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HELLENIC STATISTICAL AUTHORITY

GENERAL DIRECTORATE OF STATISTICAL SURVEYS
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INTRODUCTION

With the Amsterdam Treaty the program of social action in all member states for the years 1998-2000 was defined as well as the legal frame ruling the production of Social Statistics. The fields of poverty and social exclusion were of high priority in the political agenda of the European Council in Lisbon, in March 2000 as well as in the proposal of Commission for a communal program for encouraging co-operation among the member states against social exclusion.

During the European Council of Lisbon (March 2000) several requests were submitted concerning the quality improvement of statistical data and among other things were discussed the effacement of absolute poverty, the cooperation program among member states against social exclusion as well as the constitution of structural indicators, such as indicators of unequal income distribution, poverty percentages before and after social transfers, intergenerational poverty, etc.

In December 2000, at the European Council that took place in Nice, France, the leaders of all member states confirmed the decision of Lisbon, that the battle against poverty and social exclusion is won using open methods of co-ordination and co-operation. Basic elements of this rapprochement are the determination of commonly accepted targets for the European Union and the elaboration of proper national action plans for the achievement of these targets, as well as the regular report and recording of the progress being made.

The Greek Survey on Income and Living Conditions is part of the European Statistical Program and has replaced since 2003 the European Community Household Survey (ECHP).

Basic aim of the survey is the study, both at European and national level of households' living conditions in relation to their income. The survey is the reference for comparative statistics on income distribution and social exclusion in the European Union.

With the survey examined are specific socio-economic magnitudes affecting population's living conditions. With collected information our country calculates the structural indicators for social cohesion and produces systematic statistics on income inequalities, inequalities on households' living conditions, poverty and social exclusion.

More specifically from the survey are calculated the overarching indicators, the social Inclusion indicators and the pension adequacy indicators, concerning poverty and inequality. These indicators, among other things, contribute in the configuration and practice of social politics in our country.

For the pre-mentioned reasons information is gathered, for the households as well as for their members, concerning:

- Income from any source (work, property, social benefits, etc.)
- Occupation
- Living conditions (dwelling's quality, amenities, etc.)
- Educational level
- Health status for all members of the household

According to the methodology for measuring poverty, the poverty line is calculated with its relative concept and it is defined at 60% of the median total equivalized disposable income of the household, using modified OECD equivalized scale. 'Equivalent size' refers to the OECD modified scale which gives a weight of 1.0 to the first adult, 0.5 to other persons aged 14 or over who are living in the household and 0.3 to each child aged under 14.

As total equivalized disposable income of the household is considered total net income (that is income after deducting taxes and social contributions) received from all household members.

More specifically the income components included in the survey are:

- Income from work
- Income from property
- Social transfers and pensions
- Monetary transfers from other households and
- Imputed income from the use of company car

Income components, such as imputed rent from ownership-occupancy, income in kind and loan interest can possibly influence significantly the results and are included in the survey, but they are not included in the calculation of the indicators.

The survey is being conducted upon the decision of the Ministry of Economy and Finance in the framework of Regulation (EC) No 1177/2003 of the European Parliament and of the Council concerning Community Statistics on Income and Living Conditions (EU-SILC).

The survey consists of two components the cross-sectional and the longitudinal. The first one referring to a specific time period, while the second to the changes occurring in three or four years time.

This document 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 administrative data and of the Greek SILC 2011-survey data, according to article 16 of the EC regulation No 1777/2003 of the European Parliament and of the Council concerning Community Statistics on Income and Living Conditions (EU-SILC).

It is structured following the guidelines in the Commission Regulation (EC) no. 28/09.01.2004 (annex III). The report is divided in three chapters:

- (1) Common Cross-sectional European Union Indicators
 - (2) Accuracy
 - (3) Comparability
 - (4) Coherence
 - (5) Conclusion
- References

Data from the ad-hoc module '**on Intergenerational transmission of Disadvantages**' and the questionnaires (in Greek) are annexed to this report (see annexes 1 and 2).

1. COMMON CROSS-SECTIONAL EUROPEAN UNION INDICATORS

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

The common cross sectional EU indicators refer to those indicators adopted in the Council of the open method of coordination, based on the cross sectional sample of year 2011, with reference income period the previous calendar year (2010). The indicators below have been calculated using the Eurostat SAS program.

1.1.1. Portfolio of Overarching Indicators calculated from SILC

Table 1. At-risk-of-poverty threshold (illustrative values)

In euro

Household type	At-risk-of-poverty threshold
Single person	6,591
Two adults with two children younger than 14 years	13,842

Table 2. At-risk-of-poverty rate (by age and gender).%

Age groups	Total	Female	Male
Total	21.4	21.9	20.9
0-17	23.7	-	-
18-64	20.0	20.2	19.9
65+	23.6	25.2	21.7

Table 3. At-risk-of-poverty rate of older people. %

Age groups	Total	Female	Male
60+	23.0	24.2	21.4
75+	27.5	28.9	25.8
0-59	20.9	21.0	20.7
0-74	20.8	21.1	20.5

Table 4. At-risk-of-poverty rate, by household type

Household type	%
Total	21.3
Households without dependent children	19.5
One adult younger than 65 years	21.8
One adult 65 years or older	29.7
Single female	25.8
Single male	24.3
Two adults younger than 65 years	16.2
Two adults, at least one aged 65 years and over	22.3
Three or more adults	17.2
Households with dependent children	23.2
Single parent with dependent children	43.2
Two adults with one dependent child	17.7
Two adults with two dependent children	24.2
Two adults with three or more dependent children	20.8
Two adults	22.7
Two or more adults with dependent children	24.7
Two or more adults	21.3
Three or more adults with dependent children	19.5

Table 5. At-risk-of-poverty rate, by most frequent activity status and by gender (18+). %

Activity status	Total	Female	Male
Employment	11.9	10.1	13.2
Non employment	28.0	27.9	28.2
Unemployment	44.0	39.0	48.4
Retired	19.9	19.5	20.2
Inactive population - Other	30.0	30.4	28.3

Table 6. At-risk-of-poverty rate, by accommodation tenure status gender and age groups.%

Age groups	Owner			Rent		
	Total	Female	Male	Total	Female	Male
Total	20.3	21.3	19.3	25.9	24.1	27.8
0-17	21.0	-	-	33.7	-	-
18-64	19.0	19.6	18.4	23.9	22.1	25.7
60+	22.9	24.1	21.5	23.7	25.6	21.0
65+	23.6	25.2	21.5	24.4	25.0	23.4
75+	27.9	29.7	25.6	24.3	22.4	27.6

Table 7. In-work at-risk-of-poverty rate (by gender, population 18-64. %

Activity status	Total	Female	Male
Employment	11.9	10.1	13.2

Table 8. In-work at-risk-of-poverty rate (by full-time/part-time work)

Working status	%
Full time	10.4
Part time	21.4

Table 9. At-risk-of-poverty rate before social transfers (by age and gender). %

Age groups	Total	Female	Male
Total	44.9	46.7	43.1
0-17	29.0	-	-
18-64	37.3	38.2	36.5
65+	85.3	86.6	83.8

Table 10. At-risk-of-poverty rate before social transfers, by gender and selected age groups (except pensions). %

Age groups	Total	Female	Male
Total	24.8	25.4	24.2
0-17	26.5	-	-
18-64	23.0	23.1	23.0
65+	28.9	31.5	25.8

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Table 11. At-risk-of-poverty rate anchored at a fixed moment in time (2005) (by age and gender). %

Age groups	Total	Female	Male
Total	22.9	23.5	22.4
0-17	25.2	-	-
18-64	21.3	21.3	21.2
65+	26.4	28.1	24.4

Table 12. Population at risk of poverty or social exclusion by age and gender. %

Age groups	Total	Female	Male
Total	31.0	32.3	29.6
0-17	30.4	-	-
18-64	31.6	32.8	30.4
65+	29.3	31.5	26.5

**Table 13. Population at risk of poverty or social exclusion by broad group of citizenship
(population aged 18 and over)**

Age groups	Broad group of citizenship	%
18-64	Nationals	29.7
	Foreigners	58.3
	EU27_Foreigners	39.9
	NEU27_Foreigners	62.2
18+	Nationals	29.6
	Foreigners	57.8
	EU27_Foreigners	38.3
	NEU27_Foreigners	62.1

**Table 14. Population at risk of poverty or social exclusion by broad group of country of birth
(population aged 18 and over)**

Age groups	Broad group of country of birth	%
18-64	Nationals	29.3
	Foreigners	52.6
	EU27_Foreigners	29.2
	NEU27_Foreigners	58.6
18+	Nationals	29.2
	Foreigners	52.0
	EU27_Foreigners	29.5
	NEU27_Foreigners	57.5

Table 15. Intersections of Europe 2020 Poverty Target Indicators by age and gender

Age groups	Indicator	%
Total	Population at risk of poverty but not severely materially deprived and not living in a household with low work intensity	5.5
	Population at risk of poverty, not severely materially deprived but living in a household with low work intensity	3.5
	Population at risk of poverty, severely materially deprived but not living in a household with low work intensity	10.2
18-64	Population at risk of poverty but not severely materially deprived and not living in a household with low work intensity	5.5
	Population at risk of poverty, not severely materially deprived but living in a household with low work intensity	5.1
	Population at risk of poverty, severely materially deprived but not living in a household with low work intensity	8.4
0-17	Population at risk of poverty but not severely materially deprived and not living in a household with low work intensity	5.2
	Population at risk of poverty, not severely materially deprived but living in a household with low work intensity	1.4
	Population at risk of poverty, severely materially deprived but not living in a household with low work intensity	10.4

Table 16 People living in households with very low work intensity by age and gender. %

Age groups	Total	Female	Male
18-59	13.2	14.5	11.9
0-17	7.2	-	-
0-60	11.8	12.8	10.9

Table 17. Distribution of population lacking at least 4 items in the economic strain and durables dimension by age and gender. %

Age groups	Total	Female	Male
Σύνολο	15.2	15.4	14.9
0-17	16.4	-	-
18-64	15.4	15.6	15.3
65+	13.1	14.7	11,0

Table 18. Mean number of items lacked by persons considered as deprived in the 'economic strain and durables' dimension by age and gender. %

Age groups	Total	Female	Male
Total	3.8	3.8	3.8
0-17	3.9	-	-
18-64	3.8	3.8	3.8
65+	3.7	3.7	3.6

Table 19. Severe material deprivation rate by education level (population aged 18 and over)

Age groups	Education level	%
18-24	Total	22.0
	ISCED0_2	35.2
	ISCED3_4	21.6
	ISCED5_6	16.9
18-59	Total	15.5
	ISCED0_2	24.6
	ISCED3_4	16.2
	ISCED5_6	6.5
18+	Total	14.7
	ISCED0_2	19.4
	ISCED3_4	15.3
	ISCED5_6	5.9

Table 20. Severe housing deprivation rate by tenure status

Tenure status	%
Outright owner	3.8
Owner paying mortgage	6.6
Rent	9.7
Rent (lower price than the market price)	13.7

Table 21. Overcrowding rate by age, gender and poverty status - Total population. %

Age groups	Population	Total	Female	Male
Total	Total	25.9	25.4	26.3
	Non poor	23.2	22.7	23.7
	Poor	35.8	35.4	36.2
0-17	Total	28.9	-	-
	Non poor	23.7	-	-
	Poor	45.5	-	-
18-64	Total	28.8	27.5	30.1
	Non poor	25.8	24.5	27.1
	Poor	40.9	39.5	42.2
65+	Total	13.2	14.9	11.0
	Non poor	13.5	15.3	11.4
	Poor	12.1	13.6	9.8

Table 22. Housing cost overburden rate by age, gender and poverty status. %

Age groups	Population	Total	Female	Male
Total	Total	24.3	25.7	22.8
	Non poor	9.4	10.6	8.1
	Poor	79.0	79.5	78.5
0-17	Total	27.5	-	-
	Non poor	9.0	-	-
	Poor	87.3	-	-
18-64	Total	23.6	24.4	22.8
	Non poor	9.5	10.3	8.7
	Poor	79.9	80.3	79.5
65+	Total	23.4	28.0	17.6
	Non poor	9.3	12.9	5.2
	Poor	68.7	73.0	62.4

Table 23. Relative median at-risk-of-poverty gap (by age and gender). %

Age groups	Total	Female	Male
Total	26.1	25.6	27.2
0-17	27.4	-	-
18-64	28.8	28.0	29.4
65+	21.1	21.5	19.5
75+	21.7	22.3	20.5

Table 24. Relative median income ratio of elderly people (65+). %

Total	Female	Male
0.81	0.80	0.84

Table 25. Inequality of income distribution S80/S20 income quintile share ratio

Age groups	Total
Total	6.0
65+	4.5
0- 64	6.3

Table 26. Inequality of income distribution Gini coefficient. %

Gini Coefficient	33.6
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Table 27. Distribution of income by quantiles

Quartile	Mean income
Quartile 1	9.4
Quartile 2	17.7
Quartile 3	26.1
Quartile 4	46.8

1.2. Social exclusion indicators

Table 28. Fulfilment of basic needs. %

Fulfilment of basic needs	Population		
	Total	Poor	Non poor
Capacity to afford paying for one week holiday away from home, annually	51.2	87.4	41.3
Capacity to afford a meal with meat, chicken, fish (or vegetarian equivalent) every second day	9.3	42.7	0.3
Capacity to face unexpected financial expenses	34.4	69.5	24.9

Table 29. Housing conditions. %

Problems faced	Population		
	Total	Poor	Non poor
Leaking roof, damp walls/ floors/ foundation or rot in Window frames or floor	15.3	21.1	13.2
Too dark rooms, not enough light	6.7	10.0	5.8
Noise from neighbours or from the street	25.2	22.9	25.8
Pollution, grime or other environmental problems	25.6	23.5	26.1
Vandalism and crime	20.3	20.1	20.3
Lack of bath or shower in the dwelling	1.4	3.0	0.9
Lack of indoor flushing toilet for sole use of households	1.6	2.7	1.4
Inability to keep home adequately warm	18.7	38.9	13.7

Table 30. Financial burden of the total housing cost. %

Financial burden of the total housing cost	Population		
	Total	Poor	Non poor
A heavy burden	35.5	55.7	30.0
A slight burden	58.2	44.3	62.0
Not burden at all	6.3	0.0	8.0

Table 31 . Financial burden of the repayment of debts from hire purchases or loans. %

Financial burden of the repayment of debts from hire purchases or loans	Population		
	Total	Poor	Non poor
A heavy burden	38.8	46.4	37.3
A slight burden	45.0	39.0	46.2
Not burden at all	16.2	14.6	16.5

Table 32. Housing and non-housing related arrears. %

Arrears	Population		
	Total	Poor	Non poor
Rent or mortgage repayment	32.2	76.2	21.9
Utility bills (electricity, water, gas, etc.)	23.4	41.4	18.4
Credit cards payment or loan repayments for household items, holidays	35.9	76.8	27.8

