

NATIONAL INSTITUTE OF STATISTICS OF ROMANIA

**STATISTICS ON INCOME AND LIVING CONDITIONS  
(EU-SILC 2008)**

**INTERMEDIATE QUALITY REPORT**

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## **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 2008, the survey was carried-out by the National Institute of Statistics with the funds supplied by Eurostat on the grant nr. 36401.2007.001-2007.162.

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 2008 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 Risk-of-poverty threshold (annual illustrative values)

(a) one person household: 3908 lei

(b) household with 2 adults and 2 dependent children: 8207 lei

### 1.1.2 Risk-of-poverty rate by age and gender

AGE GROUP	TOTAL	MALE	FEMALE
Total	23	22	24
0-17	33	-	-
18-64	20	20	20
65+	26	21	30

### Risk-of-poverty rate by most frequent activity and gender

AGE GROUP	TOTAL	MALE	FEMALE
Total	23	22	24
At work	17	19	15
Not at work: total	25	21	27
Not at work: unemployed	43	51	24
Not at work: retired	19	17	21
Not at work: other inactive	32	21	35

Risk-of-poverty by household type (%)

HOUSEHOLD TYPE	
<b>Total</b>	23
Households without dependent children	18
One adult younger than 64 years	24
One adult older than 65 years	39
Single female	38
Single male	24
Two adults younger than 65 years	14
Two adults, at least one aged 65 years and over	20
Three or more adults	13
Households with dependent children	26
Single parent with dependent children	40
Two adults with one dependent children	14
Two adults with two dependent children	24
Two adults with three or more dependent children	57
Three or more adults with dependent children	26

Risk-of-poverty by tenure status (%)

	TOTAL	OWNER OR RENT-FREE	TENANT
Risk-of-poverty	23	24	16

### Risk-of-poverty by work intensity

	TOTAL
Household without dependent children $W=0$	23
Household without dependent children $0 < W < 1$	11
Household without dependent children $W=1$	15
Household with dependent children $W=0$	69
Household with dependent children $0 < W < 0.5$	34
Household with dependent children $0.5 \leq W < 1$	30
Household with dependent children $W=1$	17

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

	TOTAL	MALE	FEMALE
At-risk-of-poverty rate at 40% of median	11	11	11
At-risk-of-poverty rate at 50% of median	17	16	17
At-risk-of-poverty rate at 70% of median	30	29	31

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

	TOTAL	MALE	FEMALE
Total	32	33	32
0-17	39	-	-
18+			
18-64	32	33	31
65+	23	23	23

1.1.5 Risk-of-poverty by age and gender before all transfers

	TOTAL	MALE	FEMALE
Total	48	46	50
0-17	49	-	-
18-64	39	38	40
65+	86	89	84

1.1.6 S80/S20 quintile share ratio: 7,0

1.1.7 Gini coefficient: 36

## **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, three subsamples of the previous wave sample had to be followed-up in current wave, plus one subsample of new dwellings which entered in the sample. Because sample size is a random variable due to the tracing rules, for 2008 operation, sample size of new rotation corresponds to 2340 dwellings, and 2007 subsistent rotations comprise 5884 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, dwellings 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 2008, one sub-sample (S1 in 2007) left the survey and a new one entered for the first time. The longitudinal sample for 2007-2008 is made by the sub-samples S2, S3 and S4.

	Years					
	2007	2008	2009	2010	2011	2012
Sub-samples	S1					
	S2	S2				
	S3	S3	S3			
	S4	S4	S4	S4		
		<b>S1</b>	S1	S1	S1	
			S2	S2	S2	S2
				S3	S3	S3
					S4	S4
						S1

