NATIONAL INSTITUTE OF STATISTICS OF ROMANIA

STATISTICS ON INCOME AND LIVING CONDITIONS (EU-SILC 2009)

INTERMEDIATE QUALITY REPORT

CONTENTS

INTRODUCTION

1. COMMON CROSS-SECTIONAL EUROPEAN UNION INDICATORS

1.1. Common cross-sectional EU indicators based on the cross-sectional component of EU-SILC

1.1.1 Risk-of-poverty threshold

1.1.2 At-risk-of-poverty rate after social transfers

1.1.3 Dispersion around at-risk-of-poverty-threshold

1.1.4 Relative median risk-of-poverty gap

1.1.5 At-risk-of-poverty rate before social transfers

1.1.6 S80/S20 quartile share ratio

1.1.7 Gini coefficient

1.2. Other indicators

Mean equivalised income

2. ACCURACY

2.1 Sample design

2.2 Sampling errors

2.3 Non-sampling errors

2.4 Mode of data collection

2.5 Interview duration

2.6 Collection of variable company car

3. COMPARABILITY

3.1 Basic concepts and definitions

3.2 Components of income

4. COHERENCE

4.1 Comparison of income target variables with external sources

INTRODUCTION

The Romanian survey on income and living conditions, named Quality of life survey, represents the implementation of EU-SILC survey in Romanian statistical system. The main goal of this survey is to produce data regarding the income and living conditions in a standardized manner, in order to produce comparable estimates at EU level. In this way, the survey is the reference source for comparative statistics on income distribution and social exclusion in European Union.

In 2009, the survey was carried-out by the National Institute of Statistics with the funds supplied by Eurostat on the grant nr. 10602.2008.003-2008.144.

The survey implemented the methodology described in the EU-SILC Regulation (EC) no 1177/2003 of the European Parliament and of the Council concerning Community Statistics on Income and Living Conditions.

We designed this survey as a new harmonised survey in order to meet all EU-SILC requirements. An integrated design with a rotational sample was applied, in which the sample is divided in sub-samples, each of them similar in size and design and representative for the whole population. From one year to another three sub-samples are retained, one is dropped and one new sub-sample is included in the survey. In this way, the cross-sectional and longitudinal statistics are produced from the same set of sample observations.

This documents provides common cross-sectional EU indicators based on the cross-sectional component of EU-SILC, a description of the accuracy, precision, the comparability and the coherence of the Romanian SILC 2009 survey.

1. COMMON CROSS-SECTIONAL EUROPEAN UNION INDICATORS

1.1 Common cross-sectional EU indicators based on the cross-sectional component of EU-SILC

1.1.1 At-risk-of-poverty threshold (illustrative values)

(a) one person household: 4776.5 lei

(b) household with 2 adults and 2 dependent children: 10030.6 lei

1.1.2 At-risk-of-poverty rate by age and gender

AGE GROUP	TOTAL	MALE	FEMALE
Total	22.4	21.4	23.4
0-17	32.9	-	-
18-64	19.8	19.9	19.6
65+	21	14.7	25.3

At risk-of-poverty rate by most frequent activity and gender

AGE GROUP	TOTAL	MALE	FEMALE
Total	22.4	21.4	23.4
At work	17.6	19.4	15.2
Not at work: total	22.3	17.9	24.9
Not at work: unemployed	46.4	47.6	43.2
Not at work: retired	15.7	12.7	18.0
Not at work: other inactive	30.7	23.1	33.0

At risk-of-poverty by household type (%)

HOUSEHOLD TYPE	
Total	22.4
Households without dependent children	16.5
One adult younger than 64 years	24.6
One adult older than 65 years	32.4
Single female	32.9
Single male	21.4
Two adults younger than 65 years	13.1
Two adults, at least one aged 65 years and over	14.5
Three or more adults	13.1
Households with dependent children	26.2
Single parent with dependent children	35.3
Two adults with one dependent children	14.9
Two adults with two dependent children	24.3
Two adults with three or more dependent children	56.3
Three or more adults with dependent children	25.2

At-risk-of-poverty by tenure status (%)

	TOTAL	OWNER OR RENT-FREE	TENANT
Risk-of-poverty	22.4	22.5	17.1

At-risk-of-poverty by work intensity

	TOTAL
Household without dependent children W=0	17.3
Household without dependent children 0 < W < 1	10.4
Household without dependent children W=1	16.7
Household with dependent children W=0	69.3
Household with dependent children 0 < W < 0.5	33.8
Household with dependent children 0.5 <= W < 1	31.3
Household with dependent children W=1	16.9

1.1.3 Dispersion around at-risk-of-poverty-threshold (%)

	TOTAL	MALE	FEMALE
At-risk-of-poverty rate at 40% of median	10.8	10.4	11.1
At-risk-of-poverty rate at 50% of median	16.5	15.8	17.2
At-risk-of-poverty rate at 70% of median	29.1	28.3	29.8

1.1.4 Relative median at-risk-of-poverty gap by age and gender (%)

	TOTAL	MALE	FEMALE
Total	32.0	32.4	31.3
0-17	36.7	-	-
18-64	32.9	33.8	31.7
65+	23.3	19.7	24.6

1.1.5 At-risk-of-poverty by age and gender before all transfers

	TOTAL	MALE	FEMALE
Total	48.2	46.6	49.7
0-17	48.4	-	-
18-64	39.5	38.4	40.4
65+	86.7	89.1	85.1

1.1.6 S80/S20 quintile share ratio: 6.7

1.1.7 Gini coefficient: 34.9

1.2 Other indicators

Mean equivalised income: 9267,0 lei

2. ACCURACY

2.1 Sample design

2.1.1 Type of sampling (stratified, multi-stage, clustered)

The sampling plan is a two-stage probability sampling of housing units (dwellings).