Table 33. Ability to make ends meet. %

Ability to make ends meet	Population		
	Total	Poor	Non poor
With great difficulty	25.7	48.9	19.4
With difficulty	36.9	34.3	37.7
With some difficulty	22.8	13.1	25.5
Fairly easily	9.6	2.4	11.5
Easily	3.8	1.4	4.5
Very easily	1.1	48.9	1.4

Table 34. Lowest monthly income to make ends meet

In euro

Lowest monthly income	Population		
	Total	Poor	Non poor
	2,235	1,808	2,350

Table 35. Quality of life. %

Quality of life – Households that cannot Afford:	Population		
	Total	Poor	Non poor
Colour TV	0.1	0.2	0.0
Telephone (including mobile phone)	0.3	0.9	0.2
Computer	8.9	17.9	6.4
Washing machine	1.2	2.2	0.9
Car	8.3	17.1	6.0

1.3. Other social indicators

Table 36 . General health for household members aged 16 and over. %

General health for household members aged 16 and over	Population		
	Total	Poor	Non poor
Very good	50.6	46.4	51.7
Good	25.9	23.3	26.5
Fair	14.6	17.5	13.8
Bad	6.2	9.2	5.5
Very bad	2.7	3.6	2.4

Table 37. Suffer from any a chronic (long standing) illness or condition. %

Suffer from any a chronic (long standing) illness or condition	Population		
	Total	Poor	Non poor
Yes	23.2	26.9	22.2
No	76.8	73.1	77.8

Table 38. Limitation in activities because of health problems. %

Limitation in activities because of health problems	Population		
	Total	Poor	Non poor
Yes, strongly limited	8.6	11.5	7.8
No, limited	11.8	13.9	10.8
No, not limited	79.7	74.5	81.5

Table 39. Unmet need for medical examination or treatment. %

Unmet need for medical examination or treatment	Population		
	Total	Poor	Non poor
Yes, there was at least one occasion when the person really needed examination or treatment but did not	9.5	12.9	8.6
No, there was no occasion when the person really needed examination or treatment but did not	90.5	87.9	91.4

Table 40. Main reason for unmet need for medical examination or treatment. %

Main reason for unmet need for medical examination or treatment	Population		
	Total	Poor	Non poor
Could not afford to (too expensive)	65.6	78.3	60.5
Waiting list	8.2	6.2	9.0
Could not take time because of work, care for children or for others	5.3	1.3	6.9
Too far to travel/no means of transportation	5.6	5.3	5.7
Fear of doctor/hospitals/examination/treatment	4.3	1.6	5.4
Wanted to wait and see if problem got better on its own	4.6	3.4	5.1
Didn't know any good doctor or specialist	1.3	2.0	1.0
Other reasons	5.2	2.0	6.5

Table 41. Unmet need for dental examination or treatment. %

Unmet need for dental examination or treatment	Population		
	Total	Poor	Non poor
Yes, there was at least one occasion when the person really needed examination or treatment but did not	8.1	10.6	7.5
No, there was no occasion when the person really needed examination or treatment but did not	9.1	89.4	92.5

Table 42. Main reason for unmet need for dental examination or treatment. %

Main reason for unmet need for dental examination or treatment	Population		
	Total	Poor	Non poor
Could not afford to (too expensive)	83.6	89.7	81.3
Waiting list	1.2	0.8	1.4
Could not take time because of work, care for children or for others	4.2	1.1	5.3
Too, far to travel/no means of transportation	1.1	1.1	1.1
Fear of doctor/hospitals/examination/treatment	4.9	4.1	5.3
Wanted to wait and see if problem got better on its own	2.3	0.9	2.8
Didn't know any good doctor or specialist	0.2	0.0	0.2
Other reasons	2.5	2.3	2.6

Table 43. Highest ISCED level attained for household members aged 16 and over. %

Highest ISCED level attained	Population		
	Total	Poor	Non poor
Never attended in education or completed some classes from primary education	1.7	3.2	1.3
Primary education	4.4	7.3	3.7
Lower secondary education	22.1	30.7	19.8
Upper secondary education	11.2	15.1	10.2
Post secondary non tertiary education	32.9	32.4	33.1
First stage of tertiary education (not leading directly to an advanced research qualification)	5.5	4.0	6.0
Second Stage of tertiary education (leading to an advanced research qualification)	21.7	7.4	25.5

2. ACCURACY

2.1. Sample design

2.1.1. Type of sample design

The two-stage area sampling was applied for the EU-SILC survey.

2.1.2. Sampling units

The sample of private households was selected in two stages. The primary units are the areas (one or more unified building blocks) and the ultimate sampling units selected in each sampling area are the households

2.1.3. Stratification and sub-stratification criteria

There are two levels of area stratification in the sampling design. The first level is the geographical stratification based on the partition of the total country area into thirteen (13) standard administrative regions corresponding to the European NUTS2 level. The two major city agglomerations of Greater Athens and Greater Thessalonica constitute separate major geographical strata.

The second level of stratification entails grouping municipalities and communes within each NUTS2 administrative region by degree of urbanization, i.e., according to their population size.

The scaling of urbanization was finally designed in four groups:

- ≥ 30.000 inhabitants
- 5.000-29.999 inhabitants
- 1.000-4.999 inhabitants
- 0-999 inhabitants

The number of the final strata in the thirteen (13) geographical regions was 50. The Greater Athens Area was divided into 31 strata of about equal size (equal number of households) on the basis of the lists of city blocks of the Municipalities that constitute it and taking into consideration socio-economic criteria. Similarly, the Greater Thessaloniki Area was divided into 9 equally sized strata. The two Major City Agglomerations account for about 38% of total population and for even

larger percentages in certain socio-economic variables. Thus, the total number of strata of the survey was 90.

2.1.4. Sample size and allocation criteria

The initial sample size is 8.000 households (the sampling fraction is about 2%). This fraction was the same in each geographical region.

As it was mentioned above, the geographical regions (NUTS2) in Greece are thirteen (13) in number. However, throughout this study the 2nd geographical region (Central Macedonia) was considered without Greater Thessaloniki and the 9th geographical region (Attica) without the Greater Athens area, while either of these two major agglomerations was treated as a geographical region.

Table 44. Sample size and achieved response by NUTS2-units

NUTS2	Name	Drawn	Accepted (DB135=1)
GR11	Thraki and Anatoliki Macedonia	559	459
GR12	Kentriki Macedonia	1,568	1,109
GR13	Dytiki Macedonia	244	217
GR14	Thessalia	582	503
GR21	Ipeiros	251	219
GR22	Ionia Nisia	144	92
GR23	Dytiki Ellada	581	536
GR24	Stereia Ellada	407	345
GR25	Peloponnisos	462	401
GR30	Attiki	2,816	1,442
GR41	Voreio Aigaio	174	158
GR42	Notio Aigaio	236	170
GR43	Kriti	487	378
Total	Total	8,511	6,029

2.1.5. Sample selection schemes

1st stage of sampling

In this stage, from any ultimate stratum (crossing of Region with the degree of urbanization), say stratum h , n_h primary units were drawn (where the number n_h of draws was approximately proportional to the population size X_h of the stratum (number of households according to the last population census of the year 2001)).

Each area unit (primary unit) of the stratum had a selection probability proportional to its size. So, if X_{hi} was the number of households according to the 2001 population census- of the unit in the sample of order i , then the probability of being drawn was:

$$P_{hi} = \frac{X_{hi}}{X_h} \quad (1)$$

The total number of the primary sampling units is 1.056 areas.

As in each year the 25% of the sample households is replaced, the new households belong to different primary sampling units.

2nd stage of sampling

In this stage from each primary sampling unit (selected area) the sample of ultimate units (households) is selected. Actually, in the second stage we draw a sample of dwellings. However, in most cases, there is one to one relation between household and dwelling. If the selected dwelling constitutes of one or more households then all of them are interviewed.

Let M_{hi} be the number of households during the survey period in the i_{th} selected area of the stratum h . Out of them a systematic sample of m_{hi} households is selected with equal probabilities. Each of m_{hi} households has the same chance to be included in the survey, equal

to: $\frac{m_{hi}}{M_{hi}}$

In any selected primary unit, remains the determination of the sample size m_{hi} . The total number of households to be interviewed of the n_h selected primary sampling units will be

$$m_h = \sum_{i=1}^{n_h} m_{hi} \quad (2)$$

i.e. finally by applying the two stage sampling procedure, from the stratum h the percentage of households $\frac{m_h}{M_h}$ is drawn.

In repeated sampling, the numerator of this fraction will vary from sample to sample; to be more specific the fraction $\frac{m_h}{M_h}$ is a random variable. Within each primary sampling unit the calculation

of the sampling interval $\delta_{hi} = \frac{M_{hi}}{m_{hi}}$ is carried out, so that the following two desired conditions are satisfied.

a) The expected result $\frac{m_h}{M_h}$ is the predetermined over sampling fraction $\frac{1}{\lambda}$ in each

geographical region (NUTS II): $E\left(\frac{m_h}{M_h}\right) = \frac{1}{\lambda} = 2\%$

b) The estimator of the stratum total Y_h (for any characteristic) should be self-weighting. In other words, the calculated estimator is the result derived from the sum of the values of the characteristic over the m_h sample households by the overall raising factor λ , which is the same in each geographical region.

The conditions (a) and (b) are satisfied when:

$$\frac{1}{n_h} \cdot \frac{1}{P_{hi}} \cdot \frac{M_{hi}}{m_{hi}} = \lambda \quad (3) \Rightarrow$$

$$\frac{1}{n_h} \cdot \frac{1}{P_{hi}} \cdot \delta_{hi} = \lambda \Rightarrow$$

$$\delta_{hi} = \frac{M_{hi}}{m_{hi}} = \lambda \cdot n_h \cdot P_{hi} \quad (4)$$

2.1.6. Sample distribution over time

As the survey is annual, the sample of households is not distributed over time. The survey is carried out from October to December 2011 with reference period of data the previous year (2010).

Table 45. Sample distribution (household questionnaire) over time

Month	Date	Number	%
October	1 to 10	123	2.0
	11 to 20	197	3.3
	21 to 31	216	3.6
November	1 to 10	822	13.6
	11 to 20	1,085	18.0
	21 to 30	985	16.3
December	1 to 10	1,190	19.7
	11 to 20	1,035	17.2
	21 to 31	379	6.3

2.1.7. Renewal of the sample: rotational groups

The survey is a simple rotational design survey. The sample for any year consists of 4 replications, which have been in the survey for 1-4 years. With the exception of the first three years of survey, any particular replication remains in the survey for 4 years, each year, one of the 4 replications from the previous year is dropped and a new one is added. Between year T and T+1 the sample overlap is 75%; the overlap between year T and year T+2 is 50%; and it is reduced to 25% from year T to year T+3, and to zero for longer intervals.

2.1.8. Weightings

2.1.8.1. Design factor

For the computation of the sample household design weights as well for the computation of the cross sectional weights of the survey in general, the EC-Eurostat document EU-SILC Doc. 157/05 was used.

For the households in panel 11 - panel 4 replaced panel 8 and is of wave 1 – the household design weight (target variable DB080) is defined as the inverse of its probability of selection.

$$\frac{1}{n_h} \cdot \frac{1}{P_{hi}} \cdot \frac{M_{hi}}{m_{hi}} = DW_{hi} \quad (5)$$

M_{hi} = the number of households in the updated sampling frame in the **hi** area (primary unit).

m_{hi} = the number of selected households in the **hi** area (primary unit).

n_h = the sample size of primary units in the **h** stratum.

P_{hi} = the selection probability of **hi** primary unit.

For households in panels 1, 2 and 3 the household design weights are defined by applying the general procedure of EU-SILC Doc.157/05:

- Computation of panel person design weights
- Correction for non-response due to attrition
- Computation of sub-sample household weights
- Computation of sample household design weights

2.1.8.2. Non-response adjustments

Within each design stratum, the non-response adjustment of the responding households is carried out by the inverse of the response rate, so as to “make up” for non-responding cases in that stratum.

Target variable DB080 was adjusted for non-response for the variables DB120 (record of contact at address) and DB130 (household questionnaire result). The corrections were conducted at subsequent steps. The multiplication of DB080 with each one of the two corrections, results in a corrected DB080 weight that is used as initial weight in the calibration procedure referred in the following paragraph.

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

This involves the calibration of the household and personal weights in conjunction with external sources (Projections for population totals for year 2011). Thus, it enables the distribution of auxiliary variables on both household and individual level.

The auxiliary variables used at household level are the household size, the tenure status and the Region (NUTS2). Also, at personal level the auxiliary variable used is the distribution of population by age (five years age groups) and sex.

The weights obtained after this procedure of calibration are the household cross-sectional weights (variable: DB090). As all the household members reply to the household questionnaire, DB090 is also the weight of each member of the household (variable: RB050).

The last step involves the calculation of the personal cross sectional weights for household members aged of 16 and over (variable: PB040). The calibration procedure was applied again using as initial weights variable RB050 and as auxiliary variable the distribution of population aged 16 and over by age (five years age groups) and sex.

2.2. Sampling Errors

2.2.1. Estimation of survey characteristics

This paragraph presents the general procedure applied in order to estimate the survey characteristics and also the survey characteristics required for the calculations of standard errors

and effective sample size for the common cross-sectional EU indicators based on the cross-sectional component of EU-SILC and for the equivalised disposable income.

Let y_{hij} be the value of the characteristic y for the sampling member of order j ($j = 1, 2, \dots, m_{hi}$) of the hi area. Moreover, Y^h stands for the stratum total, which results when adding the characteristic y from all household members included in the stratum h .

The form of the estimator on the basis of the two-stage design is:

$$\hat{Y}_h = \sum_{i=1}^{n_h} \sum_{j=1}^{m_{hi}} w_{hij} \cdot y_{hij} \quad (6)$$

where, w_{hij} stands for RB050 corrected for the effect of missing values (page 9 of the EU-SILC 131-rev/04 document).

For estimating the characteristic y in country level, all stratum estimates \hat{Y}_h should be added, as follows:

$$\hat{Y} = \sum_h \hat{Y}_h \quad (7)$$

The estimation of the number of households or household members X_h in stratum h is calculated using the formula:

$$\hat{X}_h = \sum_{i=1}^{n_h} \sum_{j=1}^{m_{hi}} w_{hij} \quad (8)$$

while the estimation of the relevant characteristic in country level is calculated by adding all strata estimations, that is:

$$\hat{X}_h = \sum_h \hat{X}_h \quad (9)$$

In order to estimate the variances of the required characteristics, we applied the Jackknife Repetition Method, according to the procedure described below. The method was applied to estimate the variance for non-linear and non-smooth statistics and additionally to take into account the weighting, stratification and clustering.

We used the final (actual) sample of individuals each one of them belonging to a certain household, cluster and stratum.