**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 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. Within a household, each member has been assigned a weight coming from the final cross-sectional weight of the precedent year of survey, except for co-residents for whom the weight is =0. 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, on groups of households, groups generated by the variable considered as explicative variable of the non response: region (NUTS II level) and area of residence (urban / rural). This correspond to the so-called 'response-homogenous groups' method, which assumes that in a certain group all the units have the same probability. 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, area of residence (urban \ rural) and gender” (except for groups “0 to 15 years old” and “75 years old and more”, groups were defined by intervals of ten years 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:

	subpopulation	est	stat_se	kish	n
1	HCR, after social transfers: Age 0-15	0,3212	0,0186	1,1832	2525
2	HCR, after social transfers: Age 16-24	0,2551	0,0192	1,2361	2095
3	HCR, after social transfers: Age 25-49	0,2058	0,0098	1,2249	6253
4	HCR, after social transfers: Age 50-64	0,1715	0,0103	1,2142	4125
5	HCR, after social transfers: Age more then 64	0,2591	0,0124	1,1726	3972
6	HCR, after social transfers: Male	0,2237	0,0095	1,2287	9113
7	HCR, after social transfers: Female	0,2418	0,0090	1,2507	9857
8	HCR, after social transfers: Male Age 0-15	0,3119	0,0197	1,1521	1280
9	HCR, after social transfers: Male Age 16-24	0,2408	0,0251	1,2017	1153
10	HCR, after social transfers: Male Age 25-49	0,2050	0,0108	1,2156	3076
11	HCR, after social transfers: Male Age 50-64	0,1768	0,0127	1,2406	1945
12	HCR, after social transfers: Male Age more then 64	0,2065	0,0131	1,1951	1659
13	HCR, after social transfers: Female Age 0-15	0,3311	0,0244	1,2137	1245
14	HCR, after social transfers: Female Age 16-24	0,2702	0,0229	1,2521	942
15	HCR, after social transfers: Female Age 25-49	0,2066	0,0103	1,2341	3177
16	HCR, after social transfers: Female Age 50-64	0,1668	0,0110	1,1876	2180
17	HCR, after social transfers: Female Age more then 64	0,2956	0,0150	1,1666	2313
18	HCR, after social transfers: Male Age more then 16	0,2052	0,0093	1,2412	7833
19	HCR, after social transfers: Female Age more then 16	0,2253	0,0086	1,2460	8612
20	HCR, after social transfers: Male Age 16-64	0,2050	0,0100	1,2316	6174
21	HCR, after social transfers: Female Age 16-64	0,2075	0,0088	1,2615	6299
22	HCR, after social transfers: Male Age 0-64	0,2262	0,0102	1,2154	7454
23	HCR, after social transfers: Female Age 0-64	0,2308	0,0097	1,2563	7544
	HCR, after social transfers: One person household				
24	under 65 years	0,2396	0,0181	1,1324	899
	HCR, after social transfers: One person household				
25	65years and over	0,3935	0,0201	1,1130	1295

26	HCR, after social transfers: One person hh male	0,2352	0,0204	1,1531	754
27	HCR, after social transfers: One person hh female	0,3769	0,0178	1,1099	1440
28	HCR, after social transfers: One person hh total	0,3274	0,0155	1,1163	2194
29	HCR, after social transfers: 2 adults, no dependant children, both adults under 65 years	0,1372	0,0135	1,1046	2346
30	HCR, after social transfers: 2 adults, no dependant children, at least one adult 65 year	0,2001	0,0155	1,0993	2340
31	HCR, after social transfers: Other hh without dependant children	0,1271	0,0148	1,1854	2452
32	HCR, after social transfers: Single parent hh, one or more dependant children	0,3881	0,0456	1,1907	428
33	HCR, after social transfers: 2 adults, one dependant child	0,1360	0,0140	1,1652	2595
34	HCR, after social transfers: 2 adults, two dependant children	0,2414	0,0208	1,1635	2032
35	HCR, after social transfers: 2 adults, three or more dependant children	0,5707	0,0442	1,1586	798
36	HCR, after social transfers: Other hh with dependant children	0,2580	0,0239	1,1994	3748
37	HCR, after social transfers: Hh without dependant children	0,1830	0,0102	1,1495	9332
38	HCR, after social transfers: Hh with dependant children	0,2616	0,0122	1,2060	9601
39	HCR, after social transfers: Accommodation tenure status: Owner or rent free	0,2344	0,0090	1,2420	18645
40	HCR, after social transfers: Accommodation tenure status: Tenant	0,1633	0,0424	1,1111	325
41	HCR, after social transfers: Main activity status: Employed	0,1795	0,0105	1,2181	7948
42	HCR, after social transfers: Main activity status: Unemployed	0,4370	0,0639	1,2431	353
43	HCR, after social transfers: Main activity status: Retired	0,1908	0,0108	1,1747	5562
44	HCR, after social transfers: Main activity status: Other inactive	0,3209	0,0128	1,2077	5107
45	HCR, after social transfers: Main activity status: Employed, Male	0,1956	0,0108	1,2119	4436
46	HCR, after social transfers: Main activity status: Unemployed, Male	0,4677	0,0781	1,2322	249
47	HCR, after social transfers: Main activity status: Retired, Male	0,1737	0,0125	1,2210	2423
48	HCR, after social transfers: Main activity status: Other	0,2853	0,0152	1,1712	2005

