HELLENIC REPUBLIC

HELLENIC STATISTICAL AUTHORITY

GENERAL DIRECTORATE OF STATISTICAL SURVEYS
DIVISION OF POPULATION AND LABOUR MARKET STATISTICS

HOUSEHOLDS' SURVEYS UNIT

STATISTICS ON INCOME AND LIVING CONDITIONS (EU-SILC)

2010

INTERMEDIATE QUALITY REPORT

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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 the arenot 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 2010-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 **'intra-household sharing of resources,** 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 2010, with reference income period the previous calendar year (2009). 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	7178
Two adults with two children younger than 14 years	15073

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

Age groups	Total	Female	Male
Total	20.1	20.9	19.3
0-17	23.0	-	-
18-64	19.0	19.2	18.9
65+	21.3	23.3	18.8

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

Age groups	Total	Female	Male
60+	20.8	22.4	18.9
75+	25.5	25.8	25.2
0-59	19.9	20.4	19.5
0-74	19.6	20.4	18.9

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

Household type	%
Total	20.1
Households without dependent children	**17.6**
One adult younger than 65 years	24.8
One adult 65 years or older	30.1
Single female	27.7
Single male	26.3
Two adults younger than 65 years	18.3
Two adults, at least one aged 65 years and over	20.9
Three or more adults	12.5
Households with dependent children	**22.9**
Single parent with dependent children	33.4
Two adults with one dependent child	21.6
Two adults with two dependent children	20.3
Two adults with three or more dependent children	26.7
Two adults	19.9
Two or more adults with dependent children	22.7
Two or more adults	15.9
Three or more adults with dependent children	29.3

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

Activity status	Total	Female	Male
Employment	13.8	10.2	16.4
Non employment	25.0	27.1	21.7
Unemployment	38.5	40.0	37.0
Retired	19.0	21.4	17.0
Inactive population - Other	27.4	28.1	24.6

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	18.5	19.5	17.5	27.2	26.9	27.6
0-17	19.9	-	-	34	-	-
18-64	17.2	17.7	16.7	26.0	24.7	27.2
60+	20.8	22.4	18.9	20.8	22.1	19.0
65+	21.3	23.2	19.0	21.4	24.1	16.6
75+	26.3	27.3	25.1	18.0	15.3	27.1

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

Activity status	Total	Female	Male
Employment	13.9	10.3	16.5

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

Working status	%
Full time	11,7
Part time	29,4

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

Age groups	Total	Female	Male
Total	42.8	44.9	40.8
0-17	29.1	-	-
18-64	34.7	35.4	33.9
65+	83.7	85.6	81.2

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

Age groups	Total	Female	Male
Total	23.8	24.9	22.7
0-17	25.8	-	-
18-64	22.2	22.3	22.2
65+	27.5	31.2	22.9

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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	16.0	16.5	15.5
0-17	18.4	-	-
18-64	15.4	15.4	15.5
65+	15.8	17.7	13.5

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

Age groups	Total	Female	Male
Total	27.7	29.3	26.0
0-17	28.7	-	-
18-64	27.7	28.8	26.6
65+	26.7	29.8	22.9

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	25.2
	Foreigners	54.1
	EU27_Foreigners	46.9
	NEU27_ Foreigners	55.8
18+	Nationals	25.5
	Foreigners	53.7
	EU27_Foreigners	45.3
	NEU27_ Foreigners	55.7

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	24.6
	Foreigners	50.9
	EU27_Foreigners	42.0
	NEU27_ Foreigners	53.1
18+	Nationals	25.1
	Foreigners	50.1
	EU27_Foreigners	41.8
	NEU27_ Foreigners	52.2

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	4.1
	Population at risk of poverty, not severely materially deprived but living in a household with low work intensity	3.1
	Population at risk of poverty, severely materially deprived but not living in a household with low work intensity	11.8
18-64	Population at risk of poverty but not severely materially deprived and not living in a household with low work intensity	3.7
	Population at risk of poverty, not severely materially deprived but living in a household with low work intensity	4.4
	Population at risk of poverty, severely materially deprived but not living in a household with low work intensity	10.6
0-17	Population at risk of poverty but not severely materially deprived and not living in a household with low work intensity	4.0
	Population at risk of poverty, not severely materially deprived but living in a household with low work intensity	1.3
	Population at risk of poverty, severely materially deprived but not living in a household with low work intensity	13.6

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

Age groups	Total	Female	Male
18-59	8.5	9.6	7.5
0-17	3.9	-	-
0-60	7.5	8.5	6.4

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	11.6	12.2	10.9
0-17	12.2	-	-
18-64	11.2	11.3	11.0
65+	12.4	14.4	9.8

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	3.7	3.7	3.7
0-17	3.7		
18-64	3.7	3.7	3.7
65+	3.7	3.7	3.7

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

Age groups	Education level	%
18-24	Total	18.0
	ISCED0_2	36.1
	ISCED3_4	16.6
	ISCED5_6	11.9
18-59	Total	11.3
	ISCED0_2	21.4
	ISCED3_4	10.0
	ISCED5_6	3.7
18+	Total	11.0
	ISCED0_2	16.8
	ISCED3_4	9.5
	ISCED5_6	3.6

Table 20. Severe housing deprivation rate by tenure status

Tenure status	%
Outright owner	4.1
Owner paying mortgage	6.9
Rent	9.0
Rent (lower price that the market price)	12.7

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

Age groups	Population	Total	Female	Male
Total	Total	25.5	24.8	26.2
	Non poor	23.2	22.5	23.9
	Poor	34.7	33.6	35.8
0-17	Total	29.0	-	-
	Non poor	23.7	-	-
	Poor	46.7	-	-
18-64	Total	28.4	27.0	29.8
	Non poor	26.0	24.6	27.4
	Poor	38.4	36.8	40.0
65+	Total	12.5	14.2	10.3
	Non poor	12.8	14.9	10.5
	Poor	11.1	12.0	9.7

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

Age groups	Population	Total	Female	Male
Total	Total	18.1	19.6	16.5
	Non poor	5.5	6.8	4.3
	Poor	67.7	68.0	67.5
0-17	Total	20.2	-	-
	Non poor	4.7	-	-
	Poor	72.3	-	-
18-64	Total	18.6	19.2	17.9
	Non poor	5.9	6.6	5.2
	Poor	72.4	72.6	72.2
65+	Total	14.3	18.8	8.7
	Non poor	4.9	7.7	1.7
	Poor	49.0	55.5	38.9

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

Age groups	Total	Female	Male
Total	23.4	23.4	23.4
0-17	26.0	-	-
18-64	24.8	24.9	24.8
65+	14.6	15.8	14.2
75+	14.6	15.0	14.2

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

Total	Female	Male
0.84	0.83	0.88

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

Age groups	Total
Total	5.6
65+	4.1
0- 64	6.0

Table 26. Inequality of income distribution Gini coefficient. %

Gini Coificient	32.9

Table 27. Distribution of income by quantiles

Quartile	Mean income
Quartile 1	7,976.00
Quartile 2	11,962.80
Quartile 3	17,000.00
Quartile 4	152,836.00

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	46.4	83.4	37.0
Capacity to afford a meal with meat, chicken, fish (or vegetarian equivalent) every second day	7.9	22.7	4.2
Capacity to face unexpected financial expenses	28.2	63.3	19.3

Table 29. Housing conditions. %

Problems faced	Population		
	Total	Poor	Non poor
Leaking roof, damp walls/ floors/ foundation or rot in Window frames or floor	17.1	26.1	14.8
Too dark rooms, not enough light	7.1	11.1	6.1
Noise from neighbours or from the street	23.2	18.9	24.3
Pollution, grime or other environmental problems	25.0	19.6	26.4
Vandalism and crime	19.1	15.6	20.0
Lack of bath or shower in the dwelling	0.9	1.7	0.7
Lack of indoor flushing toilet for sole use of households	1.3	2.0	1.2
Inability to keep home adequately warm	15.4	38.4	14.8