- i. From the stratum h , ($h=1, 2, \dots, 90$) we omitted the units (individuals), that belong to the cluster i , ($i=1, 2, \dots, n_h$)

where n_h : the number of clusters in the sample in each stratum h

- ii. The individuals' weights that belong to the rest clusters of the same stratum are multiplied

by the quantity $\frac{n_h}{n_h - 1}$, while the weights of the individuals that belong to the rest strata remain constant.

- iii. Calculation of the indicator ($\hat{\theta}_{SWChi}$) according to the formulas provided by Eurostat documents using the data and weights after steps i and ii. (Actually with the use of available data after the omitting of this certain cluster).

The above procedure (steps i-iii) is repeated as many times as the clusters of the sample are. In every repeated replication we omitted the individuals of the next cluster, while we restored in the sample the individuals of the cluster that were omitted in the previous repeat.

Next, in order to estimate the variance of the indicator according to the two-stage stratified sampling we used the formula:

$$V(\hat{\theta}_{SWC}) = \sum_{h=1}^{90} \frac{n_h - 1}{n_h} \sum_{i=1}^{n_h} (\hat{\theta}_{SWChi} - \hat{\theta}_{SWC})^2 \quad (10)$$

where $\hat{\theta}_{SWC}$: is the value of the indicator, as it has been calculated with the use of the sample data and by applying stratification (S), weighting (W) and clustering (C).

2.2.2. Standard Error and Effective Sample Size

Standard errors for all the required indicators were calculated in the form of coefficient of variation (CV).

For an estimate $\hat{\theta}_{SWC}$, the coefficient of variation is defined as:

$$CV(\hat{\theta}_{SWC}) = \frac{\sqrt{V(\hat{\theta}_{SWC})}}{\hat{\theta}_{SWC}} \cdot 100 \quad (11)$$

Effective sample size was calculated as the ratio of the actual sample size to the design effect. The design effect was calculated as the ratio of the variance estimate produced for two-stage stratified sampling to the variance estimate produced under the assumption of simple random sampling¹.

The variance estimates under the assumption of weighting random sampling were calculated using the formulas presented below as a continuation of the Jackknife Repeated Replication (JRR). The steps are the following:

- i. The individuals of the sample received the final weights created after the calibration.
- ii. The value of the indicator ($\hat{\theta}_w$) is calculated using the individuals' weights in step i above

¹ In the special case of the Indicator “Relative Median at-risk-of-poverty- by household type” the design effect for the cases of “single female” and “single parent with dependent children” $deff(\theta_c)$ were calculated with the use of the formula, since it produces more robust estimations:

$$deff(\theta_c) = 1 + \frac{n_t}{n_c} \cdot [deff(\theta_t) - 1] \quad (12)$$

where

$deff(\theta_t)$ = the design effect of the total indicator

n_t = the total actual sample size

n_c = the actual sample size of the certain age and gender group

iii. Each Jackknife Repeated Replication (JRR) is formed by dropping 15 individuals from the sample and increasing the weights of the remaining (n-15) units by an appropriate factor g that is

taken as:
$$g = \frac{\sum_{i=1}^n w_i}{\sum_{i=1}^{n-15} w_i - \sum_{i=1}^{15} w_k}$$

This form retains the total weight of the included sample cases unchanged across the created replications (the same total as that for the full-sample).

iv. Calculation of the indicator ($\hat{\theta}_{wk}$), according to the formulas provided by Eurostat documents using the data and weights after step iii. (Actually using the data after omitting the 15 individuals).

Next, in order to estimate the variance of the indicator according to the “weighted” random sampling we used the formula:

$$V(\hat{\theta}_w) = \frac{n-15}{n} \cdot \sum_{k=1}^n (\hat{\theta}_{wk} - \hat{\theta}_w)^2 \quad (13)$$

where
$$\hat{\theta}_w = \frac{\sum_{k=1}^n \theta_{wk}}{n}$$

The design effect was calculated by the following formula:

$$deff(\hat{\theta}_{swc}) = \frac{V(\hat{\theta}_{swc})}{V(\hat{\theta}_w)} \cdot d_w^2$$

$$d_w^2 = \frac{n \cdot \sum_{i=1}^n w_i^2}{(\sum_{i=1}^n w_i)^2}$$

where:

d_w^2 = the effect of weighting

w_i = The final weight of individual of order i

s = stratification

w = weighting

c = clustering

In the table that follows the CV, the design effect, the actual sample size and the effective sample size are presented for all required indicators.

Due to high design effect, it is noticed that from the 2008 and in order to reduce the design effect and to achieve the minimum sample size according to regulation, the number of primary sampling units has been increased by 23% and additionally the number of secondary sampling units (households) by 25%.

Table 46. Coefficient of Variance, Design Effect, Actual and Effective Sample size
per indicator

INDICATOR	Index	CV	Design effect	Actual Sample Size	Effective Sample Size
At-risk-of-poverty rate (after social transfers)	21.4	3.66	1.35	15,067	11,161
At-risk-of-poverty rate (after social transfers) (18-64)	20.0	4.06	1.4	8,865	6,332
At-risk-of-poverty rate (after social transfers) (≥ 65)	23.6	6.52	1.11	3,611	3,253
At-risk-of-poverty rate (after social transfers) (0-17)	23.7	6.44	1.75	2,591	1,481
At-risk-of-poverty rate by age and gender (female)	21.9	3.83	1.44	7,772	5,397
At-risk-of-poverty rate by age and gender (female 18-64)	20.2	4.21	1.43	4,500	3,147
At-risk-of-poverty rate by age and gender (female ≥ 65)	25.2	6.26	1.2	1,999	1,666
At-risk-of-poverty rate by age and gender (female 0-17)	23.9	8.08	1.82	1,273	699
At-risk-of-poverty rate by age and gender (male)	20.9	3.94	1.29	7,295	5,655
At-risk-of-poverty rate by age and gender (male 18-64)	19.9	4.56	1.41	4,365	3,096
At-risk-of-poverty rate by age and gender (male ≥ 65)	21.7	8.11	1.13	1,612	1,427
At-risk-of-poverty rate by age and gender (male 0-17)	23.4	7.77	1.62	1,318	814
At-risk-of-poverty rate by most frequent activity status and gender (Employment) (≥ 18)	28.0	5.53	1.55	7,308	4,715
At-risk-of-poverty rate by most frequent activity status and gender (Employment) (female ≥ 18)	27.9	8.47	1.53	4,321	2,824
At-risk-of-poverty rate by most frequent activity status and gender (Employment) (male ≥ 18)	28.2	5.70	1.43	2,987	2,089
At-risk-of-poverty rate by most frequent activity status and gender (Non employment) (≥ 18)	11.9	3.90	1.06	4,896	4,619
At-risk-of-poverty rate by most frequent activity status and gender (Non employment) (female ≥ 18)	10.1	3.77	1.1	2,026	1,842
At-risk-of-poverty rate by most frequent activity status and gender (Non employment) (male ≥ 18)	13.2	5.03	1.07	2,870	2,682
At-risk-of-poverty rate by most frequent activity status and gender (Unemployment) (≥ 18)	7.1	4.91	1.32	3,071	2,327

INDICATOR	Index	CV	Design effect	Actual Sample Size	Effective Sample Size
At-risk-of-poverty rate by most frequent activity status and gender (Unemployment) (female >=18)	5.9	6.56	1.39	1,364	981
At-risk-of-poverty rate by most frequent activity status and gender (Unemployment) (male >=18)	8.2	6.72	1.25	1,707	1,366
At-risk-of-poverty rate by most frequent activity status and gender (Retired) (>=18)	22.5	6.69	1.02	1,818	1,782
At-risk-of-poverty rate by most frequent activity status and gender (Retired) (female >=18)	22.6	8.52	1.05	661	630
At-risk-of-poverty rate by most frequent activity status and gender (Retired) (male >=18)	22.4	6.75	1.05	1,157	1,102
At-risk-of-poverty rate by most frequent activity status and gender (Inactive population - Other) (>=18)	18.3	4.54	1.38	7	5
At-risk-of-poverty rate by most frequent activity status and gender (Inactive population - Other) (female >=18)		4.61	1.35	1	1
At-risk-of-poverty rate by most frequent activity status and gender (Inactive population - Other) (male >=18)	42.4	10.09	1.33	6	5
At-risk-of-poverty rate by most frequent activity status and gender (Employees) (>=18)	44.0	8.63	1.66	1,068	643
At-risk-of-poverty rate by most frequent activity status and gender (Employees) (female >=18)	39.0	13.82	1.59	533	335
At-risk-of-poverty rate by most frequent activity status and gender (Employees) (male >=18)	48.4	9.75	1.47	535	364
At-risk-of-poverty rate by most frequent activity status and gender (Employed persons except employees) (>=18)	19.9	6.57	1.57	3,745	2,385

INDICATOR	Index	CV	Design effect	Actual Sample Size	Effective Sample Size
At-risk-of-poverty rate by most frequent activity status and gender (Employed persons except employees) (female >=18)	19.5	9.72	1.62	1,749	1,080
At-risk-of-poverty rate by most frequent activity status and gender (Employed persons except employees) (male >=18)	20.2	6.81	1.47	1,996	1,358
At-risk-of-poverty rate by household type	21.3	3.68	1.34	14,970	11,172
At-risk-of-poverty rate by household type (Households without dependent children)	19.5	5.57	1.16	8,170	7,043
At-risk-of-poverty rate by household type (One adult younger than 65 years)	21.8	14.52	1.05	645	614
At-risk-of-poverty rate by household type (One adult older than 65 years)	29.7	7.24	1.41	855	606
At-risk-of-poverty rate by household type (Single female)	25.8	11.05	1.02	996	976
At-risk-of-poverty rate by household type (Single male)	24.3	11.73	1.13	504	446
At-risk-of-poverty rate by household type (Two adults younger than 65 years)	16.2	10.80	1.27	1,418	1,117
At-risk-of-poverty rate by household type (Three or more adults)	17.2	9.70	1.17	2,802	2,395
At-risk-of-poverty rate by household type (Households with dependent children)	23.2	5.71	1.66	6,800	4,096
At-risk-of-poverty rate by household type (Single parent with dependent children)	43.2	14.95	1.01	287	284
At-risk-of-poverty rate by household type (Two adults with one dependent child)	17.7	11.88	1.21	1,566	1,294

INDICATOR	Index	CV	Design effect	Actual Sample Size	Effective Sample Size
At-risk-of-poverty rate by household type (Two adults with two dependent children)	24.2	8.41	1.63	2,364	1,450
At-risk-of-poverty rate by household type (Two adults with three or more dependent children)	20.8	15.59	1.57	991	631
At-risk-of-poverty rate by household type (Two adults)	19.9	6.22	1.37	3,868	2,823
At-risk-of-poverty rate by household type (Two adults, at least one aged 65 years and over)	22.3	7.11	1.39	2,450	1,763
At-risk-of-poverty rate by household type (Two or more adults with dependent children)	22.7	5.96	1.64	6,513	3,971
At-risk-of-poverty rate by household type (Two or more adults without dependent children)	18.5	5.83	1.23	6,670	5,423
At-risk-of-poverty rate by household type (Three or more adults with dependent children)	24.7	12.84	1.32	1,592	1,206
At-risk-of-poverty rate by accommodation tenure status (own)	20.3	4.21	1.41	13,190	9,355
At-risk-of-poverty rate by accommodation tenure status (rent)	25.9	7.91	1.7	1,877	1,104
At-risk-of-poverty rate by accommodation tenure status (own) (female)	21.3	4.04	1.49	6,828	4,583
At-risk-of-poverty rate by accommodation tenure status (rent) (female)	24.1	8.82	1.6	944	590
At-risk-of-poverty rate by accommodation tenure status (own) (male)	19.3	4.90	1.35	6,362	4,713
At-risk-of-poverty rate by accommodation tenure status (rent) (male)	27.8	8.62	1.68	933	555
At-risk-of-poverty rate by accommodation tenure status (own) (18-64)	19.0	4.69	1.49	7,565	5,077

INDICATOR	Index	CV	Design effect	Actual Sample Size	Effective Sample Size
At-risk-of-poverty rate by accomodation tenure status (rent) (18-64)	23.9	8.24	1.62	1,300	802
At-risk-of-poverty rate by accomodation tenure status (own) (female) (18-64)	19.6	4.59	1.47	3,864	2,629
At-risk-of-poverty rate by accomodation tenure status (rent) (female) (18-64)	22.1	9.88	1.42	636	448
At-risk-of-poverty rate by accomodation tenure status (own) (male) (18-64)	18.4	5.59	1.47	3,701	2,518
At-risk-of-poverty rate by accomodation tenure status (rent) (male) (18-64)	25.7	8.61	1.61	664	412
At-risk-of-poverty rate by accomodation tenure status (own) (>=60)	22.9	6.33	1.07	4,417	4,128
At-risk-of-poverty rate by accomodation tenure status (rent) (>=60)	23.7	16.94	1.53	207	135
At-risk-of-poverty rate by accomodation tenure status (own) (female) (>=60)	24.1	6.19	1.12	2,414	2,155
At-risk-of-poverty rate by accomodation tenure status (rent) (female) (>=60)	25.6	17.46	1.62	118	73
At-risk-of-poverty rate by accomodation tenure status (own) (male) (>=60)	21.5	7.45	1.09	2,003	1,838
At-risk-of-poverty rate by accomodation tenure status (rent) (male) (>=60)	21.0	23.02	1.52	89	59
At-risk-of-poverty rate by accomodation tenure status (own) (>=65)	23.6	7.07	1.12	3,452	3,082
At-risk-of-poverty rate by accomodation tenure status (rent) (>=65)	24.4	19.28	1.49	159	107
At-risk-of-poverty rate by accomodation tenure status (own) (female) (>=65)	25.2	6.74	1.19	1,907	1,603

INDICATOR	Index	CV	Design effect	Actual Sample Size	Effective Sample Size
At-risk-of-poverty rate by accomodation tenure status (rent) (female) (≥ 65)	25.0	20.56	1.62	92	57
At-risk-of-poverty rate by accomodation tenure status (own) (male) (≥ 65)	21.5	8.70	1.13	1,545	1,367
At-risk-of-poverty rate by accomodation tenure status (rent) (male) (≥ 65)	23.4	25.08	1.48	67	45
At-risk-of-poverty rate by accomodation tenure status (own) (≥ 75)	27.9	7.44	1.37	1,817	1,326
At-risk-of-poverty rate by accomodation tenure status (rent) (≥ 75)	24.3	25.39	1.72	80	47
At-risk-of-poverty rate by accomodation tenure status (own) (female) (≥ 75)	29.7	6.36	1.72	1,025	596
At-risk-of-poverty rate by accomodation tenure status (rent) (female) (≥ 75)	22.4	33.11	1.8	50	28
At-risk-of-poverty rate by accomodation tenure status (own) (male) (≥ 75)	25.6	13.13	1.1	792	720
At-risk-of-poverty rate by accomodation tenure status (rent) (male) (≥ 75)	27.6	34.06	1.59	30	19
At-risk-of-poverty rate by accomodation tenure status (own) (0-17)	21.0	7.46	1.66	2,173	1,309
At-risk-of-poverty rate by accomodation tenure status (rent) (0-17)	33.7	11.12	1.64	418	255
At-risk-of-poverty rate by accomodation tenure status (own) (female) (0-17)	22.1	9.37	1.78	1,057	594
At-risk-of-poverty rate by accomodation tenure status (rent) (female) (0-17)	30.4	14.38	1.72	216	126
At-risk-of-poverty rate by accomodation tenure status (own) (male) (0-17)	20.0	8.94	1.54	1,116	725