	inactive, Male				
	HCR, after social transfers: Main activity status:				
49	Employed, Female	0,1585	0,0120	1,2251	3512
	HCR, after social transfers: Main activity status:				
50	Unemployed, Female	0,3595	0,0724	1,2738	104
	HCR, after social transfers: Main activity status:				
51	Retired, Female	0,2040	0,0119	1,1453	3139
	HCR, after social transfers: Main activity status: Other				
52	inactive, Female	0,3444	0,0151	1,2282	3102
	HCR, after social transfers: Work intensity: hh without				
53	dependent children, w=0	0,2259	0,0199	1,2136	1789
	HCR, after social transfers: Work intensity: hh without				
54	dependent children, 0<w<1	0,1060	0,0123	1,1939	2202
	HCR, after social transfers: Work intensity: hh without				
55	dependent children, w=1	0,1483	0,0167	1,1351	2556
	HCR, after social transfers: Work intensity: hh with				
56	dependent children, w=0	0,6927	0,0499	1,2352	527
	HCR, after social transfers: Work intensity: hh with				
57	dependent children, 0<w<0.5	0,3382	0,1005	1,1369	709
	HCR, after social transfers: Work intensity: hh with				
58	dependent children, 0.5<=w<1	0,2988	0,0209	1,2086	3515
	HCR, after social transfers: Work intensity: hh with				
59	dependent children, w=1	0,1703	0,0164	1,2015	4741
	HCR, before social transfers including pensions: Male				
60	Age 0-15	0,4202	0,0251	1,1715	1280
	HCR, before social transfers including pensions: Male				
61	Age 16-24	0,3224	0,0225	1,2181	1153
	HCR, before social transfers including pensions: Male				
62	Age 25-49	0,2779	0,0158	1,2259	3076
	HCR, before social transfers including pensions: Male				
63	Age 50-64	0,2710	0,0158	1,2657	1945
	HCR, before social transfers including pensions: Male				
64	Age more then 64	0,2308	0,0153	1,1820	1659
	HCR, before social transfers including pensions:				
65	Female Age 0-15	0,4474	0,0253	1,2158	1245
	HCR, before social transfers including pensions:				
66	Female Age 16-24	0,3501	0,0235	1,2469	942
	HCR, before social transfers including pensions:				
67	Female Age 25-49	0,2829	0,0167	1,2483	3177
	HCR, before social transfers including pensions:				
68	Female Age 50-64	0,2307	0,0144	1,2015	2180
	HCR, before social transfers including pensions:				
69	HCR, before social transfers including pensions:	0,3482	0,0166	1,1869	2313

