

Single Integrated Metadata Structure (SIMS)

Country: Greece

Compiling agency: ELSTAT

Domain name: Household Budget Survey 2015

ELSTAT metadata

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2. Introduction	Top
<p>The Household Budget Survey (HBS) is a national survey collecting information from a representative sample of households, on households' composition, members' employment status, living conditions and, mainly, focusing on their members' expenditure on goods and services as well as on their income.</p>	

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3.1 Metadata last certified	24/3/2017
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4.1 Data description	
<p>The Household Budget Survey (HBS) is a national survey collecting information from a representative sample of households, on households' composition, members' employment status, living conditions and, mainly, focusing on their members' expenditure on goods and services as well as on their income. The expenditure information collected from households is very detailed. That is, information is not collected on the basis of total expenditure categories like "food", "clothing - footwear", "health ", etc., but separately for each expenditure, for example, white bread, fresh whole milk, fresh beef etc, footwear for men, footwear for women etc., services of medical analysis laboratories, pharmaceutical products etc.</p> <p>The main purpose of the HBS is to determine in detail the household expenditure pattern in order to revise the Consumer Price Index. Moreover, the HBS is the most appropriate source in order to:</p> <ul style="list-style-type: none"> • Complete the available statistical data for the estimation of the total private consumption, • Study the households' expenditures and their structure in relation to their income and other economic, social and demographic characteristics, • Analyze the changes in the living conditions of the households in comparison with the previous surveys, • Study the relationship between households purchases and receipts in kind, • Study low income limits in the different socio-economic categories and population groups and • study the changes in the nutritional habits of the households. 	
4.2 Classification system	
<p>The HBS results are produced in accordance with the relevant International Classification Systems. Referring to:</p> <p>a) Regions, the NUTS II Classification, was used</p> <p>b) Level of education, the ISCED 2011 was used</p> <p>c) Occupation, ISCO 08 was used</p> <p>d) Economic activity, since the year 2008 the NACE (Rev. 2) has been used</p> <p>e) COICOP- HSB (2013).</p>	

4.3 Sector coverage

The HBSurvey collects very detailed information. That is, information is not collected on the basis of total expenditure categories like "food", "clothing - footwear", "health ", etc., but separately for each expenditure, for example, white bread, fresh whole milk, fresh beef etc, footwear for men, footwear for women etc., services of medical analysis laboratories, pharmaceutical products etc.

Through this survey information was collected on the value of purchases and the receipts in kind of the households as well as on the different characteristics of the households and their dwellings, aiming, mainly, to the revision of the Consumer Price Index compiled by ELSTAT.

The two-stage area stratified sampling was applied for the 2015 Household Budget Survey. 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. The final sample size is estimated 6,150 households and close enough to the sample size of the year 2014.

4.4 Statistical concepts and definitions

1. Household

Household is defined as either one person living alone or a group of persons, not necessarily related, living at the same address with common housekeeping. The household members share household's expenses or benefit from them due to lack of income.

2. Household members

Household members can either **usually reside** in the household or being **temporarily absent**.

Individuals usually residing in the household are considered the individuals that during the last 6 months have spent most of their time in the specific household.

Individuals temporarily absent from the household, **either** because they were in another private household **or** in a collective household (e.g. hospital, elderly house, etc.) are considered as household members and are registered in the questionnaire.

1. Persons usually resident, related to other members
2. Persons usually resident, not related to other members
3. Resident boarders, lodgers, tenants
4. Visitors
5. Line-in domestic servants, au-pairs
6. Persons usually resident, but temporarily absent from the dwelling (for reasons of holiday travel, work, education or similar)
7. Children of the household being educated away from home
8. Persons absent for long periods, but having household ties: persons working away from home
9. 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 consider this address to be their main residence.

(d) Category 9:

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

4.5 Statistical unit

Households and household members.

4.6 Statistical population

The survey covers all the private households throughout the country, irrespective of their size or socio-economic characteristics. The following were excluded from the survey:

- Institutional households of all types (boarding houses, elderly homes, hospitals, prisons, rehabilitation centers, camps, etc.)
- Households with more than five lodgers and
- Households with foreigners serving in diplomatic missions.

4.7 Reference area

The whole Greek territory.

4.8 Time coverage

Annual survey.