INDICATOR	Index	CV	Design effect	Actual Sample Size	Effective Sample Size
At-risk-of-poverty rate by accomodation tenure status (rent) (male) (0-17)	37.2	13.59	1.6	202	126
Inequality of income distribution S80/S20 income quintile share ratio	6.0	3.88	1.67	5,783	3,463
Inequality of income distribution S80/S20 income quintile share ratio (>=65)	4.5	5.51	1.54	1,325	860
Inequality of income distribution S80/S20 income quintile share ratio (0-65)	6.4	15.90	1.46	4,462	3,056
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits	24.8	3.31	1.37	15,067	10,998
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits (female)	25,4	3.46	1.45	7,772	5,360
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits (male)	24,2	3.59	1.34	7,295	5,444
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits (18-64)	23,0	3.69	1.38	8,865	6,424
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits (female) (18-64)	23,0	3.86	1.4	4,500	3,214
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits (male) (18-64)	23,1	4.12	1.4	4,365	3,118
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits (>=65)	28,9	5.27	1.18	3,611	3,060
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits (female) (>=65)	31,5	5.11	1.23	1,999	1,625

INDICATOR	Index	CV	Design effect	Actual Sample Size	Effective Sample Size
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits (male) (>=65)	25,8	6.69	1.22	1,612	1,321
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits (0-17)	26,5	6.01	1.78	2,591	1,456
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits (female) (0-17)	26,6	7.46	1.85	1,273	688
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits (male) (0-17)	26,4	7.31	1.66	1,318	794
At-risk-of-poverty rate before social transfers by age and gender_ including old age and survivors benefits	44,9	2.20	1.68	15,067	8,968
At-risk-of-poverty rate before social transfers by age and gender_ including old age and survivors benefits (female)	46,7	2.25	1.76	7,772	4,416
At-risk-of-poverty rate before social transfers by age and gender_ including old age and survivors benefits (male)	43,1	2.44	1.58	7,295	4,617
At-risk-of-poverty rate before social transfers by age and gender_ including old age and survivors benefits (18-64)	37,3	2.72	1.58	8,865	5,611
At-risk-of-poverty rate before social transfers by age and gender_ including old age and survivors benefits (female) (18-64)	38,2	2.86	1.67	4,500	2,695
At-risk-of-poverty rate before social transfers by age and gender_ including old age and survivors benefits (male) (18-64)	36,5	3.07	1.45	4,365	3,010
At-risk-of-poverty rate before social transfers by age and gender_ including old age and survivors benefits (>=65)	85,3	1.14	1.61	3,611	2,243

INDICATOR	Index	CV	Design effect	Actual Sample Size	Effective Sample Size
At-risk-of-poverty rate before social transfers by age and gender_ including old age and survivors benefits (female) (>=65)	86,6	1.22	1.55	1,999	1,290
At-risk-of-poverty rate before social transfers by age and gender_ including old age and survivors benefits (male) (>=65)	83,8	1.60	1.8	1,612	896
At-risk-of-poverty rate before social transfers by age and gender_ including old age and survivors benefits (0-17)	29,0	5.55	1.75	2,591	1,481
At-risk-of-poverty rate before social transfers by age and gender_ including old age and survivors benefits (female) (0-17)	29,5	6.79	1.84	1,273	692
At-risk-of-poverty rate before social transfers by age and gender_ including old age and survivors benefits (male) (0-17)	28,5	6.85	1.65	1,318	799
Gini Coefficient (inequality of income distribution)	33,6	2.02	1.84	15,067	8,189
At-risk-of-poverty threshold (median of equivalised disposable income)	6.591,4	0.99	1.2	15,067	12,556
Relative median at-risk-of-poverty gap by age and gender	26,1	6.53	1.53	3,650	2,386
Relative median at-risk-of-poverty gap by age and gender (female)	25,6	8.74	1.55	1,954	1,261
Relative median at-risk-of-poverty gap by age and gender (male)	27,2	6.61	1.2	1,696	1,413
Relative median at-risk-of-poverty gap by age and gender (18-64)	28,8	6.67	1.5	2,027	1,351
Relative median at-risk-of-poverty gap by age and gender (female) (18-64)	28,0	5.54	1.78	1,045	587

INDICATOR	Index	CV	Design effect	Actual Sample Size	Effective Sample Size
Relative median at-risk-of-poverty gap by age and gender (male) (18-64)	29,4	6.74	1.5	982	655
Relative median at-risk-of-poverty gap by age and gender (≥ 65)	21,1	4.17	1.24	946	763
Relative median at-risk-of-poverty gap by age and gender (female) (≥ 65)	21,5	5.66	1.61	567	352
Relative median at-risk-of-poverty gap by age and gender (male) (≥ 65)	19,5	12.14	2.19	379	173
Relative median at-risk-of-poverty gap by age and gender (≥ 75)	21,7	7.08	1.43	581	406
Relative median at-risk-of-poverty gap by age and gender (female) (≥ 75)	22,3	17.50	1.92	362	189
Relative median at-risk-of-poverty gap by age and gender (male) (≥ 75)	20,5	27.75	1.18	219	186
Relative median at-risk-of-poverty gap by age and gender (0-17)	27,4	11.34	1.48	677	457
Relative median at-risk-of-poverty gap by age and gender (female) (0-17)	27,0	10.52	1.29	342	265
Relative median at-risk-of-poverty gap by age and gender (male) (0-17)	27,8	5.36	1.11	335	302

2.3. Non- sampling errors

2.3.1. Sampling frame and coverage errors

EU-SILC is a household survey and, as it has already been mentioned, is carried out by applying the two-stage stratified sampling with Primary Sampling Unit (PSU) the area (one or more building blocks) and final unit the household. Thus, two frames are used, which are:

1. the frame containing the PSUs (areas) and
2. the frame of households within the selected PSUs.

The frame of PSUs is updated every ten (10) years through the general population census. Concerning the frame of households, within each selected PSU this is updated before the selection of the sampling households used for data collection.

So, any coverage problems that may arise is more possible to relate with the frame of PSUs. However, any such problems are corrected with the use of the calibration procedure already described.

2.3.2 Measurement and processing errors

2.3.2.1. Measurement errors

Measurement errors can occur from the questionnaire, the interviewers and their training, the respondents, the routing, and the skills testing before starting the fieldwork.

(1) The questionnaire

For building up the questionnaires we adopted the initially proposed questionnaires of Eurostat as the basis (documents EU-SILC055 and EU-SILC065). The structure of the questionnaires is similar to these ones. The majority of the questions are almost literally copied and translated.

In order to finalize the questionnaires, we took into account any observations made on the questionnaires of the previous years (pilot survey, EU-SILC 2003 – 2010) together with the experience from the ECHP projects.

Mainly the parts on self-employment income and taxes have been differently formulated.

The questionnaires for the 2011 survey were the same as those of 2004-2010 survey except for some small changes in the wording. The major changes concern on additional questions using in the net/gross/net conversion model (see www.statistics.gr/social_statistics/statistical_data/income_and_living_conditions/ metadata and questionnaires or on CIRCA). We did not include additional questions to cover other areas at the national level.

(2) The interviewers and their training

All the external collaborators (interviewers) of Attiki Prefecture attended a four days training course before starting the fieldwork. Four days training was both on the basic concepts of the survey and the questionnaire completion and on the use and data entry in the electronic questionnaires.

The training in Athens, Thessalonica, Patras (major regional offices in the country), followed by the Regional Offices Heads, which in turn trained both their personnel as well as the external collaborators.

Two manuals were distributed and explained during the training:

- A general guidelines' manual containing information about the objectives of the survey, the organization of the survey, legal and administrative aspects around the survey, fieldwork aspect (how to contact the household, how to introduce oneself who answers which questions. time delays. ...) and the content and correct completion of the questionnaires.
- A second manual on the use of portable PCs for the EU-SILC Computer Assisted Personal Interviews and about the data entry program itself.

Unfortunately, after four years it seems though that still some interviewers don't use the exact wording of the questions. Others skip questions. especially subjective ones (e.g. deprivation questions). Also, when the respondents didn't provide the figures the interviewers completed/imputed the figures themselves.

(3) The respondents

The respondents hesitate in providing income figures and in general deny consulting their tax return, in order to provide exact / correct amounts.

Income from interests, dividends in unincorporated businesses is in general not provided from the households, resulting thus in a significant underestimation of it despite to increase in EU SILC 2011.

There is a sense that still self-employment income has been under-estimated.

The Hellenic Statistical Authority ELSTAT (former National Statistical Service of Greece) made several plausibility checks. Especially for income data lower and upper bounds of the range in which an amount of income was accepted were applied. These checks were carried out during the survey conduction, as the guidelines of the survey included such bounds for specific income data and afterwards centrally by personnel of ELSTAT. Whenever necessary, households were called back.

Changes occurring in persons' activity status longitudinally resulted in a number of inconsistencies. For example, persons having been working in year N-1 but retired in year N, persons being students in year N-1 and employed in year N, income in year N-1 from persons who died in year N, etc. may result in these inconsistencies representing though reality. In any case the pre-mentioned examples resulted both in under and over reporting of income.

(4) Errors in routing

No errors in routing were made.

(5) Skills testing before starting the fieldwork

Interviewers were both external collaborators and personnel of ELSTAT, all experienced with other household surveys carried out by our Institute at a percentage of 80%. More specifically 30% of interviewers were personnel and the other 70% external collaborators.

2.3.2.2. Processing errors

Used the PAPI and CAPI- method to interview the persons. The electronic questionnaires were designed using Oracle - SQL, due to the mode of collection (CAPI). The errors were fewer than the other surveys.

(1) Data entry controls

As pre-mentioned several plausibility checks have been made, using the validation rules of doc. 65. Additionally to Eurostat's basic checks, checks were made with the data entry programs. In general, data entry programs and post-data entry programs checks were made as following:

- Coverage
- Checks on the number of questionnaires expected to be collected
- Number of expected household questionnaires per area unit.
- Number of expected personal questionnaires per interviewed household.
- Number of split-off households.
- Number of tracing sheets and number of moved members.
- Deletion of duplicates
- Person identification check (household member check / person identification check on household register
- Monitoring of flows, valid values and out of range values
- Intra-year inconsistencies check
- Intra-questionnaire inconsistencies check
- Controlling of the amount of income components and especially of social transfers

Personal Register

- The specific childcare programs were cross-checked with the age of the child. For example for a three year-old child the interviewer could not register an answer to “number of hours spent per week in a program of obligatory educational level”.

Household Questionnaire

- On tenure status, if there was an answer in “owned dwelling” or “rented for free” then there couldn't be registered a positive answer in question on “arrears on mortgage or rent payments”.
- On “Capacity to afford paying for one week annual holiday away from home, have a meal with meat, chicken, fish every second year, etc.” if a positive answer existed in all four items then in question on “ability to make ends meet” a positive answer wasn't accepted in “with great difficulty”.

Personal Questionnaire

- The age was cross-checked with the educational level attended.
- The age was cross-checked with the educational level attained.
- Between questions on level currently attended and level of education attained there was also made a cross-check, so that a person cannot attend a level of education being lower than the one having being finished.
- Crosscheck was made between the age at which the person finished a specific educational level and the specific educational level having been attained. The age couldn't be less than the usual age at which the level is attained.
- A person suffering from a chronic illness or condition couldn't answer in question on health status has "very good health"
- In question on basic activity status all the answers were crosschecked with the answer provided in the personal register.
- A more complicated cross-check was made in year of birth age first job was undertaken and years spend as employee or self-employed.
- A person couldn't answer "have never worked" if there exists a positive answer in question on 'working full or part time' or answer "yes" in question on 'Have you ever worked?'.
- In question on when a person was employee. then in question 50 must answered "Yes" meaning that he/she had income from paid employment.
- The same check applied for the self-employed as well, then he must answered "Yes" meaning that he/she had income from self-employment.
- In question 2 on social security benefits and specifically for the social solidarity allowance for pensioners up and down boundaries were inserted for the registration of the amount.
- In question on the s/n of the member who made tax return with the respondent must exist in the register.

In all the pre-mentioned checks the cursor couldn't continue to the next answer and a special notice appeared on the screen.

- Inter-questionnaire inconsistencies check

Longitudinal checks

- Checks and comparison of demographic data register in the Personal Register with these of previous year.
- Check and comparison of citizenships and countries of birth with previous year.

(2) Codification

The codification of questions relating to occupation (ISCO), economic activity of the local unit (NACE), nationality was done by experienced personnel according to ISCO-88 and ISCO-08, NACE rev. 2 and Doc 65/11.

(3) Other controls and other problems

Several plausibility checks have been made, most of them being the same as the ones SAS program applies. During the data processing of raw material ACCESS-2000, ORACLE (golden 3.2) and win-SPSS 13 have been used.