2.1.2 Sampling units (one stage, two stage)

The primary sampling unit, corresponding to the selection of the *master sample*, is a group of census sections (census enumeration areas EAs).

The secondary (ultimate) sampling unit, corresponding to the selection of the survey sample, has been a fix number of dwellings from each PSU.

2.1.3 Stratification and sub-stratification criteria

Stratification concerns only the first stage sampling. There are 88 strata, the criteria used being the area where a certain PSU is located (urban or rural area) and county (NUTS 3 level).

2.1.4 Sample size and allocation criteria

For the second wave, two subsamples of the first wave sample and one subsample of the second wave sample had to be followed-up in 2009, plus one subsample of new dwellings which entered in the sample. Because sample size is a random variable due to the tracing rules, for 2009 operation, sample size of new rotation corresponds to 1974 dwellings, and 2008 subsistent rotations comprise 5771 households.

2.1.5 Sample selection schemes

In the first stage, a stratified random sample of 780 areas, Primary Sampling Units (PSUs), was designed after the 2002 census. The PSUs were sampled with probability proportional to size (number of permanent dwellings). This is the Multifunctional Sample of Territorial Areas, so called the master sample EMZOT. The EMZOT sample has 427 PSUs selected from urban area and 353 PSUs selected

from rural area. In the second stage, dwelings are systematically selected from EMZOT. All households within each dwelling are included.

2.1.6 Sample distribution over time

The sample is not distributed over time.

2.1.7 Renewal of sample: Rotational groups

The survey uses the integrated four-years rotational panel design, in which one-fourth of the sample is replaced each year. In 2009, one sub-sample, S2, left the survey and a new one (S6) entered for the first time. The total sample for the year 2009 is made by the sub-samples S3, S4, S5 and S6.

	Years					
	2007	2008	2009	2010	2011	2012
Sub-samples	S1					
	S2	S2				
	S3	S3	S3			
	S4	S4	S4	S4		
		S5	S5	S5	S5	
			S6	S6	S6	S6
				S7	S7	S7
					S8	S8
						S9

2.1.8 Weightings

Weighting factors have been calculated taking into account the units probability of selection, non-response adjustment and the calibration to external data relating to the distribution of persons in the target population. The weights are calculated in three steps. The first step assigns the inverse of the selection probabilities to each sampled dwelling unit. The second step adjusts for non-response. The third and final step

consists of calibrating the secondary weights, for each wave, by region, to the best latest available population totals.

2.1.8.1 Design factor

Wave 1

The design factor of the household is the inverse of its inclusion probability.

The design factor for households and for individuals are the same, because in each selected dwelling, all persons are selected for the survey.

Wave 2

In case of the households at the second and third wave, an indirect sampling of households is done through the panel (of persons aged 14+ at the time of the panel selection). In this case, the inclusion probabilities cannot be calculated. Then, the solution consists of applying the Weight Share Method.

The design factors of households are calculated through the individual base weights. The individual base weights (calculated in previous year 2008) are inflated taking into account the attrition.

Wave 3

Two situations are distinguished:

a. The sample person was a respondent in 2008 and 2007.

The base weight is calculated taking into account the base weight of previous year and then corrected for the attrition between 2008 and 2009

b. The sample person was a non-respondent in 2008 (and a respondent in 2007).

In this case the base weight is obtain taking into account the cross-sectional weight RB050 calculated in 2007 corrected for the attrition between 2007-2009. For co-residents the weight is equal with zero.

Average of these weights over all the household members (including co-residents) is assigned to each member (including co-residents).

2.1.8.2 Non-response adjustments

In order to contra balance the non-respondent households, it is proceed at a re-weighting, by adjusting the weights of the respondent households with the inverse of the response rate.

The non-response are not globally adjusted, at the entire sample level, but separately- at waves level, on groups of households, groups generated by the variables considered as explicative of the non response. This correspond to the so-called 'response-homogenous groups' method, which assumes that in a certain group all the units have the same probability. For wave 1 we used as explicative variables for non-response region (NUTS II level) and area of residence (urban / rural) and for the second and third wave - the region. In order to minimize the effects induced by the presence of non-response another adjustment is done: re-weighting by calibration of the weights.

2.1.8.3 Adjustments to external data (level, variables used and sources)

We applied an integrative calibration that means that we used both households and personal variables in the procedure. The calibration is performed at the household level using the household variables and individual variables in their aggregate form as calibration variables. This technique ensures that all members in the same household receive the same weight. Adjustments were made using the SAS macro CALMAR. Calibration variables were: "distribution of the population by age group (0-15; 16-24;25-34;35-49;50-64;65-74; 75 and over), area of residence (urban\ rural) and gender" using Romanian Population Estimates at the end of the income reference period and ''households totals by region''.

2.1.8.4 Final cross-sectional weights

Three cross-sectional weights were calculated:

1) Household cross-sectional weight (DB090)

2) Personal cross-sectional weight for all household members (RB050)

3) Personal cross-sectional weight for all household members aged 16 and over (PB040)

2.1.9 Substitutions

No substitution of unit non-response has been applied.

2.2 Sampling errors

Sampling errors were calculated for the common cross-sectional EU indicators based on the cross-sectional component of EU-SILC.
Particularly, sampling errors were estimated with the JRR method using the software developed by Siena University (EUSILC-Report 06 for the Intermediary Quality).