The first Household Budget Survey (HBS) was conducted during the years 1957/1958, its duration was one (1) year and the sample size was, approximately, 2500 households in the urban areas of the country.

On April 1963 the survey started being conducted not only in the Urban areas but also in Semi-Urban and Rural areas as well (i.e. Municipalities and Communes) having population under 10.000 inhabitants. In the concrete survey were included 3.755 households in these areas. Its duration was one (1) year and was continued up to year 1972 but with a smaller sample size.

The next HBSurveys were conducted during the years 1974, 1981/82, 1987/88, 1993/94, 1998/99 and 2004/05 and covered all the areas of the country (urban, semi-urban and rural). The sample size was 7.500 households in the survey of year 1974 and varied from 6.000 to 6.800 households for each one of the next five surveys. The duration of the above-mentioned surveys was one (1) year.

From year 2008, taking into consideration the national needs for the Consumer Price Index compilation and in order to have higher reliability for being able to produce comparable statistics used by the National Accounts Division, it was decided the annual and continual conduct of the survey with a sample of approximately 6.200 households in the whole Greek territory. In 2015 the sample size was 6.150 households in order to have results of higher reliability at NUTS2 level.

4.9 Base period

The year of survey conduct, 2015.

5 Unit of measure

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Most indicators are reported as rates. Some are reported in other units (e.g. numbers, monetary units, etc.)

6 Reference period

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As **Reference periods** are considered the time intervals having a specific starting and ending date, to which expenditure and income of the household refer. In order to reduce sampling errors and difficulties in recalling the relevant details, various reference periods were used in the survey, according to the frequency of the types of expenditure incurred by the households or the received income.

Reference periods are considered: (a) **the fourteen (14) days of the survey** for the daily expenditure on cleaning products (detergents, soaps, toilet paper, etc.), pharmaceutical products (drugs, alcohol, etc.), household members' personal expenditure (cigarettes, newspapers, magazines, tickets, tissues, etc.), restaurants, taverns, cafés, etc. (b) **One Month, two months, three months, four months, six months or year**, for payments made at regular intervals for services e.g.: electricity, water, phone bills, communal charges, etc. circulation fees and car insurance, rent for main or secondary or countryside dwelling, (c) **The last 30 days, last 3, 6 or 12 months**, etc. prior to the end of the household survey (including the 14 days of the survey) for expenditure on furniture, electric devices, etc., expenditure on clothes and footwear, medical appliances, etc., expenditure on health and education, on holidays, income from salaries, self-employment, farming, pensions, social benefits, etc.

7 Institutional mandate

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7.1 Legal acts and other agreements

The legal framework concerning the organization and operation of ELSTAT is as follows:

- Law 3832/2010 (Government Gazette No 38, Issue A): "*Hellenic Statistical System Establishment of the Hellenic Statistical Authority (ELSTAT) as an Independent Authority*", as amended by article 90, paragraphs 8 and 9 of the Law 3842/2010 (Government Gazette No 58, Issue A): "*Restoration of fiscal justice, confrontation of tax evasion and other provisions*", by article 10 of the Law 3899/2010 (Government Gazette No 212, Issue A): "*Urgent measures for the implementation of the assistance program of the Greek Economy*", by article 45 of the Law 3943/2011 (Government Gazette No 66, Issue A): "*Combating tax evasion, staffing of auditing services and other provisions falling within the competence of the Ministry of Finance*", by article 22 paragraph 1 of the Law 3965/2011 (Government Gazette No 113, Issue A): "*Operations Reform of the Consignment and Loan Fund, Public Debt Management Agency, Public Enterprises and Government bodies, the establishment of the General Secretary of Public Property and other provisions*" and by article 51 of the Law 4021/2011 (Government Gazette No 218, Issue A): "*Enhanced measures for the supervision and restructuring of Credit Institutions – Regulation of issues of financial nature – Ratification of the European Financial Stability Facility (EFSF) Framework-Agreement and its amendments and other provisions.*"
- Regulation (EC) No 223/2009 of the European Parliament and of the Council, on the European statistics (Official Journal of the European Union L 87/164).
- Article 14 of the Law 3470/2006 (Government Gazette No 132, Issue A): "*National Export Council, tax regulations and other provisions*".
- Article 3, paragraph 1c of the Law 3448/2006 (Government Gazette No 57, Issue A): "*For the further use of information coming from the public sector and the settlement of matters falling within the responsibility of the Ministry of Interior, Public Administration and Decentralization*".
- European Statistics Code of Practice adopted by the Statistical Programme Committee on 24 February 2005 and promulgated in the Commission Recommendation of 25 May 2005 on the independence, integrity and accountability of the national and Community statistical Authorities, after its revision, which was adopted on 28 September 2011 by the European Statistical System Committee.
- Presidential Decree 226/2000 (Government Gazette No 195, Issue A): "*Organization of the General Secretariat of the National Statistical Service of Greece*".
- Articles 4, 12, 13, 14, 15 and 16 of the Law 2392/1996 (Government Gazette No 60, Issue A): "*Access of the General Secretariat of the National Statistical Service of Greece to administrative sources and administrative files, Statistical Confidentiality Committee, settlement of matters*".