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

Financial burden of the total housing cost	Population		
	Total	Poor	Non poor
A heavy burden	32.4	50.6	27.8
A slight burden	60.3	49.2	63.1
Not burden at all	7.2	0.2	9.0

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	12.4	11.8	12.5
A slight burden	20.3	11.9	22.4
Not burden at all	4.0	0.2	5.0

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

Arrears	Population		
	Total	Poor	Non poor
Rent or mortgage repayment	10,1	15,2	8,9
Utility bills (electricity, water, gas, etc.)	18,8	37,9	14,0
Credit cards payment or loan repayments for household items, holidays	13,3	17,3	12,3

Table 33. Ability to make ends meet. %

Ability to make ends meet	Population		
	Total	Poor	Non poor
With great difficulty	24.1	47.3	18.3
With difficulty	34.2	40.1	32.8
With some difficulty	24.0	8.9	27.8
Fairly easily	12.3	2.6	14.8
Easily	5.0	1.0	5.9
Very easily	0.3	0.0	0.4

Table 34. Lowest monthly income to make ends meet

In euro

Lowest monthly income	Population		
	Total	Poor	Non poor
	2,463.77	2,000.18	2,579.77

Table 35. Quality of life. %

Quality of life – Households that cannot Afford:	Population		
	Total	Poor	Non poor
Colour TV	0.1	0.3	0.0
Telephone (including mobile phone)	0.3	0.9	0.2
Computer	9.1	21.1	6.1
Washing machine	1.0	3.0	0.5
Car	8.4	19.5	5.6

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	50.1	43.7	51.6
Good	25.6	24.1	26.0
Fair	14.8	18.8	13.8
Bad	6.7	9.4	6.0
Very bad	2.9	4.0	2.6

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	22.6	28.6	21.1
No	77.4	71.4	78.9

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

Limitation in activities because of health problems	Population		
	Total	Poor	Non poor
Yes, strongly limited	8.0	10.5	7.4
No, limited	10.7	13.5	10.0
No, not limited	81.3	76.1	82.6

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 din not	7.7	11.2	6.8
No, there was no occasion when the person really needed examination or treatment but din not	92.3	88.8	93.2

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)	54.6	70.8	48.1
Waiting list	12.1	6.0	14.5
Could not take time because of work, care for children or for others	13.0	5.2	16.1
Too, far to travel/no means of transportation	4.7	5.4	4.4
Fear of doctor/hospitals/examination/treatment	4.6	3.6	5.0
Wanted to wait and see if problem got better on its own	8.1	6.3	8.9
Didn't khow any good doctor or specialist	0.3	2.7	0.4
Other reasons	2.6	70.8	2.6

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 din not	7.3	12.0	6.2
No, there was no occasion when the person really needed examination or treatment but din not	92.7	88.0	93.8

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)	76.8	87.5	71.6
Waiting list	3.8	2.7	4.4
Could not take time because of work, care for children or for others	9.1	2.4	12.2
Too, far to travel/no means of transportation	0.6	1.1	0.3
Fear of doctor/hospitals/examination/treatment	3.7	3.0	4.1
Wanted to wait and see if problem got better on its own	3.6	1.9	4.3
Didn't khow any good doctor or specialist	0.1	0.1	0.1
Other reasons	2.4	1.3	2.9

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 comleted some classes from primary education	6.6	11.6	5.4
Primary education	23.8	32.9	21.5
Lower secondary education	11.1	14.3	10.4
Upper secondary education	32.2	31.1	32.4
Post secondary non tertiary education	5.1	3.9	5.4
First stage of tertiary education (not leading directly to an advanced research qualification)	20.7	6.2	24.3
Second Stage of tertiary education (leading to an advanced research qualification)	0.5	.0	.6

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	542	510
GR12	Kentriki Macedonia	1534	1339
GR13	Dytiki Macedonia	241	227
GR14	Thessalia	587	529
GR21	Ipeiros	241	215
GR22	Ionia Nisia	130	121
GR23	Dytiki Ellada	534	494
GR24	Sterea Ellada	408	345
GR25	Peloponnisos	460	413
GR30	Attiki	3056	2026
GR41	Voreio Aigaio	168	152
GR42	Notio Aigaio	234	209
GR43	Kriti	491	425
Total	**Total**	8626	7005

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: $\dfrac{m_{hi}}{M_{hi}}$

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 $m_h = \sum\limits_{i=1}^{n_h} m_{hi} \,(2)$

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

In repeated sampling, the numerator of this fraction will vary from sample to sample; to be more specific the fraction $\dfrac{m_h}{M_h}$ is a random variable. Within each primary sampling unit the calculation of the sampling interval $\delta_{hi} = \dfrac{M_{hi}}{m_{hi}}$ is carried out, so that the following two desired conditions are satisfied.

a) The expected result $\dfrac{m_h}{M_h}$ is the predetermined over sampling fraction $\dfrac{1}{\lambda}$ in each geographical region (NUTS II): $E\left(\dfrac{m_h}{M_h}\right) = \dfrac{1}{\lambda} = 2‰$

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 April to June 2010 with reference period of data the previous year (2009).

Table 45. Sample distribution (household questionnaire) over time

Month	Date	Number	%
April	1 to 10	6	0.09
	11 to 20	17	0.24
	21 to 30	9	0.13
May	1 to 10	181	2.58
	11 to 20	439	6.27
	21 to 31	749	10.69
June	1 to 10	1913	27.31
	11 to 20	1772	25.30
	21 to 30	1919	27.39

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 wave 10 - panel 3 replaced panel 7 – the household design weight (target variable DB080) is defined as the inverse of its probability of selection.

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

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 6, 7 and 8 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 2010). 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 Geographical 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 ($j = 1,2,...,m_{hi}$)

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:

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

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

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

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

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

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

In order to estimate the variances of the required characteristics, we applied the Jackknife Re-sampling Method, according to the procedure described below. The method was selected for application due to its ability in estimating the variance for non-linear and non-smooth statistics and additionally due to the fact that it takes 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, …, 90) we omitted the units (individuals), that belong to the cluster i, ($i = 1, 2, …, n_h$)

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

ii.   The individuals' weights (RB050) that belong to the rest clusters of the same stratum are multiplied with the quantity $\dfrac{n_h}{n_h - 1}$, while the weights of the individuals that belong to the rest strata remain constant.

iii.   Calculation of the indicator ($\widehat{\theta}_{strhi}$) 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 repeat 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:

$$V(\widehat{\theta}_{str}) = \sum_{h=1}^{90} \frac{n_h - 1}{n_h} \sum_{i=1}^{n_h} (\widehat{\theta}_{strhi} - \widehat{\theta}_{str})^2 \qquad (10)$$

where $\widehat{\theta}_{str}$: is the value of the indicator, as it has been calculated with the use of the sample data.

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 $\hat{Y}$, the coefficient of variation is defined as:

$$CV\left(\hat{Y}\right) = \frac{\sqrt{V\left(\hat{Y}\right)}}{\hat{Y}} *100 \quad (11)$$

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 sampling[1].

The variance estimates under the assumption of simple random sampling were calculated using the formulas presented below as a continuation of the Jackknife Re-sampling Method. The steps are the following:

i.   The individuals of the sample received equal weights with value $\frac{N}{n}$

where:

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[1] In the special case of the Indicator "Relative Median at-risk-of-poverty- Gap by Age and Gender" the design effect for certain age and gender groups ($deff(Y_c)$) was calculated with the use of the formula, since it produces more robust estimations:

$$deff(Y_c) = 1 + \frac{n_t}{n_c} \bullet \left[deff(Y_t) - 1\right] \quad (12)$$

where

$deff(Y_t) =$ the design effect of the toatal indicator

$n_t =$ the total actual sample size

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

N = The estimation of the country's individuals' population resulting from the summation of the individuals' weights.

n = the individuals' sample size

ii.   The value of the indicator ($\widehat{\theta}_{srs}$) is calculated using the individuals' weights in step i above

iii.   15 individuals are omitted from the sample while the rest individuals are attained equal weights with value $\dfrac{N}{n-15}$

iv.   Calculation of the indicator ($\widehat{\theta}_{srsk}$), 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).