2.2.1 Standard errors and effective sample size

The following table contains respectively the value, the absolute sampling error, the Kish indices and the achieved sample size for each of the indicators:

Nr crt	Subpopulation	est	stat_se	kish	n
1	HCR	0,2304	0,0095	1,2776	18703
2	HCR, after social transfers: Age 0-17	0,3395	0,0191	1,2213	2778
3	HCR, after social transfers: Age 18-24	0,2427	0,0198	1,2524	1570
4	HCR, after social transfers: Age 25-49	0,2141	0,0111	1,2385	6027
5	HCR, after social transfers: Age 50-64	0,1622	0,0096	1,2422	4246
6	HCR, after social transfers: Age 65+	0,2090	0,0126	1,1815	4082
7	HCR, after social transfers: Male	0,2195	0,0095	1,2736	8975
8	HCR, after social transfers: Female	0,2406	0,0104	1,2818	9728
9	HCR, after social transfers: Male Age 0-17	0,3209	0,0196	1,2047	1436
10	HCR, after social transfers: Male Age 18-24	0,2298	0,0237	1,2230	875
11	HCR, after social transfers: Male Age 25-49	0,2121	0,0125	1,2297	2960
12	HCR, after social transfers: Male Age 50-64	0,1701	0,0103	1,2647	2005
13	HCR, after social transfers: Male Age 65+	0,1425	0,0187	1,2332	1699
14	HCR, after social transfers: Female Age 0-17	0,3558	0,0228	1,2372	1342
15	HCR, after social transfers: Female Age 18-24	0,2566	0,0256	1,2592	695
16	HCR, after social transfers: Female Age 25-49	0,2149	0,0114	1,2478	3067
17	HCR, after social transfers: Female Age 50-64	0,1559	0,0112	1,2196	2241
18	HCR, after social transfers: Female Age 65+	0,2572	0,0148	1,1604	2383
19	HCR, after social transfers: Male Age 18+	0,1941	0,0074	1,2800	7539
20	HCR, after social transfers: Female Age 18+	0,2150	0,0075	1,2698	8386
21	HCR, after social transfers: Male Age 18-64	0,2036	0,0089	1,2563	5840
22	HCR, after social transfers: Female Age 18-64	0,2038	0,0090	1,2807	6003
23	HCR, after social transfers: Male Age 0-64	0,2302	0,0104	1,2489	7276
24	HCR, after social transfers: Female Age 0-64	0,2367	0,0111	1,2801	7345
25	HCR, after social transfers: One person hh under 65	0,2421	0,0171	1,1088	888

	years				
26	HCR, after social transfers: One person hh 65 years and over	0,3199	0,0171	1,0704	1332
27	HCR, after social transfers: One person hh male	0,2146	0,0191	1,1389	765
28	HCR, after social transfers: One person hh female	0,3241	0,0166	1,0689	1455
29	HCR, after social transfers: One person hh total	0,2867	0,0130	1,0828	2220
30	HCR, after social transfers: 2 adults, no dependant children, both adults under 65 years	0,1302	0,0148	1,1087	2410
31	HCR, after social transfers: 2 adults, no dependant children, at least one adult 65 years or more	0,1387	0,0232	1,0844	2364
32	HCR, after social transfers: Other hh without dependant children	0,1292	0,0165	1,2893	2586
33	HCR, after social transfers: Single parent hh, one or more dependant children	0,3375	0,0882	1,1176	379
34	HCR, after social transfers: 2 adults, one dependant child	0,1474	0,0159	1,1873	2412
35	HCR, after social transfers: 2 adults, two dependant children	0,2422	0,0256	1,1812	1812
36	HCR, after social transfers: 2 adults, three or more dependant children	0,5561	0,0481	1,2039	707
37	HCR, after social transfers: Other hh with dependant children	0,2485	0,0208	1,2117	3564
38	HCR, after social transfers: Hh without dependant children	0,1620	0,0203	1,1938	9580
39	HCR, after social transfers: Hh with dependant children	0,2590	0,0139	1,2265	8874
40	HCR, after social transfers: Accommodation tenure status:Owner or rent free	0,2226	0,0091	1,2801	18202
41	HCR, after social transfers: Accommodation tenure status:Tenant	0,1701	0,0433	1,1682	280
42	HCR, after social transfers: Main activity status: Employed	0,1836	0,0109	1,2635	7364
43	HCR, after social transfers: Main activity status: Unemployed	0,4741	0,0586	1,2455	268
44	HCR, after social transfers: Main activity status: Retired	0,1586	0,0080	1,1765	5971
45	HCR, after social transfers: Main activity status: Other inactive	0,2250	0,0178	1,2427	1295
46	HCR, after social transfers: Main activity status: Employed, Male	0,1993	0,0111	1,2505	4154
47	HCR, after social transfers: Main activity status: Unemployed, Male	0,4816	0,0516	1,2391	194
48	HCR, after social transfers: Main activity status: Retired, Male	0,1256	0,0091	1,2215	2595
49	HCR, after social transfers: Main activity status: Other inactive, Male	0,2213	0,0207	1,2543	663
50	HCR, after social transfers: Main activity status: Employed, Female	0,1633	0,0119	1,2826	3210
51	HCR, after social transfers: Main activity status: Unemployed, Female	0,4698	0,1105	1,2599	74
52	HCR, after social transfers: Main activity status: Retired, Female	0,1841	0,0091	1,1525	3375
53	HCR, after social transfers: Main activity status: Other inactive, Female	0,2269	0,0233	1,2297	633
54	HCR, after social transfers: Work intensity: hh without dependent children, w=0	0,1696	0,0224	1,1739	1897
55	HCR, after social transfers: Work intensity: hh without dependent children, 0<w<1	0,1026	0,0125	1,2956	2319