concerning the conduct of censuses and statistical works, as well as of matters of the General Secretariat of the National Statistical Service of Greece.

The 2015 HBS has been conducted upon the decision of the President of ELSTAT in a sample of private households throughout the country.

[Legal framework](#)

7.2 Data sharing

Not applicable.

8 Confidentiality

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8.1 Confidentiality policy

The issues concerning the observance of statistical confidentiality by the Hellenic Statistical Authority (ELSTAT) are arranged by articles 6, 7 and 8 of the Law 3832/2010, as amended by article 90, paragraph 8 of Law 3842/2010 and by article 10 of Law 3899/2010, as well as by article 8 of Law 2392/1996, which was brought back into force, in accordance with article 90, paragraph 8 of Law 3842/2010.

Furthermore, ELSTAT disseminates the statistics in compliance with the statistical principles of the European Statistics Code of Practice and in particular with the principle of statistical confidentiality.

[Legal framework](#)

8.2 Confidentiality – data treatment

- ELSTAT protects and does not disseminate data it has obtained or it has access to, which enable the direct or indirect identification of the statistical units that have provided them by the disclosure of individual information directly received for statistical purposes or indirectly supplied from administrative or other sources. ELSTAT takes all appropriate preventive measures so as to render impossible the identification of individual statistical units by technical or other means that might reasonably be used by a third party. Statistical data that could potentially enable the identification of the statistical unit are disseminated by ELSTAT if and only if:
 - a) These data have been treated, as it is specifically set out in the Regulation on Statistical Obligations of the agencies of the Hellenic Statistical System (ELSS), in such a way that their dissemination does not prejudice statistical confidentiality or
 - b) The statistical unit has given its consent, without any reservations, for the disclosure of data.
- The confidential data that are transmitted by ELSS agencies to ELSTAT are used exclusively for statistical purposes and the only persons who have the right to have access to these data are the personnel engaged in this task and appointed by an act of the President of ELSTAT.
- The Statistical Confidentiality Committee (SCC) operating in ELSTAT, examines issues referring to the observance of statistical confidentiality. Within its competence is to recommend on:
 - the level of detail at which statistical data can be disseminated, so as the identification, either directly or indirectly, of the surveyed statistical unit is not possible;
 - the anonymization criteria for the microdata provided to users;
 - the granting of access to researchers on confidential data for scientific purposes.

9 Release policy

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9.1 Release calendar

29/6/2016

9.2 Release calendar access

[Press Releases Calendar](#)

9.3 User access

The users are being informed for survey data announcement through EL.STAT's website. Statistics must be developed, produced and disseminated in a neutral manner, so that all users must be given equal treatment, in conformity with the statistical principles as set out and further elaborated in the European Statistics Code of Practice.

10 Frequency of dissemination

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Annual.

11 Dissemination format

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11.1 News release

The date of Press Release is the 5th of October 2016.

[PRESS RELEASE \(Household budget survey 2015\)](#)

11.2 Publications

Publication "The Living Conditions in Greece" provides, both in greek and english languages, the latest statistics illustrating living conditions in Greece, among which data from the Household Budget Survey.

The publication is updated with the latest data the first Friday of January, March, May, July, September and November.

Relative links: [Living conditions in Greece](#)

11.3 On-line database

On line database, for the time being, does not exist

11.3.1 Data tables - consultations

Information is not available.

11.4 Micro-data access

The micro data files are provided to the users after submitting their application form in the competent section. In particular, they must be addressed to the Statistical Information and Publications Division in the following e-mail: data.dissem@statistics.gr.