The above procedure, steps iii-iv, is repeated as many times as to cover all individuals in groups of 15. In every repeat we omitted the next 15 individuals, while we restored in the sample the 15 individuals that were omitted in the previous repeat.

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

$$V(\widehat{\theta}_{srs}) = \sum_{k=1}^{n} (\widehat{\theta}_{srsk} - \widehat{\theta}_{srs})^2 \qquad (13)$$

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 od secondary sampling units (households) by 25%.

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

INDICATOR	CV	Design Effect	Actual Sample Size	Effective Sample Size
At-risk-of-poverty rate (after social transfers)	4.2	1.36	17,611	12,916
At-risk-of-poverty rate by age and gender	4.2	1.36	17,611	12,916
At-risk-of-poverty rate by age and gender (female_0-15)	9.6	1.03	1,312	1,277
At-risk-of-poverty rate by age and gender (female_16-24)	10.4	1.36	807	592
At-risk-of-poverty rate by age and gender (female_25-49)	5.8	1.06	2,989	2,815
At-risk-of-poverty rate by age and gender (female_50-64)	8.0	1.04	1,753	1,692
At-risk-of-poverty rate by age and gender (female_>=65)	8.2	1.05	2,192	2,097
At-risk-of-poverty rate by age and gender (female_>=16)	4.5	1.16	7,741	6,674
At-risk-of-poverty rate by age and gender (female_16-64)	4.9	1.11	5,549	4,979
At-risk-of-poverty rate by age and gender (female_0-64)	5.0	1.14	6,861	6,010
At-risk-of-poverty rate by age and gender (female >=0)	4.5	1.19	9,053	7,628
At-risk-of-poverty rate by age and gender (female 0-17)	8.9	1.03	1,496	1,451
At-risk-of-poverty rate by age and gender (female 18-64)	4.9	1.11	5,365	4,830
At-risk-of-poverty rate by age and gender (male 0-15)	9.4	1.03	1,404	1,364

INDICATOR	CV	Design Effect	Actual Sample Size	Effective Sample Size
At-risk-of-poverty rate by age and gender (male 16-24)	10.1	1.02	837	823
At-risk-of-poverty rate by age and gender (male 25-49)	7.1	1.06	2,856	2,699
At-risk-of-poverty rate by age and gender (male 50-64)	8.1	1.50	1,681	1,121
At-risk-of-poverty rate by age and gender (male >=65)	13.2	1.04	1,780	1,717
At-risk-of-poverty rate by age and gender (male >=16)	4.7	1.15	7,154	6,233
At-risk-of-poverty rate by age and gender (male 16-64)	5.2	1.11	5,374	4,837
At-risk-of-poverty rate by age and gender (male 0-64)	5.3	1.14	6,778	5,946
At-risk-of-poverty rate by age and gender (male >=0)	4.6	1.18	8,558	7,273
At-risk-of-poverty rate by age and gender (male 0-17)	8.8	1.03	1,591	1,540
At-risk-of-poverty rate by age and gender (male 18-64)	5.3	1.11	5,187	4,685
At-risk-of-poverty rate by age and gender (0-15)	7.9	1.06	2,716	2,572
At-risk-of-poverty rate by age and gender (16-24)	7.8	1.03	1,644	1,590
At-risk-of-poverty rate by age and gender (25-49)	5.8	1.12	5,845	5,216
At-risk-of-poverty rate by age and gender (50-64)	6.8	1.07	3,434	3,207
At-risk-of-poverty rate by age and gender (>=65)	9.6	1.08	3,972	3,671
At-risk-of-poverty rate by age and gender (>=16)	4.3	1.31	14,895	11,392
At-risk-of-poverty rate by age and gender (16-64)	4.6	1.23	10,923	8,913

INDICATOR	CV	Design Effect	Actual Sample Size	Effective Sample Size
At-risk-of-poverty rate by age and gender (0-64)	4.7	1.28	13,639	10,643
At-risk-of-poverty rate by age and gender (0-17)	7.3	1.06	3,087	2,902
At-risk-of-poverty rate by age and gender (18-64)	4.7	1.22	10,552	8,665
At-risk-of-poverty rate by most frequent activity status and gender	4.1	1.29	14,212	10,988
At-risk-of-poverty rate by most frequent activity status and gender (female_employed)	7.9	1.05	2,650	2,513
At-risk-of-poverty rate by most frequent activity status and gender (female_unemployed)	9.3	1.01	407	404
At-risk-of-poverty rate by most frequent activity status and gender (female_retired)	8.6	1.04	1,774	1,711
At-risk-of-poverty rate by most frequent activity status and gender (female_other inactive)	5.6	1.05	2,579	2,449
At-risk-of-poverty rate by most frequent activity status and gender (male_employed)	6.4	1.08	3,651	3,395
At-risk-of-poverty rate by most frequent activity status and gender (male_unemployed)	10.8	1.01	406	403
At-risk-of-poverty rate by most frequent activity status and gender (male_retired)	13.1	1.04	2,129	2,039
At-risk-of-poverty rate by most frequent activity status and gender (male_other inactive)	11.9	1.01	616	608
At-risk-of-poverty rate by most frequent activity status and gender (employed)	6.0	1.13	6,301	5,576
At-risk-of-poverty rate by most frequent activity status and gender (unemployed)	7.4	1.02	813	800
At-risk-of-poverty rate by most frequent activity status and gender (retired)	9.9	1.08	3,903	3,612

INDICATOR	CV	Design Effect	Actual Sample Size	Effective Sample Size
At-risk-of-poverty rate by most frequent activity status and gender (other inactive)	5.4	1.07	3,195	2,997
At-risk-of-poverty rate by household type	4.4	1.36	17,552	12,884
At-risk-of-poverty rate by household type (one person)	7.1	1.04	1,757	1,688
At-risk-of-poverty rate by household type (2 ad, both<65, no dep children)	11.7	1.57	1,638	1,046
At-risk-of-poverty rate by household type (2 ad, at least one >65, no dep children)	16.9	1.05	2,642	2,505
At-risk-of-poverty rate by household type (other, without dep children)	11.8	1.21	3,297	2,715
At-risk-of-poverty rate by household type (single parent, >=1dep children)	19.2	1.02	304	298
At-risk-of-poverty rate by household type (2 ad, 1 dep child)	11.6	1.93	2,040	1,055
At-risk-of-poverty rate by household type (2 ad, 2 dep children)	11.2	1.06	2,964	2,793
At-risk-of-poverty rate by household type (2 ad, >=3 dep children)	18.8	1.02	1,123	1,098
At-risk-of-poverty rate by household type (other, with dep children)	13.7	1.04	1,787	1,723
At-risk-of-poverty rate by household type (without dep children)	6.4	1.19	9,334	7,826
At-risk-of-poverty rate by household type (with dep children)	6.4	1.17	8,218	7,026
At-risk-of-poverty rate by accomodation tenure status	4.4	1.34	16,691	12,414
At-risk-of-poverty rate by accomodation tenure status (owner or rent free)	5.8	1.24	11,427	9,246