	Female Age more then 64				
	HCR, before social transfers excluding pensions: Male				
70	Age 0-15	0,4713	0,0239	1,1712	1280
	HCR, before social transfers excluding pensions: Male				
71	Age 16-24	0,3777	0,0230	1,2095	1153
	HCR, before social transfers excluding pensions: Male				
72	Age 25-49	0,3382	0,0169	1,2087	3076
	HCR, before social transfers excluding pensions: Male				
73	Age 50-64	0,4936	0,0187	1,2544	1945
	HCR, before social transfers excluding pensions: Male				
74	Age more then 64	0,8857	0,0111	1,4596	1659
	HCR, before social transfers excluding pensions:				
75	Female Age 0-15	0,5084	0,0253	1,2099	1245
	HCR, before social transfers excluding pensions:				
76	Female Age 16-24	0,4223	0,0235	1,2256	942
	HCR, before social transfers excluding pensions:				
77	Female Age 25-49	0,3335	0,0170	1,2334	3177
	HCR, before social transfers excluding pensions:				
78	Female Age 50-64	0,5513	0,0166	1,2657	2180
	HCR, before social transfers excluding pensions:				
79	Female Age more then 64	0,8396	0,0121	1,4739	2313
80	Median equivalised disposable income	6524,6429	132,9407	1,2362	18970
81	At-risk-of-poverty threshold, one person hh	3179,8604	72,6675	1,1225	2194
	At-risk-of-poverty threshold, hh 2 adults 2dependent				
82	children	3799,1884	94,8261	1,1712	2032
83	S80/S20	6,9748	0,3211	1,2402	18970
84	Relative median at-risk-of-poverty gap: Male Age0-15	0,3643	0,0613	1,1737	1280
	Relative median at-risk-of-poverty gap: Male Age16-				
85	24	0,3539	0,0991	1,1996	1153
	Relative median at-risk-of-poverty gap: Male Age25-				
86	49	0,3306	0,0183	1,2007	3076
	Relative median at-risk-of-poverty gap: Male Age50-				
87	64	0,3025	0,0103	1,2557	1945
	Relative median at-risk-of-poverty gap: Male Age				
88	more then 64	0,2276	0,0292	1,1804	1659
	Relative median at-risk-of-poverty gap: Female Age 0-				
89	15	0,4026	0,0385	1,2105	1245
	Relative median at-risk-of-poverty gap: Female Age				
90	16-24	0,2962	0,0144	1,2092	942
	Relative median at-risk-of-poverty gap: Female Age				
91	25-49	0,3376	0,0148	1,2261	3177
	Relative median at-risk-of-poverty gap: Female Age				
92	64	0,2848	0,0425	1,2433	2180

50-64

Relative median at-risk-of-poverty gap: Female Age

93	more then 64	0,2337	0,0239	1,2032	2313
94	Median income below the at-risk-of-poverty threshold	7764,2653	76,6892	1,2362	18970
95	HCR P.L. as 50% median	0,1651	0,0084	1,2378	18970
96	HCR P.L. as 70% median	0,3011	0,0099	1,2347	18970
97	HCR P.L. as 40% median	0,1111	0,0071	1,2429	18970
98	Gini coefficient	0,3588	0,0064	1,1969	18970
99	Mean equivalised disposable income	7764,2653	184,5411	1,2157	18970

## 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 2007 year and number of dwellings at the end of 2007 year (Source: Romanian Statistical Yearbook, 2008). 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 2,5%.

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 1,7% .



### 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
1	1969	25,2
2	1941	24,9
3	1965	25,2
4 (new)	1930	24,7
<b>Total</b>	<b>7805</b>	<b>100,0</b>

### 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 2007 survey conclusions and the 2008 secondary module.

The structure of questionnaires was the following:

❖ **The household file** included:

- identification data;
- the household composition - name, identifier, 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 economic situation of the household (housing and non-housing related arrears, non-monetary household deprivation questions);
- housing conditions (including information about dwelling and dwelling environment, housing cost, amenities in the dwelling);
- taxes paid for the year 2007;
- household incomes in 2007;
- questions regarding the 2008 secondary module;

The household questionnaire suffered more detailed modifications for several reasons, such as: the integration of the secondary module's questions, up-dating the questions in order to build the new 2008 variables HH081(bath or shower in the dwelling), HH091 (indoor flushing toilet for the sole use of the household), HS011 (arrears on mortgage or rent payments), HS021 (arrears on utility bills), HS031 (arrears on hire purchase instalments or other loan payments) HS081

(alimonies received), HS131 (alimonies paid) and the up-dating of the name of some social insurance benefits.

❖ **The individual questionnaire:**

- identification data;
- questions regarding the health status;
- level of education questions (the school attended currently, the highest level of education attended and the year when the person graduated this level);
- detailed questions regarding employment/non-employment;
- individual incomes achieved in 2007.