2.3.3. Non-response errors

2.3.3.1. Number of households for which an interview is accepted for the database

Table 47. Number of households for which an interview is accepted for the database. Rotational group breakdown and total

Rotational group	Households	%
1	1,466	24.3
2	1,576	26.1
3	1,407	23.3
4	1,580	26.2
Total	6,029	100.0

Table 48. Number of persons of 16 years or older who are members of the households for which the interview is accepted for the database. and who completed a personal interview. Rotational group breakdown and total

Rotational group	Households' members	%
1	3,150	24.9
2	3,317	26.2
3	2,964	23.4
4	3,210	25.4
Total	12,641	100.0

2.3.3.2. Unit non response

- *Household non-response rates (NRh)*

$$NRh = (1 - (Ra * Rh)) * 100 = 26.542\%$$

where

$$Ra = \frac{\text{Number of addresses successfully contacted}}{\text{Number of valid addresses selected}} \\ = \frac{\sum [DB120 = 11]}{\sum [DB120 = all] - \sum [DB120 = 23]} = \frac{8,130}{8,332} = 0.98989407 = 0.989$$

$$Rh = \frac{\text{Number of household interviews completed and accepted for the database}}{\text{Number of eligible households at contacted addresses}} = \\ = \frac{\sum [DB135 = 1]}{\sum [DB130 = all]} = \frac{6,029}{8,130} = 0.74157442 = 0.742$$

$$NRh = (1 - 0.994 * 0.837) * 100 = 26.542\%$$

So, the household non-response rate is 26.542%

- *Individual non-response rates (NRp)*

$$NRp = (1 - (Rp)) * 100$$

Where

$$Rp = \frac{\text{Number of personal interview completed}}{\text{Number of eligible individuals}} = \frac{12,641}{14,793} = 0.988$$

$$NRp = (1 - 0.988) * 100 = 1.200\%$$

So, the individual non-response rate is 0.718%

- Overall individual non-response rates (*NRp)

$$*NRp = (1 - (Ra * Rh * Rp)) * 100 = (1 - (0.990 * 0.742 * 0.988)) * 100 = 27.423\%$$

So, the overall individual non-response rate is 27.423%

Table 49. Non- response. by rotational group and total

		Total	Rotation 1	Rotation 2	Rotation 3	Rotation 4
All households	Ra	0.990	0.998	0.998	0.996	0.973
	Rh	0.742	0.793	0.801	0.766	0.638
	NRh	26.542	20.859	20.060	23.706	37.923
	Rp	0.988	0.981	0.985	0.994	0.993
	NRp	1.2	1.9	1.5	0.6	0.7
	NRp2	27.423	22.362	21.259	24.164	38.357
Original units	Ra	No substitutions				
	Rh	No substitutions				
	NRh	No substitutions				
	Rp	No substitutions				
	NRp	No substitutions				
	NRp2	No substitutions				

Ra – address contact rate

Rh – proportion of complete household interviews accepted for data base

NRh – household non-response rate

Rp - proportion of complete personal interviews within households accepted for data base

NRp – individual non-response rate

NRp2 – overall individual non-response rate

2.3.3.3. Distribution of households by ‘record of contact at address’ (DB120). by ‘household questionnaire result’ (DB130) and by ‘household interview acceptance’ (DB135)

Table 50. Distribution of households by ‘record of contact at address’ (DB120)

	Number of households	%
Total (DB120 =11 to 23)	8,332	100.0
Address contacted (DB120 =11)	8,130	97.6
Address non-contacted (DB120 =21 to 23)	202	2.4
Address cannot be located (DB120 =21)	53	0.6
Address unable to access (DB120 =22)	30	0.4
Address does not exist (DB120 =23)	119	1.4

Table 51. Distribution of households by ‘household questionnaire result’ (DB130) and by ‘household interview acceptance’ (DB135)

	Number of households	%
Total	8,130	100.0
Household questionnaire completed (DB130 =11)	6,029	74.2
Interview not completed (DB130 =21 to 24)	2,101	25.8
Refusal to co-operate (DB130 =21)	1,147	14.1
Entire household temporarily away (DB130 =22)	810	10.0
Household unable to respond (DB130 =23)	98	1.2
Other reasons(DB130 =24)	46	0.6
Total interview not completed (DB130 =21 to 24)		
Household questionnaire completed (DB135=1+2)	6,029	100.0
Interview accepted for database (DB135=1)	6,029	100.0
Interview rejected (DB135=2)	–	0.0

2.3.3.4. Distribution of substituted units

No substitution was applied in our survey

2.3.3.5. Item non-response

For the income variables the initial item non-response was approximately 0.6%. Mostly item non-response was observed in the self-employment income. However due to the limited percentage of non-response we decided to call back the households and their members in order to get the missing information. Hence, in our final data no items missing are included. Also, no imputation was made in the data, as partial information didn't exist.

In the following table only the percentages of households (per income components collected or compiled at household level) / persons (per income components collected or compiled at personal level) having received an amount for each income component are presented.

Table 52. Item non-response

Total disposable household income	% of households having received an amount
Total gross household income (HY010)	99.3
Total disposable household income (HY020)	99.0
Total disposable household income before social transfers except old-age and survivor's benefits (HY022)	97.6
Total disposable household income before social transfers including old-age and survivor's benefit (HY023)	67.4
<i>Net income components at household level</i>	<i>% of households having received an amount</i>
Income from rental of a property or land (HY040)	13.6
Family related allowances (HY050)	13.4
Social exclusion not elsewhere classified (HY060)	7.0
Housing allowance (HY070)	0.5
Regular inter-household cash transfer received (HY080)	8.0

Table 52(continued). *Item non-response*

Total disposable household income	% of households having received an amount
Interests, dividends, etc. (HY090)	7.5
Income received by people aged < 16 (HY110)	0.0
Taxes on wealth (HY120)	19.9
Regular inter-household cash transfer paid (HY130)	6.4
Net income components at personal level	% of persons 16+ having received an amount
Employee cash or near cash income (PY010)	26.6
Net non-cash employee income (PY021)	0.4
Cash benefits or losses from self-employment (PY050)	14.5
Pension from individual private plans (PY080)	0.1
Unemployment benefits (PY090)	2.8
Old age benefits (PY100)	28.5
Survivor's benefits (PY110)	5.4
Sickness benefits (PY120)	0.5
Disability/invalidity benefits (PY130)	2.1
Education-related allowances (PY140)	0.1
Gross monthly earnings for employees (PY200)	21.9

2.3.3.6. Total item non-response and number of observations in the sample at unit level of the common cross-sectional European Union indicators based on the cross-sectional component of EU-SILC and for equivalised disposable income

Table 53. Item non-response and number of observations at unit level of the common cross-sectional European Union indicators and for equivalised disposable income

Indicator	Actual sample size	Effective sample size
At-risk-of-poverty threshold (median of equivalised disposable income)	15,067	12,556
Risk of poverty threshold by household type: one person household	15,067	11,161
Risk of poverty threshold by household type: household with 2 adults and 2 dependent children	2,364	1,450
Relative median at-risk-of-poverty gap by age and gender	3,650	2,386
Risk-of-poverty rate by most frequent activity status and gender (Employment) (≥ 18)	7,308	4,715
Risk of poverty rate by household type	14,970	11,172
Risk of poverty rate by tenure status (own)	13,190	9,355
Risk of poverty rate by tenure status (rent)	1,877	1,104
Risk-of-poverty rate by age and gender before all transfers	15,067	10,998
Risk-of-poverty rate by age and gender before all transfers (including pensions)	15,067	8,968
S80/S20 quintile share ratio	5,783	3,463
Gini coefficient	15,067	8,189

It is noted that following doc EU-SILC 131-rev/04 and more specifically according to the notice 4 in page 11 “people age –1 will be taken into account in the calculation of female/males age 0”. According to the SAS program for the calculation of indicators the pre-mentioned people haven’t been included.

2.4. Data collection mode

Mostly, paper assisted personal interviewing (PAPI) technique has been used. The other techniques used are the CAPI (more specifically face-to-face interviews with laptops) and CATI techniques, while the use of self-administered by the respondent technique is very limited.

Distribution of household members aged 16 and over

In tables 54 and 55 the distributions of household members aged 16 and over by ‘data status (RB250) and by ‘type of interview’ (RB260) are presented.

Table 54. Distribution of household members (RB245=1)

	Total	RB250= 11	RB250= 21	RB250= 22	RB250= 23	RB250= 31	RB250 =32	RB250 =33
Total	12,793	12,641	7	0	11	111	23	0
%	100.0	98.8	0.1	0.0	0.1	0.9	0.2	0.0
	ROTATION 1							
Total	3,210	3,150	3	0	3	47	7	0
%	100.0	98.1	0.1	0.0	0.1	1.5	0.2	0.0
	ROTATION 2							
Total	3,369	3,317	4	0	3	42	3	0
%	100.0	98.5	0.1	0.0	0.1	1.2	0.1	0.0
	ROTATION 3							
Total	2,982	2,964	0	0	3	11	4	0
%	100.0	99.4	0.0	0.0	0.1	0.4	0.1	0.0
	ROTATION 4							
Total	3,232	3,210	0	0	2	11	9	0
%	100.0	99.3	0.0	0.0	0.1	0.3	0.3	0.0

Table 55. Distribution of household members (RB245=1)

	Total	RB260=1	RB260=2	RB260=3	RB260=4	RB260=5
Total	12,641	10,581	362	803	10	885
%	100.0	83.7	2.9	6.4	0.1	7.0
	ROTATION 1					
Total	3,150	,2547	76	288	2	237
%	100,0	80,9	2,4	9,1	0,1	7,5
	ROTATION 2					
Total	3,317	2,718	54	322	0	223
%	100.0	81.9	1.6	9.7	0.0	6.7
	ROTATION 3					
Total	2,964	2,603	69	102	6	184
%	100.0	87.8	2.3	3.4	0.2	6.2
	ROTATION 4					
Total	3,210	2,713	163	91	2	241
%	100.0	84.5	5.1	2.8	0.1	7.5

2.5. Interview duration

The mean interview duration per household was estimated at 56.95 min. The average has been calculated according to the duration being registered in the questionnaires as the sum of the duration of the household interviews plus the sum of the duration of all personal interviews, divided by the number of household questionnaires completed and accepted for database. The time needed for the data entry of the questionnaires in the computer (PAPI interview) has not been taken into account. Note that we did not include additional questions to cover other areas at the national level.

Table 56. Interview duration

HB100- Number of minutes to complete the household questionnaire	
Mean	17.49
Maximum	60
Minimum	5
PB120-Minutes to complete the personal questionnaire	
Mean	20.05
Maximum	60
Minimum	5
Mean of interview duration	56.95

3. COMPARABILITY

The definitions used are fully compared with Eurostat definitions. However, they are quoted, following, in order to facilitate users.

3.1 Basic concepts and definitions

The reference population

The reference population is all citizens officially living at Greek territory (population de facto). The source of our sample is the Census Population. This Census includes all private households and their current members residing in the territory independently of any socio-economic characteristics they may have. Persons living in collective households and in institutions are excluded from the target population as well as households having members diplomatic missioners.

The private household definition

The definition of household that Eurostat recommends is used. Household is defined as a person living alone or a group of people who live together in the same dwelling and share expenditures including the joint provision of the essentials of living.

The household membership

All household members of 16 year and older at the time of the interview are selected for a personal interview.

Subject to the further and specific conditions shown below, the following persons must if they share household expenses, be regarded as household members:

- Persons usually resident, related to other members
- Persons usually resident, not related to other members
- Resident boarders, lodgers, tenants
- Visitors
- Line-in domestic servants, au-pairs

- Persons usually resident, but temporarily absent from the dwelling (for reasons of holiday travel, work, education or similar)
- Children of the household being educated away from home
- Persons absent for long periods, but having household ties : persons working away from home
- Persons temporarily absent but having household ties: persons in hospital, homes or other institutions

Further conditions for inclusion as household members are as follows:

(a) Categories 3.4. and 5:

Such persons must currently have no private address elsewhere; or their actual or intended duration of stay must be six months or more.

(b) Category 6:

Such persons must currently have no private address elsewhere and their actual or intended duration of absence from the household must be less than six months.

(c) Category 7 and 8:

Irrespective of the actual or intended duration of absence, such persons must currently have no private address elsewhere, must be the partner or child of a household member and must continue to retain close ties with the household and must consider this address to be his/her main residence.

(d) Category 9:

Such person must have clear financial ties to the household and must be actually or prospectively absent from the household for less than six months.

- ***Shares in household expenses***

Share in household expenses include benefiting from expenses (e.g. children, persons with no income) as well as contributing to expenses. If expenses are not shared, then the person constitutes separate household at the same address.

- ***Usually resident***

A person shall be considered as a usually resident member of the household if he/she spends most of his/her daily rest there, evaluated over the past six months. Persons forming new households or joining existing households shall normally be considered as members at their new location; similarly, those leaving to live elsewhere shall no longer be considered as members of the original household. The abovementioned 'past six month' criteria shall be replaced by the intention to stay for a period of six months or more at the new place of residence.

- ***Intention to stay for a period of six months or more***

Account has to be taken of what may be considered as 'permanent' movements in or out of households. Thus a person who has moved into a household for an indefinite period or with their intention to stay for a period of six months or more shall be considered as a household member, even though the person has not yet stayed in the household for six months, and has in fact spent a majority of that time at some other place of residence. Similarly, a person who has moved out of the household to some other place of residence with the intention of staying away for six months or more, shall no longer be considered as a member of the previous household.

- ***Temporarily absent in private accommodation***

If the person who is temporarily absent is in private accommodation, then whether he/she is a member of this (or other) household depends on the length of the absence. Exceptionally, certain categories of persons with very close ties to the household may be included as members irrespective of the length of absence, provided they are not considered members of another private household.

In the application of these criteria, the intention is to minimize the risk that individuals who have two private addresses at which they might potentially be enumerated are not double-counted in the sampling frame. Similarly, the intention is to minimize the risk of some persons being excluded from membership of any household, even though in reality they belong to the private household sector.

The income reference period used

The income reference period is a fixed twelve-month period, namely the previous calendar year. For SILC 2011; the income reference period is the year 2010.

The period for taxes on income and social insurance contributions

This is also fixed twelve-month period, namely the previous calendar year. For SILC 2011 the period is the year 2010

The reference period on taxes on wealth

The reference period on taxes on wealth is the previous calendar year (2010).

The lag between the income reference period and current variables

The income reference period is the previous calendar year (year 2010) and the current variables refer to the fieldwork period (October - December 2011). Therefore the lag is at minimum 9 months and at maximum 12 months.

Total duration of the data collection of the sample

The interviews were carried out starting 1 October and ending 31 December 2011.

Basic information on activity status during the income reference period

This information can be obtained by combining the answer for question D3 (PL031) with the answer for question H3 (calendar question).(PL211A—PL211L)

3.2 Components of income

3.2.1 Income definitions

Total household gross income

HY010 = PY010G + PY050G + PY090G + PY100G + PY110G + PY120G + PY130G + PY140G + HY040G + HY050G + HY060G + HY070G + HY080G + HY090G + HY110 G.

Total disposable household income

HY020 = HY010 – HY140G – HY130G – HY120G + HY145G

Total disposable household income. before social transfers other than old age and survivors' benefit

HY022 = HY020 - PY090G + PY120G + PY130G + PY140G - HY050G - HY060G - HY070G

Total disposable household income. before social transfers including old age and survivors' benefit

HY023 = HY020 - PY090G + PY120G + PY130G + PY140G + PY100G + PY110G - HY050G - HY060G - HY070G.

Imputed rent (HY030G)

The imputed rent refers to the value that shall be imputed for all households that do not report paying full rent. either because they are owner-occupiers or they live in accommodation rented at a lower price than the market price or because the accommodation is provided rent-free.

The imputed rent shall be estimated only for those dwellings (and any associated buildings such a garage) used as a main residence by the households.

The value to impute shall be the equivalent market rent that would be paid for a similar dwelling as that occupied, less any rent actually paid (in the case where the accommodation is rented at a lower price than the market price), less any subsidies received from the government or from a non-

profit institution (if owneroccupied or the accommodation is rented at a lower price than the market price), less any minor repairs or refurbishment expenditure which the owner-occupier households make on the property of the type that would normally be carried out by landlords.