INDICATOR	CV	Design Effect	Actual Sample Size	Effective Sample Size
At-risk-of-poverty rate by accomodation tenure status (tenant)	8.3	2.01	5,264	2,613
At-risk-of-poverty rate by work intensity of the household				
At-risk-of-poverty rate by work intensity of the household (without dep children_WI=0)	11.1	1.41	1,438	1,023
At-risk-of-poverty rate by work intensity of the household (without dep children_0<WI<1)	11.8	1.40	2,921	2,092
At-risk-of-poverty rate by work intensity of the household (without dep children_WI=1)	15.0	1.78	2,031	1,143
At-risk-of-poverty rate by work intensity of the household (with dep children_WI=0)	28.6	1.01	347	345
At-risk-of-poverty rate by work intensity of the household (with dep children_0<WI<0.5)	13.2	1.39	624	449
At-risk-of-poverty rate by work intensity of the household (with dep children_0.5<W<1)	8.2	1.07	3,606	3,356
At-risk-of-poverty rate by work intensity of the household (with dep children_WI=1)	14.3	1.31	3,534	2,708
Inequality of income distribution S80/S20 income quintile share ratio	7.8	1.5	7208	4,784
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits	6.5	2.3	18,035	7,953
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits (female_0-15)	9.1	1.7	1,312	770
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits (female_0-17)	8.4	1.8	1,496	837

INDICATOR	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 (female_16-64)	4.4	1.3	5,549	4,347
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits (female_18-64)	4.4	1.2	5,365	4,347
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits (female_>=65)	5.4	1.0	2,192	2,097
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits (female_>=16)	3.6	1.2	7,741	6,674
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits (male_0-15)	8.6	1.0	1,404	1,364
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits (male_0-17)	8.2	1.0	1,591	1,540
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits (male_16-64)	4.7	1.4	5,374	3,886
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits (male_18-64)	4.7	1.4	5,187	3,701
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits (male_>=65)	6.6	1.0	1,780	1,717

INDICATOR	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_>=16)	4.0	1.1	7,154	6,233
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits (0-15)	7.4	1.2	2,716	2,254
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits (0-17)	7.0	1.3	3,087	2,313
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits (16-64)	4.2	1.3	10,923	8,604
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits (18-64)	4.2	1.3	10,552	8,372
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits (>=65)	5.1	1.1	3,972	3,671
At-risk-of-poverty rate before social transfers by age and gender_ except old age and survivors benefits (>=16)	3.5	1.3	14,895	11,392
At-risk-of-poverty rate before social transfers by age and gender_ including old age and survivors benefits	2.5	1.8	17,611	9,877
At-risk-of-poverty rate before social transfers by age and gender including old age and survivors benefits (female _0-15)	8.4	1.6	1,312	811

INDICATOR	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 _0-17)	7.6	1.7	1,496	866
At-risk-of-poverty rate before social transfers by age and gender including old age and survivors benefits (female _16-64)	3.4	1.9	5,549	2,963
At-risk-of-poverty rate before social transfers by age and gender including old age and survivors benefits (female _18-64)	3.3	1.9	5,365	2,898
At-risk-of-poverty rate before social transfers by age and gender including old age and survivors benefits (female _>=65)	1.6	2.7	2,192	803
At-risk-of-poverty rate before social transfers by age and gender including old age and survivors benefits (female _>=16)	2.4	2.1	7,741	3,766
At-risk-of-poverty rate before social transfers by age and gender including old age and survivors benefits (male _0-15)	8.4	1.0	1,404	1,364
At-risk-of-poverty rate before social transfers by age and gender including old age and survivors benefits (male _0-17)	7.7	1.0	1,591	1,540
At-risk-of-poverty rate before social transfers by age and gender including old age and survivors benefits (male _16-64)	3.5	1.7	5,374	3,106
At-risk-of-poverty rate before social transfers by age and gender including old age and survivors benefits (male _18-64)	3.6	1.8	5,187	2,950

INDICATOR	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 (male _>=65)	2.0	1.0	1,780	1,717
At-risk-of-poverty rate before social transfers by age and gender including old age and survivors benefits (male _>=16)	2.6	1.8	7,154	3,872
At-risk-of-poverty rate before social transfers by age and gender including old age and survivors benefits (0-15)	7.0	1.1	2,716	2,366
At-risk-of-poverty rate before social transfers by age and gender including old age and survivors benefits (0-17)	6.4	1.2	3,087	2,478
At-risk-of-poverty rate before social transfers by age and gender including old age and survivors benefits (16-64)	3.2	1.7	10,923	6,250
At-risk-of-poverty rate before social transfers by age and gender including old age and survivors benefits (18-64)	3.1	1.8	10,552	6,007
At-risk-of-poverty rate before social transfers by age and gender including old age and survivors benefits (>=65)	1.4	2.7	3,972	1,498
At-risk-of-poverty rate before social transfers by age and gender including old age and survivors benefits (>=16)	2.3	1.9	14,895	7,886
Gini Coefficient (inequality of income distribution)	2.2	1.99	17,611	8,867
Equivalised disposable income	2.0	1.36	17,611	12,916
Relative median at-risk-of-poverty gap by age and gender	11.4	1.1	3,967	3,667

INDICATOR	CV	Design Effect	Actual Sample Size	Effective Sample Size
Relative median at-risk-of-poverty gap by age and gender (0-15)	15.4	2.1	715	334
Relative median at-risk-of-poverty gap by age and gender (0-17)	12.3	1.2	829	682
Relative median at-risk-of-poverty gap by age and gender (16-64)	10.6	1.0	2,366	2,256
Relative median at-risk-of-poverty gap by age and gender (18-64)	12.6	1.0	2,252	2,225
Relative median at-risk-of-poverty gap by age and gender (16+)	14.4	1.1	3,252	3,047
Relative median at-risk-of-poverty gap by age and gender (18+)	14.2	1.7	3,138	1,843
Relative median at-risk-of-poverty gap by age and gender (65+)	20.3	2.1	886	414
Relative median at-risk-of-poverty gap by age and gender (female)	14.0	2.0	2,101	1,037
Relative median at-risk-of-poverty gap by age and gender (female_16_64)	14.1	1.0	1,219	1,189
Relative median at-risk-of-poverty gap by age and gender (female_18_64)	14.5	2.5	1,157	468
Relative median at-risk-of-poverty gap by age and gender (female_16+)	12.2	1.3	1,753	1,329
Relative median at-risk-of-poverty gap by age and gender (female_18+)	13.5	1.0	1,691	1,634
Relative median at-risk-of-poverty gap by age and gender (female_65+)	25.4	1.0	534	528
Relative median at-risk-of-poverty gap by age and gender (male)	11.5	1.0	1,866	1,797

INDICATOR	CV	Design Effect	Actual Sample Size	Effective Sample Size
Relative median at-risk-of-poverty gap by age and gender (male_16_64)	12.5	1.0	1,147	1,120
Relative median at-risk-of-poverty gap by age and gender (male_18_64)	11.2	1.0	1,095	1,071
Relative median at-risk-of-poverty gap by age and gender (male_16+)	12.6	1.0	1,499	1,454
Relative median at-risk-of-poverty gap by age and gender (male_18+)	10.5	1.0	1,447	1,405
Relative median at-risk-of-poverty gap by age and gender (male_65+)	16.8	1.0	352	349
Relative median income ratio	3.5	1.4	3,972	2,777
Relative median income ratio_female	3.7	2.8	2,192	794
Relative median income ratio_male	5.3	1.0	1,780	1,717
Aggregate replacement ratio	8.8	1.1	2,796	2,643
Aggregate replacement ratio_female	20.4	1.0	1,170	1,142
Aggregate replacement ratio_male	11.5	1.0	1,626	1,573

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 – 2009) 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 2010 survey were the same as those of 2004-2009 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 2010.

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 attainrd 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 , NACE rev.1 and 2 and Doc 65/09.