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 addressees 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 second 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 recommendations 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 had 15 years old in 2008 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 themselves the difference were due to the use of a different respondent in the second wave and the impossibility to correct the data in the first 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, also the question was preceded 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 software 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): 8217

-Number of valid addresses selected (DB120  $\leq$  23): 8244

**Ra** (address contact rate): **99,67%**

-Number of household interviews completed and accepted for database (DB135 = 1): 7805

-Number of eligible households at contact addresses (DB130 filled): 8178

**Rh** (proportion of complete household interviews accepted for database): **95,44%**

**NRh** (household non-response rate): **4,56%**

#### Individual non-response rates (*NRp*)

-Number of personal interviews completed (RB250 = 11 + 12 + 13): 16527

-Number of eligible individuals in the households whose interviews were completed and accepted for the database (RB245 = 1 + 2 + 3): 16581

**Rp** (proportion of complete personal interviews within the households accepted for the database): **99,67%**

**NRp** (individual non-response rate): **0,33%**

#### Overall individual non-response rates (\**NRp*)

**Ra** (address contact rate): **99,67%**

**Rh** (proportion of complete household interviews accepted for database): **95,44%**

**Rp** (proportion of complete personal interviews within the households accepted for the database): **99,67%**

**\*NRp** (overall individual non-response rate): **5,19%**

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	%
<b>Total</b>	<b>8386</b>	100,0
<b>Address contacted</b> (DB120=11)	<b>8217</b>	98,0
<b>Address non-contacted</b> (DB120=21 U 22 U 23) from which:	<b>169</b>	2,0
- address cannot be located (DB120=21)	16	0,2
- address unable to access (DB120=22)	11	0,1
- address does not exist, is not residential address or unoccupied (DB120=23)	142	1,7

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

	Number	%
<b>Total</b>	<b>8178</b>	<b>100,0</b>
<b>Household questionnaire completed (DB130=11)</b>	<b>7806</b>	<b>95,5</b>
<b>Interview not completed, from which:</b>	<b>372</b>	<b>4,5</b>
- refusal to cooperate (DB130=21)	153	1,9
- entire household temporary away for duration of fieldwork (DB130=22)	98	1,2
- household unable to respond (DB130=23)	120	1,4
- other reasons (DB130=24)	1	0,01

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

	Number	%
<b>Household questionnaire completed</b>	<b>7806</b>	<b>100,0</b>
- interview accepted for the database (DB135=1)	7805	99,9
- interview rejected (DB135=2)	1	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	%
<b>Total</b>	<b>16581</b>	100,0
<b>Information of interview completed</b>	<b>16527</b>	99,6
- information completed only from interview (RB250=11)	16527	
- information completed only from registers (RB250=12)	na	na
- information completed both from interview and registers (RB250=13)	na	na
<b>Interview not completed, though contact made</b>	<b>9</b>	0,1
- individual unable to answer and no proxy possible (RB250=21)	-	-
- failed to return the self-administrated questionnaire (RB250=22)	na	na
- refusal to cooperate (RB250=23)	9	
<b>Individual not contacted because:</b>	<b>45</b>	0,3
- person temporarily away and no proxy possible (RB250=31)	18	
- no contact for other reasons (RB250=32)	27	
<b>Information not completed, reason unknow (RB250=33)</b>	<b>-</b>	<b>-</b>

Table 3: Distribution of households members by the respondent status

	Number	%
<b>Total</b>	<b>19131</b>	100,0
- Current household member aged 16 years and over (RB245=1)	16581	86,7
- Selected respondent (RB245=2)	na	na
- non-selected respondent (RB245=3)	na	na
- not eligible respondent (RB245=4)	2550	13,3

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

	Number	%
<b>Total</b>	<b>16527</b>	100,0
- Questionnaire completed –face-to-face interview PAPI (RB260=1)	13231	80,1
- 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)	3296	19,9

## 2.5 Interview duration

The average household interview duration was 24,6 minutes.

The average individual interview duration was 21,8 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 2007 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\*(2008- 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 stairs, from the yard or from the street and which was build, transformed or arranged in order to be inhabitated.

### 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 2007).

### 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 2006 and they were collected if there were paid/received during the calendar 2007.