56	HCR, after social transfers: Work intensity: hh without dependent children, w=1	0,1649	0,0170	1,2198	2508
57	HCR, after social transfers: Work intensity: hh with dependent children, w=0	0,6676	0,0810	1,2666	390
58	HCR, after social transfers: Work intensity: hh with dependent children, 0<w<0.5	0,3382	0,0506	1,1984	623
59	HCR, after social transfers: Work intensity: hh with dependent children, 0.5<=w<1	0,3111	0,0242	1,1846	3207
60	HCR, after social transfers: Work intensity: hh with dependent children, w=1	0,1682	0,0163	1,2530	4526
61	HCR, before social transfers including pensions	0,2981	0,0083	1,2714	18703
62	HCR, before social transfers including pensions: Age 0-17	0,4316	0,0199	1,2220	2778
63	HCR, before social transfers including pensions: Age 18-24	0,3058	0,0193	1,2283	1570
64	HCR, before social transfers including pensions: Age 25-49	0,2770	0,0110	1,2395	6027
65	HCR, before social transfers including pensions: Age 50-64	0,2411	0,0122	1,2412	4246
66	HCR, before social transfers including pensions: Age 65+	0,2468	0,0138	1,1843	4082
67	HCR, before social transfers including pensions: Male	0,2925	0,0091	1,2704	8975
68	HCR, before social transfers including pensions: Female	0,3034	0,0089	1,2728	9728
69	HCR, before social transfers including pensions: Male Age 0-17	0,4274	0,0212	1,2130	1436
70	HCR, before social transfers including pensions: Male Age 18-24	0,2928	0,0201	1,2007	875
71	HCR, before social transfers including pensions: Male Age 25-49	0,2769	0,0115	1,2330	2960
72	HCR, before social transfers including pensions: Male Age 50-64	0,2561	0,0118	1,2551	2005
73	HCR, before social transfers including pensions: Male Age 65+	0,1743	0,0159	1,2428	1699
74	HCR, before social transfers including pensions: Female Age 0-17	0,4360	0,0247	1,2316	1342
75	HCR, before social transfers including pensions: Female Age 18-24	0,3192	0,0276	1,2368	695
76	HCR, before social transfers including pensions: Female Age 25-49	0,2770	0,0122	1,2457	3067
77	HCR, before social transfers including pensions: Female Age 50-64	0,2276	0,0163	1,2270	2241
78	HCR, before social transfers including pensions: Female Age 65+	0,2958	0,0143	1,1638	2383
79	HCR, before social transfers including pensions: Male Age 18+	0,2585	0,0080	1,2731	7539
80	HCR, before social transfers including pensions: Female Age 18+	0,2745	0,0076	1,2667	8386
81	HCR, before social transfers including pensions: Male Age 18-64	0,2739	0,0091	1,2485	5840
82	HCR, before social transfers including pensions: Female Age 18-64	0,2688	0,0089	1,2683	6003
83	HCR, before social transfers including pensions: Male Age 0-64	0,3091	0,0105	1,2461	7276
84	HCR, before social transfers including pensions: Female Age 0-64	0,3050	0,0110	1,2655	7345

85	HCR, before social transfers excluding pensions	0,4858	0,0105	1,2528	18703
86	HCR, before social transfers excluding pensions: Age 0-17	0,4917	0,0197	1,2233	2778
87	HCR, before social transfers excluding pensions: Age 18-24	0,3774	0,0203	1,2241	1570
88	HCR, before social transfers excluding pensions: Age 25-49	0,3389	0,0115	1,2258	6027
89	HCR, before social transfers excluding pensions: Age 50-64	0,5271	0,0140	1,2696	4246
90	HCR, before social transfers excluding pensions: Age 65+	0,8684	0,0098	1,4264	4082
91	HCR, before social transfers excluding pensions: Male	0,4699	0,0108	1,2411	8975
92	HCR, before social transfers excluding pensions: Female	0,5007	0,0114	1,2653	9728
93	HCR, before social transfers excluding pensions: Male Age 0-17	0,4878	0,0207	1,2121	1436
94	HCR, before social transfers excluding pensions: Male Age 18-24	0,3681	0,0212	1,2044	875
95	HCR, before social transfers excluding pensions: Male Age 25-49	0,3447	0,0132	1,2164	2960
96	HCR, before social transfers excluding pensions: Male Age 50-64	0,4897	0,0153	1,2652	2005
97	HCR, before social transfers excluding pensions: Male Age 65+	0,8911	0,0126	1,4307	1699
98	HCR, before social transfers excluding pensions: Female Age 0-17	0,4958	0,0241	1,2350	1342
99	HCR, before social transfers excluding pensions: Female Age 18-24	0,3871	0,0289	1,2290	695
100	HCR, before social transfers excluding pensions: Female Age 25-49	0,3329	0,0117	1,2349	3067
101	HCR, before social transfers excluding pensions: Female Age 50-64	0,5607	0,0157	1,2784	2241
102	HCR, before social transfers excluding pensions: Female Age 65+	0,8530	0,0112	1,4185	2383
103	HCR, before social transfers excluding pensions: Male Age 18+	0,4654	0,0104	1,2394	7539
104	HCR, before social transfers excluding pensions: Female Age 18+	0,5018	0,0106	1,2630	8386
105	HCR, before social transfers excluding pensions: Male Age 18-64	0,3878	0,0105	1,2270	5840
106	HCR, before social transfers excluding pensions: Female Age 18-64	0,4088	0,0108	1,2404	6003
107	HCR, before social transfers excluding pensions: Male Age 0-64	0,4107	0,0111	1,2287	7276
108	HCR, before social transfers excluding pensions: Female Age 0-64	0,4276	0,0119	1,2455	7345
109	Median equivalised disposable income	7913,3333	194,9067	1,2566	18703
110	At-risk-of-poverty threshold	4748,0000	116,9440	1,2566	18703
111	At-risk-of-poverty threshold, one person hh	4069,7399	174,7699	1,0960	2220
112	At-risk-of-poverty threshold, hh 2 adults 2 dependent children	4382,8800	231,8355	1,1902	1812
113	S80/S20	7,2474	0,3679	1,2306	18703
114	Relative median at-risk-of-poverty gap	0,3376	0,0158	1,2566	4173
115	Relative median at-risk-of-poverty gap: Age 017	0,3884	0,0546	1,2240	922
116	Relative median at-risk-of-poverty gap: Age 1824	0,3250	0,0188	1,2222	363
117	Relative median at-risk-of-poverty gap: Age 2549	0,3737	0,0258	1,2252	1255
118	Relative median at-risk-of-poverty gap: Age 5064	0,3160	0,0285	1,2587	741