(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 19 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	1,892	27.0
2	2,024	28.9
3	1,902	27.2
4	1,187	16.9
Total	7,005	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	4,062	27.5
2	4,273	28.9
3	3,944	26.7
4	2,509	17.0
Total	14,788	100.0

2.3.3.2. Unit non response

- *Household non-response rates (NRh)*

NRh = (1-(Ra * Rh)) * 100 = 16.825%

where

$$Ra = \frac{\text{Number of addresses successfully contacted}}{\text{Number of valid addresses selected}}$$

$$= \frac{\sum[DB120 = 11]}{\sum[DB120 = \text{all}] - \sum[DB120 = 23]} = \frac{8371}{8483 - 66} = 0.9939 = 0.994$$

$$Rh = \frac{\text{Number of household interviews completed and accepted for the database}}{\text{Number of eligible households at contacted addresses}} =$$

$$= \frac{\sum[DB135 = 1]}{\sum[DB130 = all]} = \frac{7005}{8371} = 0.8368 = 0.837$$

NRh=(1-0.994*0.837)*100= 16.825%

So. the household non-response rate is 16.825%

- *Individual non-response rates (NRp)*

NRp = (1-(Rp))*100

Where

$$Rp = \frac{\text{Number of personal interview completed}}{\text{Number of eligible individuals}} = \frac{14788}{14895} = 0.993$$

NRp=(1-0.993)*100=1%

So.the individual non-response rate is 0.718%

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

*NRp=(1-(Ra*Rh*Rp))*100=(1-(0.994*0.837*0.993))*100= 17.422%

So. the overall individual non-response rate is 17.42%

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

		Total	Rotation 1	Rotation 2	Rotation 3	Rotation 4
All households	Ra	0.994	1	1	0.982	1
	Rh	0.837	0.898	0.898	0.694	0.936
	NRh	16.825	10.247	10.164	31.901	6,388
	Rp	0.993	0.994	0.988	0.997	0.995
	NRp	0.718	0.636	1.225	0.354	0.555
	NRp2	17.423	10.818	11.265	32.142	6.908
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)	8,483	100.0
Address contacted (DB120 =11)	8,371	98.7
Address non-contacted (DB120 =21 to 23)	112	1.3
Address cannot be located (DB120 =21)	42	0.5
Address unable to access (DB120 =22)	9	0.1
Address does not exist (DB120 =23)	61	0.7

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

	Number of households	%
Total	8,371	100.0
Household questionnaire completed (DB130 =11)	7,005	83.7
Interview not completed (DB130 =21 to 24)	1,366	16.3
Refusal to co-operate (DB130 =21)	803	9.6
Entire household temporarily away (DB130 =22)	444	5.3
Household unable to respond (DB130 =23)	86	1.0
Other reasons(DB130 =24)	33	0.4
Total interview not completed (DB130 =21 to 24)	**1,366**	**8.2**
Household questionnaire completed (DB135=1+2)	7,005	100.0
Interview accepted for database (DB135=1)	7,005	100.0
Interview rejected (DB135=2)	0.0	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 compiles 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)	99.4
Total disposable household income before social transfers except old-age and survivor's benefits (HY022)	99.0
Total disposable household income before social transfers including old-age and survivor's benefit (HY023)	86.8
Net income components at household level	*% of households having received an amount*
Income from rental of a property or land (HY040)	16.4
Family related allowances (HY050)	11.1
Social exclusion not elsewhere classified (HY060)	20.1
Housing allowance (HY070)	1.3
Regular inter-household cash transfer received (HY080)	8.7

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

Total disposable household income	% of households having received an amount
Interests. dividends. etc. (HY090)	7.4
Income received by people aged < 16 (HY110)	0.01
Taxes on wealth (HY120)	22.6
Regular inter-household cash transfer paid (HY130)	7.1
Net income components at personal level	% of persons 16+ having received an amount
Employee cash or near cash income (PY010)	36.1
Net non-cash employee income (PY021)	0.9
Cash benefits or losses from self-employment (PY050)	15.2
Pension from individual private plans (PY080)	0.1
Unemployment benefits (PY090)	3.3
Old age benefits (PY100)	21.4
Survivor's benefits (PY110)	4.4
Sickness benefits (PY120)	1.2
Disability/invalidity benefits (PY130)	1.7
Education-related allowances (PY140)	0.2
Gross monthly earnings for employees (PY200)	32.1

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
Mean Equivalised disposable income	17,611	12,916
Risk of poverty threshold by household type: one person household	1,757	1,688
Risk of poverty threshold by household type: household with 2 adults and 2 dependent children	2,964	2,793
Relative median at-risk-of-poverty gap by age and gender	3,967	3,667
Risk of poverty rate by most frequent activity and gender	14,212	10,988
Risk of poverty rate by household type	17,552	12,884
Risk of poverty rate by tenure status	16,691	12,414
Risk-of-poverty rate by age and gender before all transfers	17,611	12,916
Risk-of-poverty rate by age and gender before all transfers (including pensions)	17,611	9,877
S80/S20 quintile share ratio	6,942	6,072
Gini coefficient	17,611	8,867

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		14,895	14,788	12	2	30	58	5	0
%		100.0	99.3	0.1	0.0	0.2	0.4	0.0	0.0
	Rotation 1								
Total		4,088	4,062	7	0	8	9	2	0
%		100.0	99.4	0.2	0.0	0.2	0.2	0.0	0.0
	Rotation 2								
Total		4,326	4,273	2	0	10	38	3	0
%		100.0	98.8	0.0	0.0	0.2	0.9	0.1	0.0
	Rotation 3								
Total		3,958	3,944	2	2	6	4	0	0
%		100.0	99.6	0.1	0.1	0.2	0.1	0.0	0.0
	Rotation 4								
Total		2,523	2,509	1	0	6	7	0	0
%		100.0	99.4	0.0	0.0	0.2	0.3	0.0	0.0

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

	Total	RB260=1	RB260=2	RB260=3	RB260=4	RB260=5
Total	14,788	11,533	1,141	926	6	1,182
%	100.0	78.0	7.7	6.3	0.0	8.0
Rotation 1						
N	4,062	2,993	450	288	2	329
%	100.0	73.7	11.1	7.1	0.0	8.1
Rotation 2						
N	4,273	3,323	210	371	0	369
%	100.0	77.8	4.9	8.7	0.0	8.6
Rotation 3						
N	3,944	3,332	282	34	4	292
%	100.0	84.5	7.2	0.9	0.1	7.4
Rotation 4						
N	2,509	1,885	199	233	0	192
%	100.0	75.1	7.9	9.3	0.0	7.7

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 to household questionnaire	
Mean	16.05
Maximum	60
Minimum	5
PB120-Minutes to complete the personal questionnaire	
Mean	19.43
Maximum	60
Minimum	10
Mean of inteview durarion	56.95

3. COMPARABILITY

T 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 2010; the income reference period is the year 2009.

The period for taxes on income and social insurance contributions

This is also fixed twelve-month period, namely the previous calendar year. For SILC 2010 the period is the year 2009

The reference period on taxes on wealth

The reference period on taxes on wealth is the previous calendar year (2009).

The lag between the income reference period and current variables

The income reference period is the previous calendar year (year 2009) and the current variables refer to the fieldwork period (April - June 2010). Therefore the lag is at minimum 3 months and at maximum 6 months.

Total duration of the data collection of the sample

The interviews were carried out starting 1 April and ending 30 June 2010.

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 mount 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 2010 (based on their income of the year 2009).

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 <u>only</u> 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 t 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 marker, 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 assesement method and the stratidication 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)

- o *Number of rooms*
- o **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 statitification 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 2008. 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 Euorostat (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	3.4	87.6	-	-	9.0	-	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 2009 and SILC 2010 by main income component

In general. in mean household disposable income of the reference years (2009 and 2010) there has been an increase (3.1%) observed. where the taxable household income was increased by 2.9%. 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 2009 and SILC 2010 by main income component

Income component	%
HY020	3.1
HY022	2.6
HY023	2.1
PY010N	1.5
PY050N	0.8

4.2 Comparison of structural indicators from EU-SILC 2010 and HBS 2009

- The **risk-of-poverty indicator** has been calculated from the HBS 2009 data and has been found to be the same as the one of EU-SILC 2010, being approxomately 20%.

- The **poverty threshold** is 7,178 €, while according to the HBS 2009 data i̇ is 7,120€.