We mention, also, that the users are being informed for the survey data announcement through EL.STAT's website. Statistics must be developed, produced and disseminated in a neutral manner so that all users are given equal treatment, in conformity with the statistical principles as set out and further elaborated in the European Statistics Code of Practice.

[Statistical data request](#)

[Data for scientific purposes](#)

11.5 Other

[Digital Library](#)

11.5.1 Metadata – consultations

Information is not available.

12 Accessibility of documentation

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12.1 Documentation on methodology

Detailed methodological information for the survey will be uploaded on ELSTAT's official website.

[Publications](#)

12.1.1 Metadata completeness - rate

12.2 Quality documentation

Quality documentation for the survey results will be included in the Quality Report.

[Quality documentation](#)

13 Quality management

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13.1 Quality assurance

In order to improve the comparability of the survey results among Member-states, the data quality of the Household Budget Survey is ensured and achieved on one hand by the compliance with the statistical principles in the European Statistics Code of Practice and on the other hand by using a common, standard questionnaire.

13.2 Quality assessment

The sample size was such that would provide results of high accuracy. Consequently, the sample size was representative of the reference population for the survey and all the appropriate measures were taken into account in order to minimize the errors during the survey conduct.

14 Relevance

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14.1 User needs

The main purpose of the HBS is to determine in detail the household expenditure pattern in order to revise the Consumer Price Index. Moreover, the HBS is the most appropriate source in order to:

- Complete the available statistical data for the estimation of the total private consumption,
- Study the households' expenditures and their structure in relation to income and other economic, social and demographic characteristics of the households,
- Analyze the changes in the living conditions of the households as compared to previous surveys,
- Study the relation between households' purchases and receipts in kind,
- Study low income limits in the different socio-economic categories and population groups,
- Study the changes in the nutritional habits of the households in the country.

The main user of the survey is Eurostat, as well users coming from:

- Ministries and public administrations, that use the data for economic and social policy planning purposes
- Universities (teachers/graduate and post graduate students), research organizations, e.t.c.
- Private firms

The public that often gets the information via mass media in publications made by the statistical offices.

14.2 User satisfaction

In general, there are steps taken to promote data use. These are:

- Consultation from data users
ELSTAT is collecting formal and informal feedback from HBS' data main users.
- Dissemination of aggregated HBS data accomplished in several ways:
 1. Electronic publication of tables
 2. Print-out tables

3. Dissemination of tables and metadata (statistical and methodological contents, questionnaires, etc.) via internet ("www.statistics.gr")

4. Press releases

- Promotion of users micro data base

A users' micro data base has been constructed, using the anonymisation criteria adopted also in the EU-SILC project. This database is available to anyone interested, for free. The database includes all existing in the questionnaires variables while the expenditure and income have been transformed on a monthly basis. Another micro data base has also been constructed containing the list of all Eurostat proposed variables.

Relevant users' survey is conducted by the relevant Division :

[User Satisfaction Survey Results](#)

14.3 Completeness

The variables and data coming from the survey have been judged as having completeness and analysis in a high quality grade.

15 Accuracy and reliability

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15.1 Overall accuracy

Because of the fact that the Household Budget Survey is a sampling survey, we have sampling and non-sampling errors. During the previous years, the overall accuracy of the survey was good enough. For 2015 the initial sample size was **6,251** households (sampling fraction $1/\lambda$ **1,5%**) equally distributed within the year, so as to have four (4) equally dependent samples, corresponding to the four quarters of the year. The achieved final sample size was **6,150** households. The total number of sampling areas amounted to **1,023**.

More details are presented in the following tables.

Table 1: Response rate (%)

HBS 2015	Achieved net sample (n)	Response Rate (R %)
EL	6,150	64.1

Table 2: Number of households for which an interview is accepted for the database.

Quarter breakdown and total

Quarter	Households	%
1	1,540	25.0
2	1,551	25.2
3	1,522	24.7
4	1,537	25.0
Total	6,150	100.0

Table 3 : Number of persons who are members of the households for which the interview is accepted for the database.

Quarter group breakdown and total

Quarter group	Households' members	%
1	3,744	24.9
2	3,840	25.5
3	3,711	24.7
4	3,739	24.9
Total	15,034	100.0

Table 4 : Response by quarter group and total

Quarter group	%
1	70.8
2	72.7
3	70.4
4	46.5
Total	65.1

15.2 Sampling error

In order to measure the sampling errors we calculated coefficients of variation for the main survey variables. Their values are within the acceptance limits.