The market rent is the rent due for the right to use an unfurnished dwelling on the private market, excluding charges for heating, water, electricity etc.

Income from rental of property or land (HY040G)

Asked as Eurostat recommends. Income from rental of a property or land refers to the income received, during the income reference period, from renting a property (for example renting a dwelling –not included in the profit/loss of unincorporated enterprises- receipts from boarders or lodgers, or rent from land) after deducting costs such as mortgage interest repayments. minor repairs, maintenance, insurance and other charges.

Family/children related allowances (HY050G)

Family / children related allowance includes:

- Lifelong pension for mothers having more than 3 children
- Allowance for families having 3 children
- Allowance for families having more than 3 children
- Lump sum due to birth of third, four etc. child
- Family allowances for public servants
- Incapacitated relatives care benefit
- Pregnancy-puerperal benefit
- Parental leave allowance
- Birth grant
- Marriage benefit (lump-sum)

The allowance for family public servants, the allowance for pregnancy-puerperal and the allowance for parental leave, if registered to the particular question will not be included to the income of employees.

Social exclusion payments not elsewhere classified (HY060G)

Social benefits in the function 'social exclusion not elsewhere classified include:

- Assistance – lump sum – to poor households in mountainous and disadvantageous areas
- Allowances to children under 16 years old who live in poor households (pre-school and school allowance)
- Allowance to repatriates
- Allowance to refugees
- Allowance to persons released from prison
- Allowance to drug-addicts and alcoholics
- Allowances to long-standing unemployed aged 45-65
- Allowance of social solidarity for pensioners
- Assistance to households having faced earthquake. flood. etc.
- Assistance to employees, farmers, pensioners means tested

Housing allowances (HY070G)

The housing allowances include:

- Benefits paid to bank clerks or public servants working in border areas or to military servants
- Rent benefit a means-tested transfer by a public authority to tenants based on income
- Rent benefit transfer by a public authority to households having faced an earthquake. flood. etc. independently of income
- Benefit to owner-occupiers: a means-tested transfer by a public authority to owner-occupiers to alleviate their current housing costs: in practice help with paying mortgages and/ or interest and/or rehabilitation subsidy and/or a building subsidy.
- Subsidy of interest rate for loans of first dwelling.

It excludes:

- Social housing policy organized through the fiscal system
- All capital transfers (in particular investment grants).

Regular inter - household cash transfers received (HY080G)

Regular inter-household cash transfers received refer to regular monetary amounts received, during the income reference period from other households or persons. More specifically, we asked for “alimony –compulsory or voluntary”, “child support, for children residing away from home” and in general for any regular cash support.

Regular inter - household cash transfers received (HY081G)

This variable includes only alimony –compulsory or voluntary received.

Interest, dividends, profit from capital investments in incorporated businesses (HY090G)

Interests, dividends, profits from capital investment in an unincorporated business refer to the amount of interest from assets such as bank accounts, certificates of deposit, bonds etc. dividends and profits from capital investment in an unincorporated business in which the person does not work, received during the income reference period less expenses incurred.

Interest paid on mortgage (HY0100G)

Interest paid on mortgage refers to the total gross income, before deducting any tax credit or tax allowance of mortgage interest on the main residence of the household during the income reference period.

It excludes:

- Any other mortgage payments, either interest or principal, made at the same time, such as mortgage protection insurance or home and contents insurance
- Payments on mortgages to obtain money for housing purposes (repairs, renovations etc.) or for non housing purposes
- Repayments of the principal or capital sum

Income received by people aged under 16 (HY0110G)

Income received by people aged under 16 is defined as the gross income received by all household members aged under sixteen during the income reference period. Income received from other household members for work in the family business is not included.

Regular taxes on wealth (HY0120G)

Regular taxes on wealth refers to taxes that are paid periodically on the ownership or use of land or buildings by owners. The regular taxes on wealth provided will be those paid during the income reference period.

Regular inter-household transfers paid (HY0130G)

Regular inter-household cash transfers paid refer to regular monetary amounts paid, during the income reference period to other households or persons. More specifically, we asked for “alimony –compulsory or voluntary”, “child support. for children residing away from home” and in general for any regular cash support.

Regular inter - household cash transfers paid (HY131G)

This variable includes only alimony –compulsory or voluntary paid

Tax on income and social insurance contributions (HY0140G)

Tax on income refers to taxes on income, profits and capital gains. They are assessed on the actual or presumed income of individuals, households or tax-unit. They include taxes assessed on holdings of property, land or real estate when these holdings are used as a basis for estimating the income of their owners.

Taxes on income include:

- Taxes on individual, household or tax-unit income (income from self-employment, property, entrepreneurship, pensions etc.) included taxes deducted by employers (pay-as-you earn taxes) other taxes at source and taxes on the income of owners of unincorporated enterprise paid during the income reference period.
- Tax reimbursement received during the income reference period related to tax paid for the income received during the income reference period or for income received in previous year. This value will be taken into account as a reduction of taxes paid.
- Any interest charged on arrears of taxes due and any fines imposed by taxation authorities.

Social insurance contributions refer to employees' and self-employed contributions paid during the income reference period to either mandatory government or employer-based insurance schemes (pension, health, etc.).

We have also taken into account of the money that people have received from the taxes or that people have paid to the taxes in 2011 (based on their income of the year 2010).

Repayments/receipts for tax adjustments (HY0145)

Repayments/receipts for tax adjustments refer to the money paid to/received from Taxes Authorities related to the income received.

Cash or near-cash employee income (PY010G)

Employee cash or near cash income refers to the monetary component of the compensation of employees in cash payable by an employer on behalf of the employee to social insurance schemes or tax authorities.

Included are:

- Wages and salaries paid in cash for time worked or work done in main and any secondary or casual job(s)
- Overtime
- Commission and tips
- Piece rate payments

- Payments for fostering
- Profit sharing and bonuses
- Allowance for working in remote locations, for transport
- Remuneration for time not worked (e.g. holiday payments)
- Additional payments based on productivity
- Supplementary payments (e.g. thirteenth month payment)
- Marriage allowance
- Allowance to the workers in the building constructions

Excluded are:

- Reimbursements made by the employer for work-related expenses (e.g. business travel)
- Severance and termination pay to compensate employees for employment ending before the employee has reached the normal retirement age for that job and redundancy payments
- Allowances for purely work-related expenses such as those for travel and subsistence or for protective clothes
- Lump sum payments at the normal retirement date
- Union strike pay

Non-cash employee income (PY020G)

Gross non-cash employee income includes:

Information on the following items has also been collected and included, for:

- company car and associated costs
- Free of charge or contribution meals within working hours
- Reduced values for electricity, telephone, water etc
- Produced goods provided free of charge or with reduced price to employees

Non-cash employee income (PY021G)

This variable includes only the company car and associated costs (e.g. car insurance, taxes and duties), provided for either private use or both private and work use.

Employer's social insurance contribution (PY030G)

Employers' contributions are defined as payments made, during the income reference period, by employers for the benefits of their employees to insurers.

Cash profits or losses from self-employment (including royalties) (PY050G)

It includes:

- Net operating profit or loss accruing to working owners of, or partners in, an unincorporated enterprise, less interest on business loans.
- Royalties earned on writing, inventions, and so on not included in the profit/loss of unincorporated enterprises.
- Rentals from business buildings, vehicles, equipment etc not included in the profit/loss of unincorporated enterprises, after deduction of related costs such as interest on associated loans, repairs and maintenance and insurance charges.

Value of goods produced for own consumption (PY070G)

The value of goods produced for own consumption refers to the value of food and beverages produced and also consumed within the same household.

The value of goods produced for own consumption are calculated as the market value of goods produced deducting any expenses incurred in the production, not being though counted in total income. The item has not been included in the data files.

Pension from individual private plans (PY080G)

Regular pensions from private plans (other than those covered under ESSPROS)

Unemployment benefits (PY090G)

As unemployment benefits included are:

- Full unemployment allowance
- Partial unemployment allowance
- Early retirement for labour market reasons
- Allowance vocational training for unemployed
- Reimbursement due to dismissal from work
- Seasonal unemployment benefit for persons seasonally working (e.g. actresses, musicians, building workers, hotel staff, etc.)
- Allowance for young persons aged 20-29 years
- Allowance of military service
- Placement, resettlement or rehabilitation benefit
- Any other benefit replacing in whole or in part income lost by a worker due to loss of gainful employment.

Old-age benefit (PY100G)

Old age benefit includes:

- Old age pension from public sector
- Supplementary pension from public sector
- Early retirement pension due to resignation
- Care allowance
- Parallel pension from private sector (paid by the employer)
- Lump sum due to retirement
- National resistance pension

- Any other old age benefit providing a replacement income when the aged person retires from the labour market, or guarantee a certain income when a person has reached a prescribed age.

Survivors' benefits (PY110G)

It includes:

- Old age pension from public sector
- Supplementary pension from public sector
- Parallel pension from private sector (paid by the employer)
- Orphans pension
- Pension of war victims

Sickness' benefits (PY0120G)

Included are:

- Paid sick leave
- Benefit for working accidents
- Benefit for spa therapy, airing etc.
- Assistance for movement of sick persons

Disability/Invalidity benefits (PY0130G)

Included are:

- Disability/Invalidity pension
- Benefit for persons with special needs
- Care allowance for incapacitated persons
- Care allowance for incapacitated children
- Nutrition allowance for people suffering kidney's disease
- Any other cash benefit

Education-related allowances (PY0140G)

It includes:

- Benefit received for participation in research programs
- Scholarships

Gross monthly earnings from employees (PY0200G)

It refers to the monthly amount in the main job for employees. It includes usual paid overtime, tips, profit share, bonuses. Information on gross monthly earnings for employees has been used only for the calculation of gender pay gap.

3.2.2. Other definitions

Capacity to face unexpected financial expenses (HS060)

Household members' were asked if they had financial difficulties facing unexpected but necessary expenses, such as the repair or replacement of the refrigerator, the washing machine, the car etc. As far as the amount of this unexpected expense is concerned, it shouldn't exceed 540 € (the monthly low income) and should be covered solely from members' savings and not from loans made from relatives, friends or bank.

3.2.3. Variables not being collected but imputed

Imputed rent (HY030G)

We calculate the imputed rent using the self assessment method and the stratification method. With the first method, the respondent provides the figure and the interviewer checks the answer according to the rents prevailing in the specific area. Also, for calculation of the imputed rent we developed the stratification method using the following variables:

- ***Dwelling type*** (Detached house, Semi-detached or groups of similarly dwellings, Apartment or flat in a building with less than 10 dwellings. Apartment or flat in a building with 10 dwellings or more. Some other kind of accommodation, please specify)

- ***Number of rooms***
- **Tenure status** (Owned. Rented. sub-rented with rent at prevailing or market price (Included are cases where rent is recovered from housing benefit). Rented at a reduced price (lower price than the market price). Provided rent-free (from the employer, relatives. etc.))
- ***For owned dwelling***
 - Year of purchase/inhabit main dwelling
 - Monthly Imputed rent for the dwelling (if the household renting a similar dwelling)
 - Approximate range for imputed rent (if the household does not know)
 - Mortgage loan (paid interest)
- ***For dwelling rented with rent lower than the market price***
 - Year of sign the rent contract for the main dwelling
 - Rent per month for the main dwelling
 - Monthly Imputed rent for the dwelling (if it is provided this reduced price)
 - Approximate range for imputed rent (if the household does not know)
- ***For provided rent-free dwelling***
 - Year of movement in the dwelling
 - Monthly Imputed rent for the dwelling (if the household renting a similar dwelling)
 - Approximate range for imputed rent (if the household does not know)
- ***Other variables***
 - Dwelling amenities. balcony. veranda. garage/ parking. elevator. swimming pool. garden and also dwelling area.

It is noted that in the files we completed the variable with the results of stratification method.

Housing cost (HH070)

This term housing cost refers to monthly costs connected with the households right to live in the accommodation. The costs of utilities (water, electricity, gas and heating) resulting from the actual use of the accommodation are also included.

A linear model estimated the housing cost in the EU-SILC survey. In detail, the parameters of the linear model were estimated using data from Household Budget Survey 2010. The independent variables that were used were: Actual rent paid, utility bills, repairs and other expenses, mandatory services and charges, mortgage interest payments.

The estimated linear model was applied to the data of EU-SILC producing estimates of the housing cost, of similar households.

Interest paid on mortgage (HY0100G)

For calculation of interest paid on mortgage we use the model of “Separation of the interest component from total mortgage payment: illustrative model that proposed by Eurostat (see EU SILC Doc. 105- How to separate interest from principal”)

The variables used are:

P_0 the amount originally borrowed (principal)

T the term of the loan (number of years over which it is to be repaid)

t current duration of the mortgage (time since the loan was taken out)

P_t the amount of principal (loan) outstanding at time t

Y the mortgage payment (annualised), the total amount including principal and interest

I the interest rate (annualised).

Company car assessment (PY021)

The benefit for individuals of using a company car for private goals was not directly assessed at the interview but afterwards calculated by applying the depreciation method.

According to doc. EU-SILC 130/04 the main idea of the method was to impute to the employee the amount the recipient would have to pay over the reference period to enjoy the same benefit from the use of own vehicle.

More specifically:

- 1 Depreciation = (Purchase prices – selling prices at X) / X.
- 2 Where X is the average age of a company car.

To calculate the “purchase price” and the “selling price”, the make, the model, the registration year and other characteristics of the car have been used. A list of prices or manufacturer’s recommended retail prices have been used for a wide range of new cars. If a specific type of car was not included in the list, the RRP has been available from the manufacturer’s website. If a RRP was not available in the country, then it was estimated based on the price of a similar car or the price relative to other cars in the country with the similar pricing structure. The list price included VAT and vehicle registration tax. For calculating the “average age of a company car” an average of 5 has been considered.

3.2.4. The source or procedure used for the collection of income variables

All income variables were collected by interview.

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

(e.g. gross, net of taxes on income at source and social contributions, net of tax on income at source, net of social contributions)

The interviewers and the respondents have the option of reporting income gross or net (of tax on income at source and, if applicable, of social contributions) at component level. The form in which the net amounts are recorded in database are net of tax on income at source and of social contributions.