- Also, **indicator S80/S20** is 5.8, while for the HBS 2008 it has been estimated to 5.5. **Gin**i **indicator** is 33.1 and 32.7, respectively.

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

In HBS 2009, the 19,6% of total population is at risk of poverty, when the indicator of poverty only takes into consideration consumption expenditure coming from purchases,. Nevertheles, this relative percentage drops to 15,3% when all types of consumption expenditures are taken into consideration (account), irespective 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 2009/ SILC 2010*
Euro

HBS 2009	SILC 2010
At-risk-of-poverty threshold (Consumption expenditure (purchases))	At-risk-of-poverty threshold (Disposable income)
7,120	7,178

Tabl 60. *At-risk-of-poverty rate. HBS 2009/ SILC 2010*
%

HBS 2009	SILC 2010
At-risk-of-poverty threshold (Consumption expenditure (purchases))	At-risk-of-poverty threshold (Disposable income)
19.6	20.1

4.3. Significant differences in some indicators between EU- SILC 2010and 2009

Table 61 displays significant differences existing in some indicators of EU-SILC 2010 and EU-SILC 2009. The differences between indicators cannot totally be explained. However. it should be noted that:

- Concerning the increase of the at risk poverty indicator at-risk-of-poverty rate by household type (Three or more adults with dependent children), it can be attributed to the variable having no high frequency and as a result the changes from year to year may be due to the sample process (see the estimated CV=13.7).
- Concerning the increase poverty rate by household type (Single male), it is due to the the sample process (see the estimated CV= 4.3).
- Concerning the decrease of the at risk poverty indicator at-risk-of-poverty rate by household type (Two adults with two dependent children), it can be attributed to targeted (see the estimated CV=11.2).
- Concerning the decrease of poverty of households before social transfers_male 65 + it is due to the the sample process (see the estimated CV=2.0).

Table 61. Significant differences in some indicators between SILC 2009 and SILC 2010

Indicators	Differences 2008/09	CV (%)
A_GE3_DCH (Three or more adults with dependent children)	Inrcease c.10.7 (from 18.6 to 29.3)	13.7
A1M (Single male)	Increase. c 3.3 (from 23.0 to 26.3)	*4.3*
A2_2DCH (Two adults with two dependent children)	Decreαse c. 2.1 (from 22.4 to 20.3)	11.2
At-risk-of-poverty rate before social transfers _male _65+	Derceace c. 3.1 (from 84.3 to 81.2)	2.0

4.3. Comparison of income target variables – EU SILC 2009 and 2010

Table 62. Comparison of income target variables – EU SILC 2009 and 2010

	EU SILC 2009 (mean)	EU SILC 2010 (mean)	Sums 2009 (in million Euros)	Sums 2010 (in million Euros)
Total disposable household income (HY020)	23,394.73	24,224.38	96,250	99,924
Total disposable household income before social transfers except old-age and survivor's benefits (HY022)	22,612.22	23,318.94	93,030	96,189
Total disposable household income before social transfers including old-age and survivor's benefit (HY023)	16,815.56	17,288.63	69,181	71,314
Income from rental of a property or land (HY040N)	1,078.46	1,043.30	4,436	4,304
Family related allowances (HY050N)	164.21	153.93	675.56	634,97
Social exclusion not elsewhere classified (HY060N)	149.46	234,40	614.89	965.24
Housing allowance (HY070N)	23.91	24.67	98.38	101.75
Regular inter-household cash transfer received (HY080N)	477.46	480.61	1,964	1,825
Interests. dividends. etc. (HY090N)	98.10	134.54	403.61	554.97
Income received by people aged < 16 (HY110)	0.07	0.07	0.298	0.293
Taxes on wealth (HY120N)	6.37	3,746	26.20	15,507
Regular inter-household cash transfer paid (HY130N)	442.70	366.83	1,821	1,513

Table 62 (continued). Comparison of income target variables – EU-SILC 2009 and 2010

	EU SILC 2009 (mean)	EU SILC 2010 (mean)	Sums 2009 (in million Euros)	Sums 2010 (in million Euros)
Net income components at personal level				
Employee cash or near cash income (PY010N)	5,023.30	5,098.93	46,817	47,159
Non cash income (PY021N)	13.93	18.02	128.33	166,701
Cash benefits or losses from self-employment (PY050N)	2,294.08	2,356.04	21,135	21,791
Pension from individual private plans (PY080N)	0.98	40.39	9.10	37,362
Unemployment benefits (PY090N)	72.30	93.43	20,894	86,411
Old age benefits (PY100N)	2,268.00	2.359.65	3,003	2,182.40
Survivor' benefits (PY110N)	326.07	336.03	46.29	310.79
Sickness benefits (PY120N)	5.03	5.09	1,061	4,711
Disability/Invalidity benefits (PY130N)	115.21	117.38	70.00	108.56
Education-related allowances (PY140N)	7.60	5.57	70.00	51.54
Gross monthly earnings for employees (PY200G)	1, 382.20	1,384.44	4,135	4,070

Table 63. Comparison of the total equivalized disposable household income(deciles). EU-SILC 2009 and 2010

Total equivalised disposable household income			
	EU-SILC 2009	EU-SILC 2010	Ghange
Number of households	4,114,150	4,124,947	0.3
Mean	13,324.12	13,692.67	2.8
Standard deviation	10,382.96	9,891,67	-4.7
10%	3,223.26	3,631,56	12.7
20%	6,056.61	6,347,53	4.8
30%	7,770.40	7,819.96	0.6
40%	9,188.60	9373.51	2.0
50%	10,475.36	10,758,95	2.7
60%	12,023.51	12,524.36	4.2
70%	13,844.19	14,486.57	4.6
80%	16,332.27	16,789.05	2.8
90%	19,984.24	20,368,31	1.9
100%	34,352.39	34,882,00	1.5

Table 64. Comparison of the total equivalized disposable household income(quintiles). EU-SILC 2009 and 2010

Total equivalised disposable household income			
	EU-SILC 2009	EU-SILC 2010	Ghange
Number of households	4,114,150	4,124,947	0.3
Mean	13,324.12	13,692.67	2.8
Standard deviation	10,382.96	9,891.67	-4.7
20%	4,641.29	5,010.49	8.0
40%	8,482.73	8,610.69	1.5
60%	11,249.98	11,640.74	3.5
80%	15,089.11	15,635.47	3.6
100%	27,168.18	27624.86	1.7

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

Table 65. 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)	3,339,665	3,012,913	The difference can be attributed either to farmers working with salaries/wages or to persons also working part time in secondary jobs and do not declare their income or to illegal immigrants
Net Cash Income benefits/Losses from self-employment (including profit/loss from unincorporated enterprise. royalties) (PY050)	1,410,390	1,419,979	
Property income ((Regular pension from Private (non-ESSPROS) schemes)) (PY080)	4,644	5,700	According to information from private insurance companies

Table 65– *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)	304,367		
Old-age benefits (PY100)	1,981,821	2,234,152	The amounts are comparable as in the survey included are also benefits except for pensions <u>and</u> also there are pensioners – farmers. invalidated. etc.- not being obligated to make tax return *approxomately
Survivor's Benefits (PY110)	402,955		
Disability/Invalidity Benefits(PY130)	161,374	200,000*	
Income from rental of a property or land (HY040)	675,827	644,870	The difference is attributed to the fact thatin administrative data is not included the rent of land
Social exclusion not elsewhere classified (HY060)	459,548	950,000	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)	83,465	100,000*	*approximately

Table 65– 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)	930,887	4,598,520	The difference is attributed to the fact that households were allowed to pay the specific tax within next year

Table 66. Comparison of income target variables and number of households and persons who receive income from each "income component". EU – SILC 2009 and 2010