We also mention that for an estimate R , the coefficient of variation is defined as:

$$CV(R) = \frac{\sqrt{v(R)}}{R} * 100$$

Detailed Information on the sample design and the estimation process is described in the below table while we present the coefficients of variation for the 12 main categories of goods and services.

Table. Coefficients of Variation for the 12 main categories of goods and services

Goods and Services	Coefficient of variation %
Total	1.5
Food	1.2
Alcoholic beverages and tobacco	2.6
Clothing and footwear	3.1
Housing	1.2
Durables	3.3
Health	3.0
Transport	3.1
Communications	1.5
Recreation and culture	3.8
Education	5.4
Hotels,cafes and restaurants	2.6
Miscellaneous goods and services	2.5

15.3 Non-sampling error

The non-sampling errors can be divided into the following categories:

- Non response errors
- Elaboration errors
- Measurement errors

Non-response errors In order to decrease the percentage of non-response, the following were implemented:

- An introductory / informative letter was sent almost one month before the survey launch in order to inform the households that they had been selected for the survey and asking for their cooperation and reliable information provision as well.
- Whenever the interviewer couldn't find, during the visit, the surveyed household, he/she left the particular letter with the date of the next visit or his/her telephone number for contact (at least three visits at the surveyed household).

Elaboration errors Quality and quantity checks were made on the data base for the elaboration errors correction.

Measurement errors These errors were faced with the following ways:

- Provision of appropriate guidelines
- Training
- Checks made by ELSTAT (logical/completeness/flow etc)

15.3.1 Coverage error

HBS is a household survey 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, there are two frames used, which are:

- the frame containing the PSUs (areas) and
- 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 problem that may arise is more possible to be related with the frame of the PSUs. However, any such problems are corrected with the use of the calibration procedure used in the weights calculation as described in the respective paragraph.

15.3.1.1 Over-coverage – rate

15.3.1.2 Common units – proportion

15.3.2 Measurement error

1-The questionnaire

For building up the questionnaires we consulted the questionnaires of previous HBS Surveys. The structure of the questionnaires is almost similar to these ones. Also, in order to finalize the questionnaires, we took into account any observations having been made on the questionnaires of the previous years, together with the experience from other projects and the suggestions of data main users.

2-The interviewers and their training

All the interviewers attended a one-day training course before starting the fieldwork. A manual was distributed and presented during the training. A “general guidelines” manual” containing information about the objectives of the survey, the organization of it, legal and administrative aspects related to it, fieldwork aspects (how to contact the household, how to introduce oneself, who answers which questions, time delays, e.t.c.) and the content and correct completion of the questionnaires. It seems though that some interviewers don't use the exact wording of the questions. Others skip questions, especially subjective ones. Also, when the respondents didn't provide the figures, the interviewers completed/imputed the figures themselves.

3-The respondents

Household respondents didn't update the diaries of daily expenditure daily. This problem was solved by having almost everyday communication (by phone or visit) with the households. Also, the household respondents provided the expenditure made mostly for goods and not the quantities of the specific items. In these cases the missing quantities were imputed by the staff in the office. For purchases with reference period more than a quarter of a year, often a reminder, from the interviewee, of all the services applicable in this period, has been proved to be useful. The respondents hesitated to provide income figures and in general denied to consult their tax return, in order to provide exact / correct amounts. Income from interests and dividends from unincorporated businesses were in general not provided from the households, resulting thus in a significant underestimation of it.

4-Errors in routing

There were no errors made in the routing.

5-Skills tested before starting the fieldwork

98% of the interviewers were external collaborators of ELSTAT, experienced with household surveys. The remaining --% were permanent personnel of ELSTAT.

15.3.3 Non response error

Non-response errors are errors due to an unsuccessful attempt to obtain the desired information from an eligible unit. Two main types of non-response errors are considered, unit non-response and item non-response.

