	%	count	%	count	%	count	%
PY010G	Employee cash or near-cash income	3296	50,5	2866	87,0	6	0,2	424	12,9
PY021G	Company car	32	0,5	32	100,0	0	0,0	0	0,0
PY050G	Cash benefit or losses from self-employment	716	11,0	694	96,9	0	0,0	22	3,1
PY070G	Value of goods produced by own-consumption	382	5,9	382	100,0	0	0,0	0	0,0
PY080G	Pension from individual private plans	9	0,1	9	100,0	0	0,0	0	0,0
PY090G	Unemployment benefit	324	5,0	324	100,0	0	0,0	0	0,0
PY100G	Old-age benefit	1671	25,6	1656	99,1	0	0,0	15	0,9
PY110G	Survivor’s benefit	100	1,5	100	100,0	0	0,0	0	0,0
PY120G	Sickness benefit	388	5,9	388	100,0	0	0,0	0	0,0
PY130G	Disability benefit	633	9,7	629	99,4	0	0,0	4	0,6
PY140G	Education related allowances	105	1,6	105	100,0	0	0,0	0	0,0

Table 34. Item non-response on personal level by personal income items-longitudinal R6 component in 2008

Personal income items		Household having received an amount		Full information		Partial information		Missing / Imputed	
		count	%	count	%	count	%	count	%
PY010G	Employee cash or near-cash income	2620	50,3	2558	97,6	7	0,3	55	2,1
PY021G	Company car	34	0,7	34	100,0	0	0,0	0	0,0
PY050G	Cash benefit or losses from self-employment	610	11,7	583	95,6	21	3,6	6	1,0
PY070G	Value of goods produced by own-consumption	377	7,2	377	100,0	0	0,0	0	0,0
PY080G	Pension from individual private plans	9	0,2	9	100,0	0	0,0	0	0,0
PY090G	Unemployment benefit	235	4,5	235	100,0	0	0,0	0	0,0
PY100G	Old-age benefit	1405	27,0	1395	99,3	1	0,1	9	0,6
PY110G	Survivor’s benefit	96	1,8	96	100,0	0	0,0	0	0,0
PY120G	Sickness benefit	405	7,8	405	100,0	0	0,0	0	0,0
PY130G	Disability benefit	494	9,5	456	92,3	36	7,9	2	0,4
PY140G	Education related allowances	80	1,5	80	100,0	0	0,0	0	0,0

Table 35. Item non-response on personal level by personal income items-longitudinal R6 component in 2009

Personal income items		Household having received an amount		Full information		Partial information		Missing / Imputed	
		count	%	count	%	count	%	count	%
PY010G	Employee cash or near-cash income	2264	49,2	2185	96,5	5	0,2	74	3,3
PY021G	Company car	19	0,4	19	100,0	0	0,0	0	0,0
PY050G	Cash benefit or losses from self-employment	557	12,1	529	95,0	20	3,8	8	1,4
PY070G	Value of goods produced by own-consumption	2079	45,1	2079	100,0	0	0,0	0	0,0
PY080G	Pension from individual private plans	13	0,3	13	100,0	0	0,0	0	0,0
PY090G	Unemployment benefit	209	4,5	209	100,0	0	0,0	0	0,0
PY100G	Old-age benefit	1282	27,8	1266	98,8	2	0,2	14	1,1
PY110G	Survivor’s benefit	69	1,5	69	100,0	0	0,0	0	0,0
PY120G	Sickness benefit	308	6,7	295	95,8	0	0,0	13	4,2
PY130G	Disability benefit	403	8,8	368	91,3	34	9,2	1	0,2
PY140G	Education related allowances	65	1,4	65	100,0	0	0,0	0	0,0

Table 36. Item non-response on personal level by personal income items-longitudinal R6 component in 2010

Personal income items		Household having received an amount		Full information		Partial information		Missing /Imputed	
		count	%	count	%	count	%	count	%
PY010G	Employee cash or near-cash income	2089	47,6	2019	96,6	20	1,0	50	2,4
PY021G	Company car	18	0,4	18	100,0	0	0,0	0	0,0
PY050G	Cash benefit or losses from self-employment	424	9,7	393	92,7	21	5,3	10	2,4
PY070G	Value of goods produced by own-consumption	0	0,0	0	0,0	0	0,0	0	0,0
PY080G	Pension from individual private plans	4	0,1	4	100,0	0	0,0	0	0,0
PY090G	Unemployment benefit	287	6,5	287	100,0	0	0,0	0	0,0
PY100G	Old-age benefit	1304	29,7	1296	99,4	0	0,0	8	0,6
PY110G	Survivor’s benefit	83	1,9	83	100,0	0	0,0	0	0,0
PY120G	Sickness benefit	253	5,8	253	100,0	0	0,0	0	0,0
PY130G	Disability benefit	316	7,2	309	97,8	0	0,0	7	2,2
PY140G	Education related allowances	67	1,5	67	100,0	0	0,0	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 R6 component