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 2009	EU- SILC 2010	EU- SILC 2010/2009
Employee cash or near cash Income in reference period (PY010)	3,306,242	3,339,665	1.0
Non-cash Employee income (company car)(PY021)	76,516	82,795	8.2
Net Cash Income benefits/Losses from self-employment (including profit/loss from unincorporated enterprise. royalties) (PY050)	1,504,984	1,410,390	-6.3
Property income ((Regular pension from Private (non-ESSPROS) schemes)) (PY080)	5,213	4,644	-10.9
Unemployment Benefits (PY090)	257,061	304,367	18.4
Old-age benefits (PY100)	1,994,938	1,981,821	-0.7
Survivor's Benefits (PY110)	384,679	402,955	4.8
Sickness Benefits(PY120)	25,210	19,768	-21.6
Disability/Invalidity Benefits (PY130)	177,100	161,374	-8.9
Education-related Allowances (PY140)	20,434	17,304	-15.3

Table 66– continued. Comparison of income target variables and number of households and persons who receive income from each "income component'. EU – SILC 2009 and 2010

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 2009	EU SILC 2010	EU- SILC 2010/2009
Income from rental of a property or land (HY040)	657,982	675,827	2.7
Family/children related allowances (HY050)	504,699	459,548	-8.9
Social exclusion not elsewhere classified(HY060)	241,079	830,465	244.5
Housing allowances (HY070)	55,766	51,619	-7.4
Regular inter- household cash transfer received (HY080)	344,299	357,181	3.7
Net interest. dividends. profit from capital investments in unincorporated business (HY090)	299,471	303,752	1.4
Income received by people aged under 16 (HY110)	156	538	244.9
Regular taxes on wealth (HY120)	202,379	930,887	360.0
Regular inter- household cash transfer paid (HY130)	321,708	291,295	-9.5

- **Mean equivalized income**

The annual mean equivalized income of 2010 was calculated in the survey in 13.979.70 euro and from the Bank of Greece (estimated value) the respective amount (not including rural areas) was found to be 14,500.00 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 67. *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	173,883	171,770	1.2
Allowance for mothers having more than 3 children	42,285	80,626	-47.6
Allowance for mothers having third child	40,605	61,201	-33.7
Lump sum due to birth of third. four etc. child	7,802	2,339	233.6
Total	264,575	315,936	-16,3

- **Unemployment benefit**

Comparisons have been made for regular unemployment benefit with administrative data (approximately 277,954). while the survey were found 285,537 persons.

- **Social solidarity for pensioners**

As far as the social solidarity benefit for pensioners is concerned. according to administrative data 252,124 persons (information of the main insurance scheme IKA) received it in 2010 (EU-SILC 2010), while from the survey the relative number is 186,520 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 2010 and HBS 2009) making thus the survey robust.

Table 68. Variable PL031: "Self-defined current activity status". %

Self-defined current activity status	EU-SILC 2010	LFS 2010
At work (Full + Part time)	48.0	47.6
Unemployed	7.2	6.4
Non economically active	44.8	46.0

Table 69. Variable PL060: "Number of hours usually worked per week in main job".%

	EU-SILC 2010	LFS 2010
Number of hours usually worked per week in main job	39.5	40.1

Table 70. Variable PL130: "Number of persons working in the local unit". %

Number of persons working in the local unit	EU-SILC 2010	LFS 2010
1 person	16.5	17.8
2 persons	15.2	14.7
3 persons	5.7	8.1
4 persons	4.2	5.3
5 persons	4.5	4.2
6 persons	2.5	2.4
7 persons	1.5	1.3
8 persons	1.7	1.4
9 persons	0.9	0.8
10 persons	2.3	1.6
11-19 persons	12.3	10.4
20-49 persons	8.4	7.0
50 persons or more	16.9	10.6
Don't know but fewer that 11 persons	2.4	5.7
Don't know but more than 10 persons	5.2	8.7

Table 71. PL040: "Status in employment" %

Status in employment	EU-SILC 2010	LFS 2010
Self employed with employees	6.0	8.0
Self employed without employees	22.8	22.0
Employee	64.9	64.5
Family worker	6.3	5.4

Table 72. PE040: "Highest ISCED level attained".%

Highest ISCED level attained	EU-SILC 2010	LFS 2010
Never attended any level of education	4.6	2.5
Primary education	24.3	31.1
Lower secondary education	11.4	12.6
Upper secondary education	32.9	29.0
Post secondary non tertiary education	5.2	6.5
First stage of tertiary education	21.2	18.0
Second stage of tertiary education	0.5	0.3

Table 73. PL050 : 'Occupation'. %

Occupation	EU-SILC 2010	LFS 2010
Legislators and senior officials-Corporate managers	7.5	10.0
Physical. mathematical. engineering science and other professionals	12.0	15.2
Physical. engineering science associate professionals and other associate professionals	7.2	8.8
Office clerks and customer services clerks	12.2	10.7
Personal and protective services workers. models. salespersons and demonstrators miscellaneous	14.0	14.4
Skilled agricultural and fishery workers	15.9	11.6
Extraction and building trades workers. other craft and related trades workers Metal machinery and related trades workers. Precision. handicraft. printing and related trades workers	14,7	12.8
Stationary-plant and related operators. drivers and mobile plant operators. machine operators and assemblers	6.3	7.2
Sales and services elementary occupations. agricultural. fishery and related labourers in mining. construction. manufacturing and transport	8.9	7.7
Armed forces	1.2	1.4

Table 74. PL111: "Economic activity". %

Economic activity	EU-SILC 2010	LFS 2010
Agriculture, hunting, forestry and fishing	11.3	12.5
Mining and quarring	0.2	0.3
Manufacturing	9.8	10.9
Electricity,gas,steam and airconditioning	0.7	0.6
Water supply: sewerage, waste management and remediation	0.5	0.7
Construction	7.2	7.5
Wholeshale and retail trade:repair of motor vehicles and motorcycles	18.5	18.1
Transportation and storage	4.7	6.8
Accommodation and food service activities	6.1	4.6
Information and communication	2.1	2.0
Financial and incurance activities	3.4	2.6
Real estate activities	0.2	0.1
Professional scientific and technical activities	5.7	4.9
Administrative and support service activities	2.5	1.7
Public administration and defence;compulsory social security	9.5	8.5
Education	8.6	7.5
Human health and social work activities	5.9	5.6
Arts, entertainment and recreation activities	1.3	1.1
Other service activities	1.7	2.0
Activities of households as employers	0.1	2.1

Table 75. Household by size. %

Households type	HBS 2009	EU-SILC 2010	LFS 2010
One person household	20.2	20.3	26.7
Two persons household	28.2	28.2	30.8
Three persons household	21.1	21.1	19.6
Four persons household	28.0	27.1	17.2
Five persons household	1.8	2.7	4.2
More than six persons household	0.7	0.5	1.4

Table 76. HH021: "Tenure status". %

Tenure status	HBS 2009	EU-SILC 2010
Owner	79.0	77.6
Tenant	21.0	22,4

Table 77. HH081: "Bath or shower in dwelling".%

Bath or shower in dwelling	HBS 2009	EU-SILC 2010
Yes	97.8	98.9
No	2.2	1.1

Table 78. HH091: "Indoor flushing toilet for sole use of household".%

Indoor flushing toilet for sole use of household	HBS 2009	EU-SILC 2010
Yes	98.1	98.4
No	1.9	1.6

Table 79. HH010: "Dwelling type". %

Dwelling type	HBS 2009	EU-SILC 2010
Detached house	32.4	32.8
Semidetached house	8.8	8.2
Apartment or flat	58.7	58.9
Some other kind of accommodation	0.0	0.0

Table 80. "Non monetary household deprivation". %

Non monetary household deprivation	HBS 2009	EU-SILC 2010
Telephone(HS070)	99.5	99.3
Colour TV(HS080)	98.7	99.7
Computer(HS090)	46.6	51.9
Washing machine(HS100)	95.8	95.8
Car(HS110)	66.6	73.2

Table 81. Variable PL015: "Have you ever worked" (for persons not working but having worked in the past) . %

Have you ever worked	EU-SILC 2010	LFS 2010
Yes	66.3	58.3
No	33.7	41.7

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 2.4 while the one from the LFS is 0.8.