15.3.4 Processing error

Concerning Data Processing we mention the following:

- 1- **Checking errors** The questionnaires were checked in two stages. The first stage concerns the completeness and logical consistency of data collected, while the second concerns their correct data entry. More specifically, the officials in charge of the checks, in accordance with the interviewers' guidelines and taking into account other objective facts, checked the data among the different questionnaires and also correlated them with data of households living in the same region, in order to verify the correctness of the answers. Mistakes were corrected and any unclear answers were clarified in cooperation with the interviewer or the interviewee. After that, data entry was done and massive computer checks were made. Also, with the use of appropriate computer programs, tables with the survey's data were drawn up. During all stages of fieldwork the interviewers were under the continuous supervision of skilled employees of the Unit in charge of ELSTAT
- 2- **Codification** The nomenclature used for the survey was the more detailed COICOP-HBS 2000. The codification of questions relating to occupation (ISCO), economic activity of the local unit (NACE) and nationality was done by experienced personnel, according to ISCO-08 and NACE rev.2.
- 3- **Other checks and problems** Several plausibility checks have been made. During the data processing of raw data ACCESS-2000, SPSS and Oracle (golden 32) were used.

15.3.5 Model assumption error

16 Timeliness and punctuality

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16.1 Timeliness

HBS cross-sectional data are available in the form of tables, usually, 180 days after the end of the data collection period.

16.2 Punctuality

There was no time lag in the provision of survey results

17 Comparability

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17.1 Comparability - geographical

Since common variable definitions and data production methods have been implemented not only in all geographical regions of the country but also among all EU countries, no geographical comparability problems have been caused.

17.1.1 Assymetry for mirror flows statistics – coefficient

17.2 Comparability over time

In the HBSurvey, longitudinal comparability exists since the years 1974, 1981/82, 1987/88, 1993/94, 1998/99, 2004/05, 2008, 2009, 2010, 2011, 2012, 2013 and 2014.

18 Coherence

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18.1 Coherence cross-domain

The coherence of two or more statistical outputs refers to the degree to which the statistical processes, by which they were generated, used the same concepts and harmonized methods. A comparison with external sources for all income target variables and the number of persons who receive income from each „income component“ will be provided, where the Member States concerned consider such external data to be sufficiently reliable.

The risk-of-poverty indicator produced from HBS 2015, as well other important measures, was compared with the respective measures produced from EU-SILC 2015. Also comparisons were made with LFS results. No significant differences were observed in the results as one can see in the next paragraphs and tables. We also note that comparing HBS with EU-SILC survey for example, one should keep in mind the differences between the concepts and methodologies since discrepancies may arise by the fact that they serve different purposes. HBS targets household expenditure whereas EU-SILC targets household income.

18.1.1 Coherence – sub annual and annual statistics

Coherence - sub annual and annual statistics (EU-SILC: at risk of poverty)

Table1: At-risk-of-poverty threshold: 2015 EU-SILC –HBS

2015 EU - SILC	2015 HBS
4.512,00	4.985,50

Table 2: At-risk-of-poverty rate: 2014 EU-SILC –HBS %

2015 EU - SILC	2015 HBS
21.4	19.7

Table 3: Income quintile share ratio S80/S20: 2014 EU-SILC –HBS

2015 EU - SILC	2015 HBS
6.5	5.6

Coherence – EU-SILC The next tables present the coherence between 2015 HBS and 2015 EU-SILC.

Table 4:“Tenure status”. %

Tenure status	2015 HBS	2015 EU - SILC
Owner	82.8	78.2
Tenant	17.2	21.8

Table 5 : “Bath or shower in dwelling”.%

Bath or shower in dwelling	2015 HBS	2015 EU - SILC
No	1.1	0.5
Yes	98.9	99.5

Table 6: "Indoor flushing toilet for sole use of household" .%

Indoor flushing toilet for sole use of household	2015 HBS	2015 EU - SILC
No	1.3	0.4
Yes	98.7	99.6

Table 7 : "Dwelling type". %

Dwelling type	2015 HBS	2015 EU - SILC
Detached house	33.4	32.8
Semidetached house	9.3	9.9
Apartment or flat	57.2	57.8
Some other kind of accommodation	0.1	0.0

Coherence – Labour Force Survey The following tables prove that the most quality target variables are in coherence with variables collected from LFS – 2nd quarter of 2015 making thus the survey robust.