RB250- Data status	2007	2008	2009	2010
Information completed only from interview(11)	6529	5205	4599	4384
From register…no reason (12-33)	0	0	6	2
Total	6529	5205	4605	4386

Table 38. Distribution of RB260- longitudinal R6 component

RB260- Contact address	2007	2008	2009	2010
PAPI (1)	5019	4183	4058	3563
CAPI, CATI, Other(2,3,4)	0	0	0	0
Proxy(5)	1510	1022	541	821
missing	0	0	0	0
Total	6529	5205	4599	4384

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 2010-2009-2008-2007 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 2010-2009-2008-2007.

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 2007, 2008, 2009, 2010

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, in 2009 and 2010 as well.
Total duration of data collection of the sample
The data collection lasted 13 weeks.

viii. *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 (2007) second EU-SILC wave (2008) third EU-SILC wave (2009) and fourth EU-SILC wave (2010) 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 2007, 2008, 2009 and 2010 (weighted)*

weighted		2007		2008		2009		2010	
		mean	standard error	mean	standard error	standard error	standard error	mean	standard error
PY010G	Employee cash or near-cash income	1 410 237	15 474	1 489 381	13 517	1621374	7862	1607120	12149
PY020G	Non-cash employee income	98 653	15 256	76 487	225	74810	196	71205	199
PY050G	Cash benefit or losses from self-employment	893 234	58 792	942 774	12 658	1074571	4951	1094533	4742
PY070G	Value of goods produced by own-consumption	388 738	139 349	444 017	255	569888	396	366526	156
PY080G	Pension from individual private plans	247 210	18 395	263 042	915	267210	692	271736	823
PY090G	Unemployment benefit	861 340	5 508	949 236	21 543	1048213	2482	1042794	5245
PY100G	Old-age benefit	439 261	29 782	410 948	579	482880	540	457066	628
PY110G	Survivor's benefit	104 599	7 263	103 112	519	111630	433	103057	400
PY120G	Sickness benefit	521 900	10 406	588 141	2 267	677155	1655	626640	1651
PY130G	Disability benefit	112 671	8 121	152 376	233	162289	193	177380	321
PY140G	Education related allowances	1 410 237	15 474	1 489 381	13 517	1621374	7862	1607120	12149
Income components on household level									
HY010	Total household gross income	2 510 148	26 020	2 697 270	41 069	2944966	20246	2912549	21574
HY020	Total disposable household income	1 998 043	17 298	2 101 591	23 423	2275418	12487	2260719	12831
HY022	Total disp.hhold income before soc.trans other than old-age benefit and survivor's benefit	1 737 966	17 327	1 810 434	16 776	1985007	12943	1975663	13137
HY023	Total disp.hhold income before soc.transfers including old-age and survivor's benefit	1 430 903	20 136	1 440 865	34 012	1521096	14391	1496257	14132
HY040G	Income from rental of a property or land	599 990	113 058	599 283	122 817	563642	83555	389627	61439
HY050G	Family/Children related allowances	371 931	7 173	388 899	7 460	417322	4556	421251	4340
HY060G	Social exclusion not elsewhere classified	49 203	3 903	105 051	10 562	126209	10041	124329	7864
HY070G	Housing allowances	49 971	2 393	50 098	1 980	50041	1677	58109	2818
HY080G	Regular interhousehold cash transfers received	111141	5 479	161 739	10 332	189354	7224	215888	8122
HY090G	Interest, dividends, profit from cap.investment	783 803	123 903	1 238 220	308 293	1208454	228152	811389	152898
HY100G	Interest repayment on mortgage	222 814	7 997	188 086	3 560	217108	3496	209488	3075
HY110G	Income received by people under 16	184 734	85 902	72 508	14 864	147857	43615	171124	88543
HY120G	Regular taxes on wealth	14 552	183	14 583	223	15335	224	15469	209
HY130G	Regular interhousehold cash transfers paid	79 198	3 731	118 197	12 587	134562	6005	144042	5906
HY140G	Tax on income and social contribution	720 485	13738	851 769	17 561	929010	14008	902689	14687