### 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**

$$\text{HY010} = \sum \text{PY010G} + \sum \text{PY021G} + \sum \text{PY050G} + \sum \text{PY090G} + \sum \text{PY100G} + \sum \text{PY110G} + \sum \text{PY120G} + \sum \text{PY130G} + \sum \text{PY140G} + \text{HY040G} + \text{HY050G} + \text{HY060G} + \text{HY070G} + \text{HY080G} + \text{HY090G} + \text{HY110G}$$

#### ❖ **Total household disposable income**

$$\text{HY020} = \sum \text{PY010G} + \sum \text{PY021G} + \sum \text{PY050G} + \sum \text{PY090G} + \sum \text{PY100G} + \sum \text{PY110G} + \sum \text{PY120G} + \sum \text{PY130G} + \sum \text{PY140G} + \text{HY040G} + \text{HY050G} + \text{HY060G} + \text{HY070G} + \text{HY080G} + \text{HY090G} + \text{HY110G} - \text{HY120G} - \text{HY130G} - \text{HY140G}$$

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

$$HY022 = HY020 - (\sum PY090G + \sum PY120G + \sum PY130G + \sum PY140G) - HY050G - HY060G - HY070G$$

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

$$HY023 = HY020 - (\sum PY090G + \sum PY100G + \sum PY110G + \sum PY120G + \sum PY130G + \sum PY140G) - HY050G - HY060G - HY070G$$

- ❖ **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 around 37000 households and it is conducted continuously 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
- Benefit for leave due to child care

❖ **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, dividends, profit from capital investments in unincorporated 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 around 37000 households and it is conducted continuously 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: anticipated 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 insurance pension for old age limit
- Anticipated social insurance pension
- Social benefit (in the form of pension)
- Social insurance pension for farmers
- Pension for war invalids, war orphans and war widows (excluding survivors' pension)
- Social benefit for war's veterans and war's widows

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

- Survival social insurance pension
- Allowance or other money rights for survivors 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 insurance pension for work incapacity
- Special allowance for handicapped persons

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

- Scholarships

- Cash amount received by people attended 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 use 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 dividends and money withdrawn from the banks;

## **4. COHERENCE**

### **4.1 Comparison of income target variables with external sources**

A very exact comparison between 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 following table show the income estimations into these two surveys, regarding the incomes received from January to December 2007. When it was possible, the figures were recalculated for both HBS and EU-SILC in order to be as close as possible from the methodological point of view.

The figures presented in the following table are calculated as average per household.

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 the value of these components in the diary.

		<b>HBS 2007</b>	<b>EU-SILC 2008</b>	
1	<b>TOTAL GROSS HOUSEHOLD INCOME (2+5+13+16+26 + 35)</b>	<b>HY010</b>	16380.0	17779.8
2	<b>Gross cash or non-cash employee income</b>	<b>PY010G</b>	10729.8 <sup>1</sup>	11775.8 <sup>2</sup>
5	<b>Gross profit or losses from self-employment</b>	<b>PY050G</b>	1138.7	1477.6
13	<b>Gross property income</b>	<b>HY040G</b>	39.1	75.4
16	<b>Gross income from cash transfers received (17+18+19+20+21+22+23+24 +25)</b>		3981.1	4444.3
17	Family/children-related allowances	HY050G	466.8	397.2
18	Social exclusion not elsewhere classified	HY060G	98.6	129.4
19	Gross unemployment benefits	PY090G	77.0	45.2
20	Gross old-age benefits	PY100G	2657.2	3156.0
21	Gross survivor's benefits	PY110G	172.4	179.5
22	Gross sickness benefits	PY120G	4.2	4.2
23	Gross disability benefits	PY130G	490.7	419.6
24	Education-related allowances	PY140G	14.2	9.5
25	Regular inter-household cash transfers received	HY080G	na	103.7
26	<b>Gross income received by people aged under 16</b>	<b>HY110G</b>	na	6.7
35	<b>Other cash incomes not else classified</b>		491.3	na
29	<b>Cash transfers paid (30+31+33+34)</b>		2775.4	3349.7
30	Regular taxes on wealth	HY120N	2775.4	176.6
31	Taxes on income and social contribution	HY140N		3155.6
33	Regular inter-household cash transfers paid	HY130N	na	17.7
34	Repayments/receipts for tax adjustments	HY145N	na	-0.2
	<b>TOTAL DISPOSABLE HOUSEHOLD INCOME</b>	<b>HY020</b>	13604.6	14430.1

<sup>1</sup> including the employees' in-kind wage

<sup>2</sup> excluding the value of the company car