Table 8 : "Self-defined current activity status" %

Self – defined current activity status	2015 HBS	2015 EU-SILC	2015 LFS
At work (full and part time)	38.6	38.2	38.2
Unemployed	13.5	14.6	14.2
Economically non active	47.9	47.2	47.7

Table 9: "Number of hours usually worked per week in main job" %

Number of hours usually worked per week in main job	2015 HBS	2015 EU-SILC	2015 LFS
	41.1	42.3	42.0

Table 10 "Status in employment" %

Status in employment	2015 HBS	2015 EU-SILC	2015 LFS
Self employed with employees	5.3	5.8	6.8
Self employed without employees	24.1	24.6	23.9
Employee	67.6	65.8	64.8
Family worker	3.0	3.8	4.4

Table 11 : "Highest ISCED level attained".% n

Highest ISCED level attained	2015 HBS	2015 EU-SILC	2015 LFS
Never attended any level of education	10.3	5.4	4.3
Primary education	20.9	21.8	23.9
Lower secondary education	10.5	11.3	12.4
Upper secondary education	29.3	32.8	31.5
Post secondary non tertiary education	6.1	5.6	6.5
First stage of tertiary education	20.6	20.4	19.6
Second stage of tertiary education	2.3	2.9	1.9

Table 12 : Household by size % n

Households type	2015 HBS	2015 EU-SILC	2015 LFS
One person household	25.7	25.7	29.3
Two persons household	29.5	29.5	32.1
Three persons household	19.8	19.8	18.0
Four persons household	17.6	17.5	15.5
Five persons household	2.4	5.2	3.8
More than six persons household	5.1	2.3	1.3

Table 13: "Number of persons working less than 30 hours per week" % n

Number of persons working less than 30 hours per week	2015 HBS	2015 EU-SILC	2015 LFS
	9.5	12.5	11.4

Table 14 : "Type of contract" % n

Type of contract	2015 HBS	2015 EU-SILC	2015 LFS
Permanent job/work contract of unlimited duration	85.9	75.4	88.1
Temporary job/work contract of limited duration	14.1	24.6	11.9

Table 15: Occupation ISCO 08

Occupation ISCO 08	2015 HBS	2015 EU-SILC	2015 LFS
Armed forces	1.5	1.3	1.6
Legislators, senior officials and managers	3.1	1.7	3.3
Professionals	19.5	13.9	18.6
Technicians and associate professionals	7.9	7.1	8.2
Clerks	14.3	11.1	10.5
Service workers and shop and market sales workers	22.5	20.8	23.7
Skilled agricultural and fishery workers	10.0	15.1	12.0
Craft and related trades workers	9.5	12.0	9.6
Plant and machine operators and assemblers	5.4	6.1	5.8
Elementary occupations	8.4	10.9	7.1

Table 16: Economic activity NACE rev.2

Economic activity NACE rev.2	2015 HBS	2015 EU-SILC	2015 LFS
Agriculture, hunting, forestry and fishing	10.4	12.6	12.9
Mining and quarrying	.2	0.3	0.3
Manufacturing	8.3	9.2	9.3
Electricity,gas,steam and airconditioning	.8	0.6	0.7
Water supply: sewerage,waste management and remediation	.2	0.5	0.6
Construction	5.2	4.4	4.0
Wholesale and retail trade;repair of motor vehicles and motorcycles	17.4	18.6	18.3
Transportation and storage	5.5	4.8	4.7
Accommodation and food service activities	9.5	8.5	9.0
Information and communication	1.9	2.5	2.0
Financial and insurance activities	3.3	2.5	2.4
Real estate activities	.1	0.2	0.2
Professional scientific and technical activities	4.6	5.1	5.8
Administrative and support service activities	1.3	2.2	2.4
Public administration and defence: compulsory social security	10.1	9.2	8.7
Education	8.5	8.2	8.1
Human Health and social work activities	6.5	6.2	5.9
Arts,entertainment and recreational activities	1.5	1.5	1.3
Other service activities	2.3	2.3	2.1
Activities of households as employers	2.0	0.8	1.3

18.1.2 Coherence – National Accounts

18.2 Coherence - internal

As mentioned above, no significant differences are observed among these surveys carried out by EL.STAT. More details on coherence will be presented in the 2015 HBS Quality Report.

19 Cost and burden

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The burden concerns the required time, which must be spent for data provision on behalf of the interviewer. Nevertheless, there is not possibility for any further time relief.

The total cost of the survey amounted to 350.000 euros (external collaborators & staff).