119	Relative median at-risk-of-poverty gap: Age 65+	0,2418	0,0180	1,1742	892
120	Relative median at-risk-of-poverty gap: Male	0,3376	0,0168	1,2475	1857
121	Relative median at-risk-of-poverty gap: Female	0,3375	0,0184	1,2651	2316
122	Relative median at-risk-of-poverty gap: Male Age 0-17	0,3526	0,0187	1,2129	459
123	Relative median at-risk-of-poverty gap: Male Age 18-24	0,3250	0,0176	1,1985	189
124	Relative median at-risk-of-poverty gap: Male Age 25-49	0,3710	0,0305	1,2149	605
125	Relative median at-risk-of-poverty gap: Male Age 50-64	0,3401	0,0407	1,2685	362
126	Relative median at-risk-of-poverty gap: Male Age more then 64	0,1997	0,0167	1,1700	242
127	Relative median at-risk-of-poverty gap: Female Age 0-17	0,4317	0,0201	1,2355	463
128	Relative median at-risk-of-poverty gap: Female Age 18-24	0,3182	0,0523	1,2311	174
129	Relative median at-risk-of-poverty gap: Female Age 25-49	0,3763	0,0386	1,2354	650
130	Relative median at-risk-of-poverty gap: Female Age 50-64	0,2845	0,0328	1,2498	379
131	Relative median at-risk-of-poverty gap: Female Age more then 64	0,2544	0,0200	1,1762	650
132	Median income below the at-risk-of-poverty threshold	3145,3055	90,3138	1,2566	4173
133	Dispersion around the risk-of-poverty threshold -40%	0,1166	0,0076	1,3164	18703
134	Dispersion around the risk-of-poverty threshold -50%	0,1721	0,0081	1,2932	18703
135	Dispersion around the risk-of-poverty threshold -70%	0,2953	0,0086	1,2627	18703
136	Gini coefficient	0,3446	0,0065	1,2258	18482
137	Mean equivalised disposable income	9235,0866	208,3896	1,2483	18482

2.3 Non-sampling errors

2.3.1 Sampling frame and coverage errors

Due to the lack of appropriate information, the new dwellings, built after 2002 Census of the Population and Dwellings, that could possibly constitute a sampling frame of the new dwellings, have not been taken into account. Thus, an updates has be done for the PSU included in EMZOT in 2007 year, on the basis of a micro-census type survey. The micro-census has aimed in particular the updating of the addresses of the dwellings.

Under-coverage rate was estimated as the ratio between number of new dwellings, built in the period end of 2002 year (the year of the census)- end of 2008 year and number of dwellings at the end of 2008 year (Source: Romanian Statistical Yearbook, 2009). Thus, it was assumed that the proportion of the new dwellings in total dwellings should be the same in the master sample. Under-coverage rate was 3,29%.

Over-coverage rate was estimated on the basis of the survey sample, as ratio between number of not-eligible dwellings (not-existing addresses, or being non-residential or unoccupied or not the main addresses) and number of sampled dwellings (all addresses selected). Over-coverage rate was 1,96% .

2.3.3.1 Achieved sample size

- **Number of households for which an interview is accepted for the database by rotational group**

ROTATIONAL GROUP	households	percentage
DB075=2	1962	23.9
DB075=3	1985	24.2
DB075=4	1925	23.4
DB075=1	2345	28.5
Total	**8217**	**100,0**

2.3.2 Measurement and processing errors

2.3.2.1 Measurement errors

As in any other survey, there are 3 main sources of measurement errors:

- the questionnaires (1)
- the interviewers (2)
- the respondents (3)

(1) We used three types of questionnaires:

- the household file;
- the household questionnaire, with the detailed questions regarding the household;
- the individual questionnaire, which was fulfilled for each person 15 years or more, in order to record better the incomes of the people less than 16 years.

The questionnaires were up-dated with the improvements based on the 2008 survey conclusions and the 2009 secondary module.
The structure of questionnaires was the following:

- **The household file** included:
  - identification data;
  - the household composition - name, identificator, date of birth, sex, the relatives' code (mother's, father's and husband's/wife's), sample-person or co-resident, person's mobility compared with first wave, month and year when the current person left the household/came into the sampled household (if was the case), economic status during the income reference period etc.;
  - some questions about household identification;

The household file is design and used all four years a person is included in the survey.

- **The household questionnaire** included:
  - identification data;
  - data regarding child care for all the children less than 12 years;
  - questions regarding the children items asked at household level (2009 secondary module)- basic needs; educational or leisure needs and medical needs-;
  - questions regarding economic situation of the household (housing and non-housing related arrears, non-monetary household deprivation questions); endowment with durable goods;
  - housing conditions (including information about dwelling and dwelling environment, housing cost, amenities in the dwelling);
  - taxes paid at household level for the year 2008;
  - household incomes in 2008;

- **The individual questionnaire:**

- identification data;
- questions regarding de jure and de facto marital status; first and second citizenships; country of birth;
- questions regarding the health status; limitations in activities due to a medical problem; unmeet need for medical, respectively dental consultation; reasons for the unmeet need for medical and dental consultation;
- level of education questions (the school attended currently, the highest level of education attended and the year when the person graduated this level);
- questions regarding detailed information about employment/non-employment;
- individual incomes achieved in 2008.

In order to help the data collection activities, other materials were designed by the methodological team:

-*the letter for the households* – a paper sheet in which the objectives of the EU-SILC survey is presented, the importance of the people participation is highlighted and the confidentiality of the data is garrantied.