Table 82. Variable PL120: "Number of persons working less than 30 hours per week". %

Working less than 30 hours per week	EU-SILC 2010	LFS 2010
Number of persons working less than 30 hours per week	13.3	13.6

Table 83. Variable PL140: "Type of contract". %

Type of contract	EU-SILC 2010	LFS 2010
Permanent job / work contract of unlimited duration	78.0	87.2
Temporary job/work contract of limited duration	22.0	12.8

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 0.6 while that of SILC 2.7.

Table 84. Comparison of labour participation. %

Age	Total		Male		Female	
	LFS	EU SILC	LFS	EU SILC	LFS	EU SILC
15-19 years	0.8	1.0	0.9	1.0	0.7	.9
20-24 years	5.8	6.0	5.5	5.4	6.3	6.9
25-29 years	12.6	12.9	11.8	12.1	13.6	13.9
30-34 years	14.2	14.6	14.1	14.5	14.5	14.6
35-39 years	14.2	14.6	13.9	14.1	14.5	15.2
40-44 years	15.2	14.3	14.7	14.6	15.8	13.9
45-49 years	12.4	12.0	12.0	12.0	13.1	11.9
50-54 years	11.3	10.9	11.9	11.6	10.3	10.0
55-59 years	7.7	8.7	8.5	9.1	6.5	8.1
60-64 years	4.2	3.8	4.7	3.9	3.5	3.7
65 years +	1.6	1.3	1.9	1.6	1.2	.9

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.

REFERENCES

1   **Regulation (EC) no 1177/2003 of the European Parliament and of the council of 16 June 2003. concerning Community statistics on income and living conditions (EU-SILC). Office Journal of the European Union. L 165. volume 46. Brussels. 2003**

2   **Quality evaluation criteria and content of the intermediate and final quality report of EU-SILC instrument. Commission** regulation (EC) No 28/2004.

3   **Updated definitions of EU-SILC instrument. Commission** regulation (EC) No 1980/2003

4   **Fieldwork aspects and the imputation procedures of EU-SILC instrument.** Commission regulation (EC) No 1981/2003

5   **Sampling and racing rules of EU-SILC instrument.** Commission regulation (EC) No 1982/2003

6   **List of target secondary variables of EU-SILC instrument relating to the Intergenerational transmission of poverty.** Commission regulation (EC) No 16/2004

7   **List of target primary variables of EU-SILC instrument. Commission** regulation (EC) No 1983/2003

8   **Description of target variables.** doc EU-SILC 65/04. European Commission. Eurostat. Directorate E: Social and regional statistics and geographical information system. Unit E-2: Living conditions. 2004

9   **Common Cross-sectional EU indicators based on EU-SILC; the gender pay gap.** doc EU-SILC 131-rev/04. Working Group on Statistics on Income and Living Conditions 29-30 March 2004. Eurostat. Luxembourg

10   **Algorithms to compute Overarching Indicators based on EUSILC and adopted under the Open Method of Coordination (OMC)** doc EU-SILC LC/16/07/EN. 2007. Eurostat. Luxembourg

11 **Doc. EU-SIL 133/04 : Income in EU-SILC: NET/GROSS/NET CONVERSION**. 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 2010 list of target secondary variables on intra-household sharing of resources

ANNEX I. Intra-household sharing of resources

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

1. Units

The seven compulsory variables relating to the regime and management of household finances are asked at household level. All the other variables included in this module are to be asked at personal level and have the current situation as reference period. They relate to two different types of units. The variables related to the contribution to the common household budget, access to a bank account, the ability to decide about expenses, time use and expenditure shall be provided for each current household member or, if applicable, for all selected respondents aged 16 years old and over living in a household with at least two persons aged 16 years old and over. The variables related to decision-making (both specific and general) and to the length of cohabitation of the partners shall be provided for each current household member or, if applicable, for all selected respondents aged 16 years old and over living with a partner.

2. Modes of data collection

For variables asked at household level (section 1 in the list below), the mode of data collection is personal interview with the household respondent. For variables asked at individual level (sections 2 and 3 in the list below), the mode of data collection is personal interview with all current household members aged 16 years old and over or, if applicable, with the household selected respondent. Owing to the characteristics of the information to be collected, only personal interviews (proxy interviews as an exception for persons temporarily absent or incapacitated) are allowed.

4.   Reference period

All target variables relate to the current situation as reference period.

5. Transmission of data to Eurostat

The target secondary variables on 'intra-household sharing of resources' will be sent to Eurostat either in the household data file (H) or in the personal data file (P) after the target primary variables.

Tables

1. Household item questions asked at household level

1.1. Items asked at household level

Table 1. HA010 – Regime of household finances. %

We treat all incomes as common resources	81.7
We treat some incomes as common resources and the rest as private resources	15.6
We treat all incomes as private resources of the person receiving them	2.7
We do not receive any income in the household	0.1

Table 2. HA020 – Management of common household finances. %

One or more household members	97.6
At least one person inside the household and at least one person outside the household is involved in managing the common household finances	2.2
No person inside the household and at least one person outside the household is involved in managing the common household finances	0.1
There are no common household finances	0.1

Table 3. HA030 – ID number of person 1 managing the household's finances

Personal identification number of person 1	3,249,637

Table 4. HA040 – ID number of person 1 managing the household's finances

Personal identification number of person 2	2,093,407

Table 5. HA050 – ID number of person 1 managing the household's finances

Personal identification number of person 3	135,548

Table 6. HA060 – ID number of person 1 managing the household's finances

Personal identification number of person 4	25,117

Table 7. HA070 – ID number of person 1 managing the household's finances

Personal identification number of person 5	0

1.2 Items asked at individual level

Table 8. PA010 – Proportion of personal income kept separate from the common household budget. %

All my personal income	14.4
More than half of my personal income	6.2
About half of my personal income	5.7
Less than half of my personal income	18.1
None	35.6
The respondent has no personal income	20.0

Table 9. PA020 – Access to a bank account. %

Yes	60.7
No	39.3

Table 10. PA030 – Decision-making on everyday shopping. %

More me	27.9
Balanced	46.3
More my partner	25.7

Table 11. PA040 – Decision-making on important expenses to make for the child(ren). %

More me	14.2
Balanced	74.2
More my partner	11.6

Table 12. PA050 – Decision-making on expensive purchases of consumer durables and furniture. %

More me	11.4
Balanced	72.9
More my partner	9.4
Never arisen	6.3

Table 13. PA060 – Decision-making on borrowing money. %

More me	8.2
Balanced	54.1
More my partner	7.1
Never arisen	30.7

Table 14. PA070 – Decision-making on use of savings**.** %

More me	7.3
Balanced	63.5
More my partner	6.0
We do not have (common) savings	4.4
Never arisen	18.7

Table 15. PA080 – Decision-making — general. %

More me	11.9
Balanced	78.1
More my partner	9.9

Table 16. PA090 – Ability to decide about expenses for your own personal consumption, your leisure activities and hobbies.%

Yes, always or almost always	52.2
Yes, sometimes	30.8
Never or hardly ever	17.0

Table 17. PA100 – Ability to decide about purchases for children's needs (including giving them pocket money). %

Yes, always or almost always	46.2
Yes, sometimes	44.6
Never or hardly ever	9.2

Table 18. PA110 – Length of cohabitation of the partners

Number of years	25.95

Table 19. PA120 – Time spent commuting to and from work

Hours per week	4.19

Table 20. PA130 – Time spent on leisure

Hours per week	10.99

Table 21. PA140 – Time spent on household work, child care and care for other dependants

Hours per week	14.74

Table 22. PA150 – Money spent per month for own use

National currency per month	153.06

Table 23. PA160 – Money spent per month for children by the person interviewed

National currency per month	261.06

ANNEX 2. Questionnaires

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