Table 57. The form in which income variables at component level have been obtained. %

Target variable	Variable name	Unit of measurement	Gross	Net of taxes on income at source and social contributions	Net and gross	Net of taxes on income at source	Net of social contributions	Unknown	How the amount is recorded
Employee Cash or near cash Income in reference period	PY010	Individual level	-	100	-	-	-	-	Net
Non-Cash Employee income	PY021	Individual level	-	100	-	-	-	-	Net
Non-Cash Employee income (Company car)	PY020	Individual level	Imputation						Net
Net Cash Income benefits/Losses from self-employment (including profit/loss from unincorporated enterprise. Royalties	PY050	Individual level	8.6	81.2	-	2.4	5.8	2.0	Net
Property income (Regular pension from Private (non-ESSPROS) schemes))	PY080	Individual level	-	100	-	-	-	-	Net
Unemployment Benefits	PY090	Individual level	-	100	-	-	-	-	Net
Old-age benefits	PY100	Individual level	-	100	-	-	-	-	Net

Table 57 – continued. The form in which income variables at component level have been obtained. %

Target variable	Variable name	Unit of measurement	Gross	Net of taxes on income at source and social contributions	Net and gross	Net of taxes on income at source	Net of social contributions	Unknown	How the amount is recorded
Survivor's Benefits	PY110	Individual level	-	100	-	-	-	-	Net
Sickness Benefits	PY120	Individual level	-	100	-	-	-	-	Net
Disability/Invalidity Benefits	PY130	Individual level	-	100	-	-	-	-	Net
Education-related Allowances	PY140	Individual level	-	100	-	-	-	-	Net
Income from rental of a property or land	HY040	Household level	-	100	-	-	-	-	Net
Family/children related allowances	HY050	Household level	-	100	-	-	-	-	Net
Social exclusion not elsewhere classified	HY060	Household level	-	100	-	-	-	-	Net
Housing allowances	HY070	Household level	-	100	-	-	-	-	Net
Regular inter-household cash transfer received	HY080	Household level	-	100	-	-	-	-	Net
Net interest, dividends, profit from capital investments in unincorporated business	HY090	Household level	-	100	-	-	-	-	Net
Income received by people aged under 16	HY110	Household level	-	100	-	-	-	-	Net
Regular inter-household cash transfer paid	HY130	Household level	-	100	-	-	-	-	Net

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

The basic requirement in EU-SILC (EU Statistics on Income and Living Conditions) concerning income variables is to record gross income in specified detail at the personal and income component level, but disposable income only as a set of three variable at the total household level. There may be severe practical difficulties for some Member States. including Greece, in collecting income data exactly in this form. whether the data are obtained from registers or directly from respondents in sample surveys.

Net amounts of the target income variables were reported net of tax on income at source and net of social contributions. Gross amounts of the target gross income variables have also been obtained using a net-to-gross conversion model Sienna Microsimulation Model (SM2)

The **main idea** on which the model is constructed is the following: from the incomplete information collected in the survey (some incomes are collected gross. other are collected net, net of taxes, net of social insurance contribution or net of both) and knowing the taxation system of the country, the total gross “real” taxable income is calculated (by imputing taxes at source, social insurance contributions. deductions and tax credits) in order to calculate the “real” income taxes which should be paid for the “complete” gross taxable income.

A ratio between the total tax due and taxable income is calculated and a supplementary amount (representing the proportion of that income component in the total real tax due) is added to (or deducted from) all the income components collected by the survey in different ways (gross or net).

In this way the model obtains the main income typologies: gross income, net income, income taxes and social contributions.

The SM2 system has been implemented in the form of SAS programs. On the input side, a large body of programs was developed to construct the required auxiliary variables for the application of the model using the data available in EU_SILC UDB and PDB. These programs are specific to the particular data sources used (EU-SILC) by University of Siena (V. Verma, G. Betti, F. Ballini). However, they identify the set of auxiliary variables which are needed for

the implementation of the model under the existing national fiscal system. which are equally relevant for application under EU-SILC. They have also developed numerous routines which apply the specified social insurance contribution and tax rules using the above mentioned auxiliary variables as inputs. Again, these are largely independent, for greek fiscal system, of the particular data source used. and hence equally relevant for application under EU-SILC. These specific routines for Greece were 'called' by a core program using SAS macros and an important aim of the SM2 system has been to make this core highly standardised to permit easy adaptation and application in the multi-country context of EU-SILC.

3.3. Tracing rules

It has been applied the Commission regulation (EC) no 1982/2003 of 21 October 2003 regarding the tracing rules.

4. COHERENCE

Coherence refers to the comparison of target variables and of the number of persons who receive income from each income component. with external sources (both administrative data and data from other surveys) being considered as reliable.

4.1. Change between SILC 2010 and SILC 2011 by main income component

In general, in mean household disposable income of the reference years (2010 and 2011) there has been an decrease (-11.3%) observed, where the taxable household income was decreased by 7.0%. due to general problematic recording of self employed income and some other income components (e.g. regular inter-household cash transfers)- (table 58).

Table 58 . Change between SILC 2010 and SILC 2011 by main income component

Income component	%
HY020	-11,3
HY022	-11,5
HY023	-14,8
PY010N	-13,3
PY050N	-10,9

4.2 Comparison of structural indicators from EU-SILC 2011 and HBS 2010

- The **risk-of-poverty indicator** has been calculated from the HBS 2010 data was 20.0% and of EU-SILC 2011 was 21.4%.
- The **poverty threshold** is 6.591€, while according to the HBS 2010 data it is 6,686€.
- Also, **indicator S80/S20** is 6.0, while for the HBS 2011 it has been estimated to 5.7.

It is noted that for the Household Budget Survey the pre-mentioned indicators have been estimated from consumption expenditure and not from income.

In HBS 2010, the 20.0% of total population is at risk of poverty, when the indicator of poverty only takes into consideration consumption expenditure coming from purchases,. Nevertheless, this relative percentage drops to 15,6% when all types of consumption expenditures are taken into consideration (account), irrespective of the mode of acquisition (imputed rent from ownership-occupancy, own produced goods for self-consumption, goods and services provided for free by the employer, by other households, non profitable organizations, the state etc.)

Table 59. *At-risk-of-poverty threshold (illustrative values). HBS 2010/ SILC 2011*
Euro

HBS 2010	SILC 2011
At-risk-of-poverty threshold (Consumption expenditure (purchases))	At-risk-of-poverty threshold (Disposable income)
6,686	6,591

Tabl 60. *At-risk-of-poverty rate. HBS 2010/ SILC 2011*
%

HBS 2010	SILC 2011
At-risk-of-poverty threshold (Consumption expenditure (purchases))	At-risk-of-poverty threshold (Disposable income)
20.0	21.4

4.3. Significant differences in some indicators between EU- SILC 2011 and 2010

The significant differences existing in some indicators of EU-SILC 2011 and EU-SILC 2010 can be explained to financial crisis in Greece and it can be attributed to the some variables having no high frequency and as a result the changes from year to year may be due to the sample process.

4.3. Comparison of income target variables – EU SILC 2010 and 2011

Table 61. Comparison of income target variables – EU SILC 2010 and 2011

	EU SILC 2010 (mean)	EU SILC 2011 (mean)	Sums 2010 (in million Euros)	Sums 2011 (in million Euros)
Total disposable household income (HY020)	24,224.38	21,590.37	99,924	89,700
Total disposable household income before social transfers except old-age and survivor's benefits (HY022)	23,318.94	20,777.7	96,189	86,322
Total disposable household income before social transfers including old-age and survivor's benefit (HY023)	17,288.63	14,926.07	71,314	62,011
Income from rental of a property or land (HY040N)	1,043.30	911.34	4,304	3,786
Family related allowances (HY050N)	153.93	165.12	634.97	685.98
Social exclusion not elsewhere classified (HY060N)	234.40	125.63	965.24	521.95
Housing allowance (HY070N)	24.67	13.16	101.75	54,600
Regular inter-household cash transfer received (HY080N)	480.61	400.57	1,825	1,664
Interests. dividends. etc. (HY090N)	134.54	87,9336	554.97	365,32

Table 61 continued. Comparison of income target variables – EU SILC 2010 and 2011

	EU SILC 2010 (mean)	EU SILC 2011 (mean)	Sums 2010 (in million Euros)	Sums 2011 (in million Euros)
Income received by people aged < 16 (HY110)	0.07	0.27	0.012	0.012
Taxes on wealth (HY120N)	37.46	38.64	150,507	160,552
Regular inter-household cash transfer paid (HY130N)	366.83	343.31	1,513	1,426
Net income components at personal level				
Employee cash or near cash income (PY010N)	5,098.93	4,562.14	47,159	41,605
Non cash income (PY021N)	18.02	12.82	0,166	0,117
Cash benefits or losses from self- employment (PY050N)	2,356.04	2,026.72	21,791	18,522
Pension from individual private plans (PY080N)	4.39	1.71	37,362	15,63
Unemployment benefits (PY090N)	93.43	115.27	1,411	1,051
Old age benefits (PY100N)	2,359.65	2,344.06	21,820	21,516
Survivor' benefits (PY110N)	336.03	305.58	3,100	2,794
Sickness benefits (PY120N)	5.09	5.02	0,47	0,45
Disability/Invalidity benefits (PY130N)	117.38	106.93	1,086	0,977
Education-related allowances (PY140N)	5.57	4.59	0, 51	0,41
Gross monthly earnings for employees (PY200G)	1,384.44	1,376.69	4,070	3,334

Table 62. Comparison of the total equivalized disposable household income(deciles). EU-SILC 2010 and 2011

Total equivalised disposable household income			
	EU-SILC 2010	EU-SILC 2011	Change
Number of households	4,124,947	4,154,528	0.7
Mean	13,692.67	12,637.08	-7.7
Standard deviation	9,891.67	9,145.63	-7.5
10%	3,631.56	2,950.64	-18.8
20%	6,347.53	5,579.42	-12.1
30%	7,819.96	7,148.06	-8.6
40%	9373.51	8,536.36	-8.9
50%	10,758.95	10,078.29	-6.3
60%	12,524.36	11,793.63	-5.8
70%	14,486.57	13,590.89	-6.2
80%	16,789.05	15,794.93	-5.9
90%	20,368.31	19,128.35	-6.1
100%	34,882.00	31,802.94	-8.8

Table 63. Comparison of the total equivalized disposable household income(quintiles). EU-SILC 2010 and 2011

Total equivalised disposable household income			
	EU-SILC 2010	EU-SILC 2011	Change
Number of households	4,124,947	4,154,528	0.7
Mean	13,692.67	12,637.08	-7.7
Standard deviation	9,891.67	9,145.63	-7.5
20%	5,010.49	4,625.43	-7.7
40%	8,610.69	7,841.51	-8.9
60%	11,640.74	10,937.08	-6.0
80%	15,635.47	14,694.96	-6.0
100%	27,624.86	25,448.75	-7.9

4.4. Comparison of income target variables and number of persons who receive income from each “income component”. with external sources

Table 64. Comparison of income target variables and number of persons who receive income from each “income component”. with external sources

Income component	Number of persons who receive from income component in survey data	Number of persons who receive from income component in administrative data	Notes
Employee cash or near cash income in reference period (PY010)	2,928,527	3,152,953	
Net Cash Income benefits/Losses from self-employment (including profit/loss from unincorporated enterprise. royalties) (PY050)	1,173,267	1,253,523	
Property income ((Regular pension from Private (non-ESSPROS) schemes)) (PY080)	11,411	12,000	According to information from private insurance companies

Table 64– continued. Comparison of income target variables and number of persons who receive income from each “income component”. with external sources

Income component	Number of households that receive from income component in survey data	Number of households that receive from income component in administrative data	Notes
Unemployment benefits (PY090)	267,850	298,453	
Old-age benefits (PY100)	2,092,961	2,455,600	*approximately
Survivor’s Benefits (PY110)	397,707		
Disability/Invalidity Benefits (PY130)	183,820	200,000*	
Income from rental of a property or land (HY040)	574,755	535,600	The difference is attributed to the fact that in administrative data is not included the rent of land
Social exclusion not elsewhere classified (HY060)	232,372	320,250	The difference is attributed to the fact that many social exclusion benefits concern fringe groups, not being easily declared in the survey.
Housing allowances (HY070)	30,604	50,000	*approximately

Table 64– continued. Comparison of income target variables and number of persons who receive/pay income from each “income component”. with external sources

Income component	Number of households that pay - survey data	Number of households that pay – administrative data	Notes
Regular taxes on wealth (HY120)	926,245	1,000,000	

Table 65. Comparison of income target variables and number of households and persons who receive income from each “income component”. EU – SILC 2010 and 2011

Income component	Number of persons who receive from income component in survey data	Number of persons who receive from income component in survey data	Change
	EU- SILC 2010	EU- SILC 2011	EU- SILC 2011/2010
Employee cash or near cash Income in reference period (PY010)	3,339,665	2,928,527	-14.0
Non-cash Employee income (company car)(PY021)	82,795	57,758	-43.3
Net Cash Income benefits/Losses from self-employment (including profit/loss from unincorporated enterprise. royalties) (PY050)	1,410,390	1,173,267	-20.2
Property income ((Regular pension from Private (non-ESSPROS) schemes)) (PY080)	4,644	11,411	59.3
Unemployment Benefits (PY090)	304,367	267,850	-13.6
Old-age benefits (PY100)	1,981,821	2,092,961	5.3
Survivor’s Benefits (PY110)	402,955	397,707	-1.3
Sickness Benefits(PY120)	19,768	48,015	58.8
Disability/Invalidity Benefits (PY130)	161,374	183,820	12.2
Education-related Allowances (PY140)	17,304	6,887	-151.3

Table 65– continued. Comparison of income target variables and number of households and persons who receive income from each “income component”. EU – SILC 2010 and 2011

Income component	Number of households that receive from income component in survey data	Number of persons who receive from income component in survey data	Change
	EU SILC 2010	EU SILC 2011	EU- SILC 2011/2010
Income from rental of a property or land (HY040)	675,827	574,755	-17.6
Family/children related allowances (HY050)	459,548	457,609	-0.4
Social exclusion not elsewhere classified (HY060)	830,465	232,372	-257.4
Housing allowances (HY070)	51,619	30,604	-68.7
Regular inter- household cash transfer received (HY080)	357,181	353,074	-1.2
Net interest. dividends. profit from capital investments in unincorporated business (HY090)	303,752	360,981	15.9
Income received by people aged under 16 (HY110)	538	1,347	60.1
Regular taxes on wealth (HY120)	930,887	926,245	-0.5
Regular inter- household cash transfer paid (HY130)	291,295	272,561	-6.9

- **Mean equivalized income**

The annual mean equivalized income of 2011 was calculated in the survey in 12.637.08 euro and from the Bank of Greece (estimated value) the respective amount (not including rural areas) was found to be 11,500.00 euro (not included the income from agriculture).

- **Family allowances**

We made comparisons for household family allowances with administrative data and we found out that only the 83.7 % of them has been recorded. As far as the pension for mothers having more than 3 children is concerned it has been recorded accurately 98.8% (Table 67).

Table 66. *Comparison of number of persons who receive income from family allowances with external sources*

Family allowances	Number of persons that received the family allowances in survey data	Number of persons received the family allowances in administrative data	Recorded in survey/recorded from administrative data %
Life long pension for mothers with more than 3 children	198,809	169,752	17.1
Allowance for mothers having more than 3 children	55,108	80,355	-31.4
Allowance for mothers having third child	33,945	59,123	-42.6
Lump sum due to birth of third. four etc. child	226	1,955	-88.4
Total	288,088	311,185	-7.4

- **Unemployment benefit**

Comparisons have been made for regular unemployment benefit with administrative data (approximately 267,954). while the survey were found 298,453 persons.