- *the list of the dwelling and households included in the sample* (LG) is a document with two parts: first one included the exact addresees selected to carry-out the interviews. The second part included the situation found on the field for each address. This document is very usefull for the interviewers and supervisors in order to check the integrity of the data collected.

- *the tracing file*, was a paper sheet designed in order to identify households/persons which moved from the initial adresses from the first wave. The paper sheet fulfilled by the county from which they left was sent to the NIS methodological team and they sent again in the county where the information collected show they moved in. These counties procceded to follow-up and interviewed them, in the case they founded.

(2) The main challenge for the interviewers was in the third wave to administer the tracing rules. Beside this, the recording of the accurate incomes was the second very difficult task.

A handbook was prepared with all the information available to help the interviewers in the fields work activities. Explanations for a big number of questions from all the questionnaires were included. Aspects related to the follow-up of households/persons and the construction of identifiers were explained in this handbook also. A special section included some recommandations about the behaviour in the respondents' presence and the way the interviewers should convince population to participate to this survey.

Other aspects:

- co-resident and sample –person; some interviewers changed the code of co-residents in sample-person for the persons who attained 15 years old in 2009 because of the age;
- presence in the household created confusion for the members who are abroad for an un-known period of time; in other surveys there was a special code – abroad – for these persons. The implication on household's income and the definition of the household (share of incomes or expenditures) made difficult to establish if these persons are or not the household members;
- different answers to the same questions in two different waves; interviewers justified themselfes the difference were due to the use of a different respondent in the second wave and the imposibility to correct the data in the previous wave.

(3) For respondents, the most difficult information to declare was the value of incomes in the previous calendar year, the social insurance contribution and the taxes on wealth. Another difficult answer was related to the housing cost, aldo the question was preceding by a helping question in which they were asked what kind of housing cost that household is actually paying, in order to be sure the respondent is thinking at the elements of the housing cost are recommended by EU-SILC methodology to be included here.

Some households found difficult to estimate the rent they would receive if they would rent the dwelling.

2.3.2.2 Processing errors

During the field work period and data processing period several checks were done.
Data editing and cleaning was done in two steps: firstly, at the level of each county and secondly, after the counties' files will be sent to INS team, a second check was done by EU-SILC central team.

At the county level, after data collection, supervisors had the duty to check the integrity of the questionnaires (one household file and at least one household questionnaire per household and as many personal questionnaires as household members 15 years and more exists). During data entry, a checking software was applied at county level. The counties sent the files at central level and a new check was done on the national files.
The checking sofware included 3 types of checks: checks at each questionnaire level (household and personal questionnaires), checks for the correlation between the information included in household and personal questionnaires, and a third type of checks, integrity checks, if all the addresses included in the sample were visited (if questionnaires completed exist for each address included in the sample). Inside each type of questionnaire there were 2 types of logical conditions: to see if all the compulsory questions were fulfilled and to check if the answers were correct (for quantitative variables minimal and maximal limits were established, and for qualitative variables logical conditions were tested).
After the data files in the EUROSTAT format were obtained, a third data check was done, using the EUROSTAT software available on Circa user group.
The process of cleaning the data took a long time and imposed special efforts both from the county teams and central metodological team in order to obtain the 4 micro-data files in Eurostat format, due to the big number of variables and numerous

corelations between them. A special kind of difficulties were related to the special codification of the split-of/moved hoseholds/persons in the original files.

2.3.3.1 Unit non-response

Household non-response rates (*NRh*)

-Number of addresses successfully contacted (DB120 = 11): 8056

-Number of valid addresses selected (DB120 <> 23): 8070

Ra (address contact rate): **99.8%**

-Number of household interviews completed and accepted for database (DB135 = 1): 7745

-Number of eligible households at contact addresses (DB130 filled): 8014

Rh (proportion of complete household interviews accepted for database): **96.65%**

NRh (household non-response rate): **3.35%**

Individual non-response rates (*NRp*)

-Number of personal interviews completed (RB250 = 11 + 12 + 13): 16282

-Number of eligible individuals in the households whose interviews were completed and accepted for the database (RB245 = 1 + 2 + 3): 16330

Rp (proportion of complete personal interviews within the households accepted for the database): **99.71%**

NRp (individual non-response rate): **0.29%**

Overall individual non-response rates (*NRp)

Ra (address contact rate): **99.8%**

Rh (proportion of complete household interviews accepted for database): **96.65%**

Rp (proportion of complete personal interviews within the households accepted for the database): **99.71%**

***NRp** (overall individual non-response rate): **3.82%**

2.3.3.3 Distribution of households by “record of contact at adress” (DB120) by “household questionnaire result” (DB130) and by “household interview acceptance” (DB135)

Table 1A: **Distribution of households by “record of contact at adress” (DB120)**

	Number	%
Total	**8217**	100,0
Address contacted (DB120=11)	**8056**	98.0
Address non-contacted (DB120=21 U 22 U 23) from which:	**161**	2.0
- address cannot be located (DB120=21)	3	
- address unable to access (DB120=22)	11	
- address does not exist, is not residential address or unocuppied (DB120=23)	147	

Table 1B: **Distribution of households by “household questionnaire result” (DB130)**

	Number	%
Total	**8014**	**100,0**
Household questionnaire completed (DB130=11)	**7748**	**96.7**
Interview not completed, from which:	**266**	**3.3**
- refusal to cooperate (DB130=21)	110	1.4
- entire household temporary away for duration of fieldwork (DB130=22)	87	1.1
- household unable to respond (DB130=23)	64	0.7
- other reasons (DB130=24)	5	0,1

Table 1C: **Distribution of households by "household interview acceptance" (DB135)**

	Number	%
Household questionnaire completed	**7748**	100,0
- interview accepted for the database (DB135=1)	7745	99,9
- interview rejected (DB135=2)	3	0,1

2.3.3.4 Distribution of substituted units

We did not allowed to substitute units.

2.3.4 Item non-response

We have no item non-response due to the checking programs used at the county level which show these missings data and the supervisors have to solve it: first of all, the questionnaire is checked in order to find if it is an operator's mistake and secondly, the household is asked again if the information was not supplied from the beginning.

2.4 Method of data collection

The method of data collection was face-to-face personal interviews, using paper questionnaires. The interviewers visited the addresses selected in the sample and fulfilled the questionnaires, based on the interviews. The household questionnaire was fulfilled by interview with the household head and individual questionnaire by interview with each household member 15 years old and more.

Table 2: Distribution of households members 16 years old and over by data status

	Number	%
Total	**16330**	100,0
Information of interview completed	**16282**	99,7
- information completed only from interview (RB250=11)	16282	
- information completed only from registers (RB250=12)	na	na
- information completed both from interview and registers (RB250=13)	na	na
Interview not completed, though contact made	**7**	0,1
- individual unable to answer and no proxy possible (RB250=21)	2	-
- failed to return the self-administrated questionnaire (RB250=22)	na	na
- refusal to cooperate (RB250=23)	5	
Individual not contacted because:	**41**	0,2
- person temporarily away and no proxy possible (RB250=31)	26	
- no contact for other reasons **(**RB250=32)	15	
Information not completed, reason unknow (RB250=33)	-	-

Table 3: Distribution of households members by the respondent status

	Number	%
Total	**18703**	100,0
- Current household member aged 16 years and over (RB245=1)	16330	87.3
- Selected respondent (RB245=2)	na	na
- non-selected respondent (RB245=3)	na	na
- not eligible respondent (RB245=4)	2373	12.7

Table 4: Distribution of households members aged 16 years old and over by the type of interview

	Number	%
Total	**16282**	100,0
- Questionnaire completed –face-to-face interview PAPI (RB260=1)	14065	86.4
- Questionnaire completed –face-to-face interview CAPI (RB260=2)	na	na
- Questionnaire completed –CATI (RB260=3)	na	na
- Self-administrated by respondent (RB260=4)	na	na
- Proxy interview (RB260=5)	2217	13.6

2.5 Interview duration

The average household interview duration was 22.03 minutes.

The average individual interview duration was 22.21 minutes.

2.6 Collection of variable company car

The following information were collected in the individual questionnaire:

- the type of the car;
- the model;
- the registration year;
- number of months in 2008 the car was at the disposal of the person for private use;

The company car value was calculated as:

Company car value = number of months*selling price*[1 – 100*(2009- registration year)/10]/12

The selling prices of the cars by type of car and producer were taken from the List of manufactures recommended retail prices of the Competition DG report.

1. COMPARABILITY

3.1 Basic concepts and definitions

3.1.1 The reference population

The reference population is all citizens officially living in Romania. Persons living in collective households and in institutions are excluded from the target population, as well as households having members diplomatic missioners.

3.1.2 The dwelling definition

The dwelling is the unit formed by one or more rooms, having in general annexes (kitchen, bathroom etc.) or other utility spaces, the unit being independent from the functional point of view, having separate entrance from the space of the staires, from the yard or from the street and which was build, transformed or arranged in order to be inhabitatted.

3.1.3 The household definition

Household is defined as a person living alone or a group of persons who live together in the same dwelling and share expenditures including the joint provision of the essentials of living.

3.1.4 The household membership

We used the same household membership definition as the Eurostat recommended in the document EU-SILC 065.

3.1.5 The income reference period

No departure from the common definition.

We used a fixed income reference period of twelve-month, more exactly the previous calendar year (January – December 2008).

3.1.6 The period for taxes on income and social insurance contribution

No departure from the common definition.

The repayments and receipts for tax adjustment referring to the income taxes recalculated for the global income gained in 2007 and they were collected if there were paid/received during the calendar 2008.

3.1.7 Activity status during the income reference period

No departure from the common definition.

3.1.8 Total duration of data collection

Data collection period was 3 weeks.

3.2 Components of income

The main goal of this survey is a correct estimation of the gross and disposable income of the households. In order to achieve this goal, the household and individual questionnaires included a long list of income components, currently existing in Romania (45 income components in individual questionnaire and 19 income components in the household questionnaire). From all these elements we calculated income components at household and individual level corresponding to the income variables for households and persons and in the final, we aggregated all in the gross (HY010) and disposable income (HY020) for each household who accepted the interview.

The total gross and disposable household incomes, as the each component of the total income were calculated in the following way:

- **Total household gross income**

HY010 = ∑PY010G + ∑PY050G + ∑PY090G + ∑PY100G + ∑PY110G + ∑PY120G + ∑PY130G + ∑PY140G + HY040G + HY050G + HY060G + HY070G + HY080G + HY090G + HY110G

- **Total household disposable income**

HY020 = ∑PY010G + ∑PY050G + ∑PY090G + ∑PY100G + ∑PY110G + ∑PY120G + ∑PY130G + ∑PY140G + HY040G + HY050G + HY060G + HY070G + HY080G + HY090G + HY110G – HY120G – HY130G – HY140G

- **Total household disposable income, before social transfers other than old age and survivors' benefits**

HY022 = HY020 – (∑PY090G + ∑PY120G + ∑PY130G + ∑PY140G) – HY050G – HY060G – HY070G

- **Total household disposable income, before social transfers including old age and survivors' benefits**

HY023 = HY020 – (∑PY090G + ∑PY100G + ∑PY110G + ∑PY120G + ∑PY130G + ∑PY140G) – HY050G – HY060G – HY070G

- **Imputed rent (HY030N)**

The value of imputed rent was estimated at the household level (and included in the personal file for only one person per household) from the household budget survey (HBS), using the stratification method. The HBS includes arround 37000 households and it is conducted continuosly during each year.