- **Social solidarity for pensioners**

As far as the social solidarity benefit for pensioners is concerned. according to administrative data 242,453 persons (information of the main insurance scheme IKA) received it in 2011 (EU-SILC 2011), while from the survey the relative number is 160,311 persons, having in mind that IKA gives that the 80% of that allowance.

- **ESSPROS**

In general, deviations from ESSPROS's data are accepted and are attributed to the fact that ESSPROS's data are from administrative data while the other are from a sample of households.

4.5. Comparison of other quality target variables

Below are presented tables proving that the most quality target variables are in coherence with variables collected from other surveys (LFS – 2nd quarter of 2011 and HBS 2010) making thus the survey robust.

Table 67. Variable PL031: “Self-defined current activity status”. %

Self-defined current activity status	EU-SILC 2011	LFS 2011
At work (Full + Part time)	40,0	44.3
Unemployed	13,2	9.7
Non economically active	46,8	46.0

Table 68. Variable PL060: “Number of hours usually worked per week in main job”.%

	EU-SILC 2011	LFS 2011
Number of hours usually worked per week in main job	39,7	42

Table 69. Variable PL130: “Number of persons working in the local unit”. %

Number of persons working in the local unit	EU-SILC 2011	LFS 2011
1 person	16.2	18.8
2 persons	16.8	14.3
3 persons	6.3	8.3
4 persons	5.4	5.0
5 persons	4.0	4.1
6 persons	2.1	2.3
7 persons	1.4	1.3
8 persons	1.6	1.2
9 persons	0.7	0.5
10 persons	2.7	1.5
11-19 persons	10.7	10.2
20-49 persons	8.8	7.2
50 persons or more	16.6	10.9
Don't know but fewer than 11 persons	2.7	5.8
Don't know but more than 10 persons	4.0	8.5

Table 70. PL040: “Status in employment” %

Status in employment	EU-SILC 2011	LFS 2011
Self employed with employees	5.4	7,8
Self employed without employees	22.9	22,9
Employee	67.0	63,7
Family worker	4.7	5,6

Table 71. PE040: “Highest ISCED level attained”.%

Highest ISCED level attained	EU-SILC 2011	LFS 2011
Never attended any level of education	6.1	5.9
Primary education	22.1	26.6
Lower secondary education	11.2	11.9
Upper secondary education	32.9	29.9
Post secondary non tertiary education	5.5	6.3
First stage of tertiary education	21.7	19.1
Second stage of tertiary education	0.4	0.3

Table 72. PL050 : ‘Occupation’. %

Occupation	EU-SILC 2011	LFS 2011
Armed forces	1.3	1.5
Legislators, senior officials and managers	7.2	4.2
Professionals	12.2	17.5
Technicians and associate professionals	7.2	7.8
Clerks	13.2	10.4
Service workers and shop and market sales workers	14.5	21.2
Skilled agricultural and fishery workers	14.0	11.5
Craft and related trades workers	14.8	12.1
Plant and machine operators and assemblers	6.8	6.3
Elementary occupations	8.8	7.4

Table 73. PL111: “Economic activity”. %

Economic activity	EU-SILC 2011	LFS 2011
Agriculture, hunting, forestry and fishing	10.7	12.3
Mining and quarrying	0.3	0.3
Manufacturing	8.7	10.0
Electricity,gas,steam and airconditioning	0.6	0.5
Water supply: sewerage, waste management and remediation	1.2	0.7
Construction	6.6	6.3
Wholesale and retail trade:repair of motor vehicles and motorcycles	18.7	18.6
Transportation and storage	4.3	4.9
Accommodation and food service activities	6.3	7.3
Information and communication	2.2	1.9
Financial and insurance activities	4.1	2.7
Real estate activities	0.0	0.1
Professional scientific and technical activities	7.3	5.1
Administrative and support service activities	1.4	2.0
Public administration and defence;compulsory social security	9.9	8.8
Education	7.8	7.5
Human health and social work activities	5.2	5.7
Arts, entertainment and recreation activities	1.1	1.2
Other service activities	2.2	2.1
Activities of households as employers	1.8	1.9

Table 74. Household by size. %

Households type	HBS 2010	EU-SILC 2011	LFS 2011
One person household	20.3	18.9	27.0
Two persons household	28.2	28.0	31.0
Three persons household	21.1	21.0	19.2
Four persons household	27.9	28.6	17.2
Five persons household	1.9	2.7	4.2
More than six persons household	0.6	0.8	1.5

Table 75. HH021: “Tenure status”. %

Tenure status	HBS 2010	EU-SILC 2011
Owner	76.6	77.3
Tenant	23.1	22.7

Table 76. HH081: “Bath or shower in dwelling”.%

Bath or shower in dwelling	HBS 2010	EU-SILC 2011
Yes	1.9	1.6
No	98.1	98.4

Table 77. HH091: “Indoor flushing toilet for sole use of household”.%

Indoor flushing toilet for sole use of household	HBS 2010	EU-SILC 2011
Yes	2.4	1.9
No	97.6	98.1

Table 78. HH010: “Dwelling type”. %

Dwelling type	HBS 2010	EU-SILC 2011
Detached house	30,6	30,5
Semidetached house	8,9	8,4
Apartment or flat	36,3	61,0
Some other kind of accommodation	23,6	26,5

Table 79. Variable PL015: “Have you ever worked” (for persons not working but having worked in the past) . %

Have you ever worked	EU-SILC 2011	LFS 2011
Yes	68.0	60.6
No	32.0	39.4

The number of persons not working at present. but having worked in the past estimated from the Labour Force Survey is considered as more accurate. than the one of the EU-SILC since the coefficient of variation of the specific characteristic from the EU-SILC is 2.7 while the one from the LFS is 0.9.

Table 80. Variable PL120: “Number of persons working less than 30 hours per week”. %

Working less than 30 hours per week	EU-SILC 2011	LFS 2011
Number of persons working less than 30 hours per week	12.3	13.9

Table 81. Variable PL140: “Type of contract”. %

Type of contract	EU-SILC 2011	LFS 2011
Permanent job / work contract of unlimited duration	77.9	88.1
Temporary job/work contract of limited duration	22.1	11.9

As far as the percentage of persons in permanent work is concerned the one calculated from the LFS is considered as more accurate since the coefficient of variation of it is 0.8 while that of SILC 3.5.

Table 82. Comparison of labour participation. %

Age	Total		Male		Female	
	LFS	EU SILC	LFS	EU SILC	LFS	EU SILC
15-19 years	0.8	1.1	0.8	1.4	0.7	0.6
20-24 years	5.5	6.1	5.2	5.1	6.1	7.4
25-29 years	12.3	12.6	11.8	11.9	12.9	13.6
30-34 years	14.0	15.1	13.8	14.6	14.4	15.7
35-39 years	14.8	15.4	14.5	14.9	15.1	16.0
40-44 years	15.1	14.7	14.7	14.8	15.8	14.6
45-49 years	12.5	12.9	12.0	12.7	13.1	13.3
50-54 years	11.5	10.9	12.2	11.8	10.6	9.7
55-59 years	7.7	7.2	8.5	8.0	6.5	6.3
60-64 years	4.2	3.2	4.7	3.9	3.6	2.4
65 years +	1.6	0.8	1.8	1.0	1.2	0.5

5. CONCLUSIONS

Concluding, the EU-SILC project gave qualitative data, in coherence with data from administrative sources, where these data were available. The small deviations existing in specific income variables showed that in the years to come extra efforts should be made to collect social benefits more accurately.

As far as self-employment income and interest, dividends, profits from capital investments in unincorporated business are concerned that there exists a general problem in the reliable data.

The Hellenic Statistical Authority will keep on collecting qualitative data and producing the social structural indicators being absolutely necessary for policy making both at national and European level.

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Report on common structure of the model; model description and application to the ECHP data for France. Italy and Spain.

12 Commision regulation (EC) No 646/2009 of 23 July 2009 implementing Regulation (EC) No 1177/2003 of the European Parliament and of the Council concerning Community statistics on income and living conditions (EU-SILC) as regards the 2011 list of target secondary variables on intra-household sharing of resources

ANNEX I. 2011 Module on Intergenerational transmission of Disadvantages

For the purposes of this Regulation, the following units, modes of data collection, reference period and data transmission arrangements shall apply.

1. Units

The information will be provided for all current household members or if applicable for all selected respondents, aged 25-59 that is to say over 24 years and less than 60 years. The eligible persons are those with a year of birth comprised between 1951 and 1985, both years being included.

2. Modes of data collection

Owing to the characteristics of the information to be collected, only personal interviews (proxy interviews as an exception for persons temporarily away or in incapacity) or extracted information from registers are allowed.

4. Reference period

The reference period is when the interviewee was around 14 years old.

5. Definitions

(a) **Father:** the person the interviewee considered to be his/her father, when he/she was around 14 years old. In general the father will be the biological father, but if the interviewee considers someone else to be the father, during the reference period, the answers should be about him, even if the biological father is alive and known.

(b) **Mother:** the person the interviewee considered to be his/her mother, when he/she was around 14 years old. In general the mother will be the biological mother, but if the interviewee considers someone else to be the mother, during the reference period, the answers should be about her, even if the biological mother is alive and known.

(c) **Household:** it refers to the household in which the respondent was living when he/she was around 14 years old. In case the parents of the respondent were divorced and shared the custody (50% of the time each parent), the respondent should select his/her household either on an objective basis taking into account his/her main address when he/she was around 14 years old, i.e. the one in the population register and/or in his/her identity card/passport, or on a subjective basis deciding where he/she felt more at home when he/she was around 14 years old.

6. Transmission of data to Eurostat

These secondary target variables were sent to Eurostat with the Personal Data file (P-file).

Tables

Table 1. PT010: Presence of parents. %

Lived with both parents (or persons considered as parents)	93.1
Lived with father only (or person considered as a father)	2.0
Lived with mother only (or person considered as a mother)	3.9
Lived in a private household without any parent	0.8
Lived in a collective household or institution	0.3

Table 2. PT020: Number of adults

1 adult	3.1
2 adults	75.9
3 adults	11.6
4 adults	7.3
5 adults	1.9
6 adults	0.1
7 adults	0.0

Table 3. PT030: Number of children

1 child	16.3
2 children	50.1
3 children	23.3
4 children	7.6
5 children	2.7

Table 4. PT040: Number of persons in the household in work

None	1.3
1 person	49.5
2 persons	43.3
3 persons	4.1
4 persons	1.7
5 persons	0.2

Table 5. PT050: Year of birth of the father

1	89.1
2	1.6
3	6.4
4	2.8
-1	0.1

Table 6. PT060: Country of birth of the father

Born in the respondent's present country of residence/ country of the survey	89,1
Born in another EU-27 country	1,6
Born in another European country	6,4
Born outside Europe	2,8
Don't know	0.1

Table 7. PT070: Citizenship of the father

Born in the respondent's present country of residence / country of the survey	91,6
Born in another EU-27 country	1,5
Born in another European country	5,3
Born outside Europe	1,5
Don't know	0.1

Table 8. PT080: Year of birth of the mother

1	89.1
2	1.6
3	6.4
4	2.8
-1	0.1

Table 9. PT090: Country of birth of the mother

Born in the respondent's present country of residence / country of the survey	89.1
Born in another EU-27 country	1.6
Born in another European country	6.1
Born outside Europe	3.0
Don't know	0.1

Table 10. PT100: Country of birth of the mother

Born in the respondent's present country of residence / country of the survey	91.5
Born in another EU-27 country	1.5
Born in another European country	5.3
Born outside Europe	1.6
Don't know	0.1

Table 11. PT110: Highest level of education attained by the father

Father could neither read nor write in any language	3.8
Low level (pre-primary, primary or lower secondary education)	57.8
Medium level (upper secondary and post-secondary non-tertiary education)	15.6
High level (first and second stage of tertiary education)	9.2
Don't know	13.6

Table 12. PT120: Highest level of education attained by the mother

Mother could neither read nor write in any language	5.2
Low level (pre-primary, primary or lower secondary education)	14,1
Medium level (upper secondary and post-secondary non-tertiary education)	7,1
High level (first and second stage of tertiary education)	58,0
Don't know	15,6

Table 13. PT130: Activity status of the father

Employed	2.6
Self-employed (including family worker)	46.6
Unemployed	49.9
In retirement or in early retirement or had given up business	0.2
Fulfilling domestic tasks and care responsibilities	0.4
Other inactive person	0.4
Don't know	1.5

Table 14. PT140: Managerial position of the father

Supervisory	18.3
Non-supervisory	77.2
Don't know	4.5

Table 15. PT150: Main occupation of the father

Armed forces	1.5
Legislators, senior officials and managers	7.3
Professionals	5.1
Technicians and associate professionals	3.0
Clerks	9.8
Service workers and shop and market sales workers	4.9
Skilled agricultural and fishery workers	29.3
Craft and related trades workers	21.8
Plant and machine operators and assemblers	10.3
Elementary occupations	5.5
Don't know	0.9

Table 16. PT160: Activity status of the mother

Employed	1.4
Self-employed (including family worker)	1.4
Unemployed	21.2
In retirement or in early retirement or had given up business	26.2
Fulfilling domestic tasks and care responsibilities	0.2
Other inactive person	50.2
Don't know	0.4

Table 17. PT170: Managerial position of the mother

Supervisory	5.8
Non-supervisory	91.5
Don't know	2.7

Table 18. PT180: Main occupation of the mother

Armed forces	0.0
Legislators, senior officials and managers	4.8
Professionals	6.7
Technicians and associate professionals	1.3
Clerks	9.7
Service workers and shop and market sales workers	10.8
Skilled agricultural and fishery workers	43.7
Craft and related trades workers	7.2
Plant and machine operators and assemblers	4.1
Elementary occupations	10.8
Don't know	0.9

Table 19. PT190: Financial situation of the household

Very bad	5.2
Bad	10.8
Moderately bad	17.7
Moderately good	40.1
Good	20.1
Very good	5.4
Don't know	0.8

Table 20. PT200: Ability to make ends meet

With great difficulty	8.7
With difficulty	20.5
With some difficulty	26.7
Fairly easily	26.1
Easily	13.4
Very easily	3.7
Don't know	0.9

Table 21. PT210: Tenancy status

Owner	81.9
Tenant	13.2
Accommodation was provided free	3.0
Don't know	1.9

ANNEX 2. Questionnaires

[www.statistics.gr/social statistics/ statistical data/ income and living conditions/metadata](http://www.statistics.gr/social_statistics/statistical_data/income_and_living_conditions/metadata)
and questionnaires or on CIRCA).