INCOME COLLECTED AT HOUSEHOLD LEVEL

- **Income from rental of property or land (HY040N)**

- Rent received for renting land, buildings, dwellings or rooms

- **Family/children related allowances (HY050N)**

- Child allowance
- Complementary family allowance
- Allowance for new-born children
- Allowance for monoparental families
- Allowance paid to families which rise children in family placement
- Allowance accorded at the moment the family is born
- Benefit for the maternal leave or for leave due to child care (collected in the personal questionnaire)
- Benefit for leave due to child care (collected in the personal questionnaire)

❖ **Social exclusion payments not elsewhere classified (HY060N)**

- Benefit for persons without incomes/ with low incomes
- Benefit for dwelling heating
- Emergency benefit for urgent situations (natural disasters etc.)

❖ **Housing allowances (HY070N)**

We didn't identify any allowance or benefit to be included in this category.

❖ **Regular inter-household cash transfers received (HY080N)**

❖ **Interest, dividents, profit from capital investments in unicorporated business (HY090N)**

- Interests
- Dividends
- Profit from capital investments in unincorporated business

❖ **Income received by people aged under 16 (HY110N)**

- Income received by people aged under 16 (collected in the household questionnaire);

- Personal gross/net income of people 15 years old (collected in the personal questionnaire)

❖ **Regular inter-household transfers paid (HY130N)**

❖ **Tax on income and social insurance contribution (HY140N)**

- income tax retained at source for wages
- anticipated income tax for own account activities
- income tax retained at source for pensions
- regular taxes on wealth

The value of own consumption was estimated at the household level (and included in the personal file for only one person per household) from the household budget survey (HBS), using the stratification method. The HBS includes arround 37000 households and it is conducted continuosly during each year.

INCOMES COLLECTED AT PERSONAL LEVEL

❖ **Employee cash or near cash income (PY010G/PY010N)**

- Salaries and other employees rights

❖ **Non-cash employee income (PY020G/PY020N)**

- In-kind employee salaries
- Non-cash employee income

For these incomes we collected: net amount, if the income tax was retained at source, deduction and other amounts retained at source.

❖ **Cash benefits or losses from self employment (PY050G/PY050N)**

- Cash income received from agricultural associations

- Incomes from sales of agricultural products, animals and poltry
- Incomes from agricultural work carried-out for other households or persons
- Incomes from commerce
- Incomes from services carried-out
- Incomes from trade
- Incomes from liberal professions
- Incomes from royalties

For all these incomes we collected also: anticipatated income tax and social contributions (unemployment, health and pension). The sums are collected in the form of profit or loss.

❖ **Unemployment benefits (PY090G/PY090N)**

- Unemployment benefit,
- Professional integration allowance or supporting allowance
- Compensatory payment for collective firing

❖ **Old age benefits (PY100G/PY100N)**

- Social inssurance pension for old age limit
- Anticipated social inssurance pension
- Social benefit (in the form of pension)
- Social inssurance pension for farmers
- Pension for war invalids, war orphans and war widows (excluding survivals' pension)
- Social benefit for war's veterans and war's widows

❖ **Survivor's benefits (PY110G/PY110N)**

- Survival social inssurance pension
- Allowance or other money rights for survivals of persons dead during 1989 Revolution

- Allowance in case of the death of a family member

❖ **Sickness benefits (PY120G/PY120N)**

- Sickness benefit

❖ **Disability benefits (PY130G/PY130N)**

- Social inssurance pension for work incapacity
- Special allowance for handicapped persons

❖ **Education-related allowances (PY140G/PY140N)**

- Scholarships
- Cash amount received by people attainded high-school included in the program "Money for high-school"

❖ **Repayments/receipts for tax adjustment for the income achieved in 2006 (HY145N)**

3.2.2 The source or procedure for the collection of income variables

The source for the collection of income variables was paper and pencil interviews for all income variables, including the money drawn out of business by the self-employed. We did not used administrative records.
The use of the justificative documents regarding the incomes was the respondents' decision.

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

The majority of income components were recorded net and the gross variables were obtained by adding at the net values, the value of income tax retained at

source and social contributions paid (in the case of wages, we add the value of other sums retained at source, too).

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

The only income components calculated in the process of data editing were:

- the value of income tax retained at source for salaries (we have a flat rate of 16% for income tax), the respondents being asked only if they paid or not the income tax for wage;
- the exact value of the social insurance contribution retained at source for salaries, if this was declared in the form of an interval.
- the value of income tax retained at source and social insurance contributions for pensions (if the pension was bigger than 900 lei);
- the interest for dividents and money withdrawn from the banks;

4. COHERENCE

4.1 Comparison of income target variables with external sources

A very exact comparison between incomes from HBS and EU-SILC data is not possible due to some methodological differences, more exactly, differences at the level of income elements collected and included in the EU-SILC.

The differences between these two surveys it is possible to be due to the greater value of the income taxes and social insurance contributions for wages, own account activities and pensions in EU-SILC, where these elements are automatical calculated (if the person declared there were paid). In HBS the person should declare himself the value of these components in the diary.

A better comparison can be made between at-risk-of-poverty indicators calculated from both surveys.

	2009	
	HBS	EU-SILC
Poverty threshold –lei, for one person annually-	5411.3	4776.5
At-risk-of-poverty rate (after all social transfers) -%-	21.7	22.4
Dispersion around the poverty threshold -%-		
- at-risk-of-poverty rate at 40% of median	9.3	10.8
- at-risk-of-poverty rate at 50% of median	14.8	16.5
- at-risk-of-poverty rate at 70% of median	29.0	29.1
Relative median risk-of-poverty gap -%-	28.4	32.1
At-risk-of-poverty rate before social transfers -%-		
- including pensions	49.7	48.2
- excluding pensions	27.3	29.1
S80/S20 quartile share ratio	5.9	6.7
Gini Coefficient -%-	33.1	34.9