20 Data revision

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20.1 Revision policy

The revision policy concerns either on the survey data or on the survey itself (ie. the questionnaire, the sample etc), and takes place taking into consideration the users' needs for any further statistical information.

20.2 Revision practice

Since all current users' need have been recognized, in order to achieve longitudinal comparability for the survey among the Member- States, all the national questionnaires are being re-designed carefully. In conclusion, the data revision takes place after implementing checks materialized either by Eurostat or EL.STAT and after correcting data inconsistencies within either the same period or longitudinally as well.

21 Statistical processing

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21.1 Source data

Sample design /population under survey.

The two - stage area stratified sampling was adopted for the HBS survey based on the rotational integrated design method and on the Population Census of 2011 as well. This method was judged as the most appropriate for both cross –sectional and longitudinal comparisons. The primary sampling units (PSUs) are the areas (one or more unified city blocks), the secondary sampling units selected in each primary unit are the households and their members. In each Region (NUTS 2), the stratification of primary units was conducted by allocating the Municipalities and Communes according to the degree of urbanization (urban, semi-urban, and rural regions). Except for the two former Major City Agglomerations (Athens and Thessaloniki), the produced strata according to the degree of urbanization are:

Areas	Stratum	Urbanisation
Urban	1	Municipal communities with 10,000 inhabitants or more
Semi-urban	2	Municipal or local communities with 2,000 to 9,999 inhabitants
Rural	3	Local communities up to 1,999 inhabitants

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 former Major City Agglomerations account for 37% of the total population and for even larger percentages in certain socio-economic variables. The total initial sample size of households was amounted to 6.150 sampling fraction 1,5‰) and was equally divided within the reference year, so as to have four (4) different equivalent independent samples which correspond to four quarters of the year.

1st stage of sampling In this stage, from any stratum (crossing of Region with the degree of urbanisation), primary units were drawn. The number of draws is approximately proportional to the population size of the stratum (number of households in the last population census of the year 2011).

2nd stage of sampling In this stage from each primary sampling unit (selected area) the sample of secondary units (households) was selected. Actually, in the second stage we drew a systematic sample of dwellings. However, in most cases, one household corresponds to each dwelling. If in the selected dwelling lives more than one household, all of them were interviewed. The sampling frame containing the secondary units (households) in the selected sampling primary units was **updated** before the selection of households. The total number of the primary sampling units was 1023. Due to non-response, the actual total number of primary sampling units was 1018.

21.2 Frequency of data collection

The frequency of data collection is continual spread within the reference year.

21.3 Data collection

The method of data collection is the Paper-Assisted Personal Interview (PAPI).

Questionnaires

[Household questionnaire 2015](#)

[Individual Questionnaire for members aged more than 14 years old \(2015\)](#)

[Individual Questionnaire for members aged less than 14 years old \(2015\)](#)

The following separate questionnaires were used: a) *Household Questionnaire (register, dwelling information, expenditure) - «HBS:1»* b) *Personal questionnaire for members aged 14 and more (personal expenditure, employment, income) - «HBS:2»*. c) *Personal questionnaire for members aged less than 14 years old (personal expenditure) - «HBS:3»* In order to be conducted the survey as best as possible, auxiliary documents were used (i.e The map of the sampling areas and the Sampling Frames (constructed and updated)/ Diary in which must be written down the goods and services bought from the surveyed household within the concrete reference period (their quantities and prices as well)/ Introductory letter coming from the Central Service and informing the household that has been selected for the survey and asking for its cooperation and the reliable information provision as well/ comments of interviewer concerning the quality of cooperation with the surveyed household/ Doc with codes concerning: goods and services /dwelling and household characteristics/income/Regional Offices/countries e.t.c.)

Way of Questionnaires' Completion

a) Duration of the survey Conduct period

The total duration of the survey is 14 continuous days (working and not working)

b) Timetable for the questionnaires' completion

In order to be completed the survey questionnaires the below procedure should be followed by the interviewer :

a) During the **first day** must 1) be ensured the approach and reliable cooperation with the surveyed household 2) be completed the Part A of the HBS .1 which concerns the Household Synthesis

(demographic data, nationality and main economic activity) and data concerning education and health of household members. In addition must be completed the second part of the HBS.2 which concerns the employment status of the household members. Finally, the Diary must be given to the surveyed households in order to be written down the daily purchases for goods and services during the next 13 days (the first day is included as well). Additionally, the way of their completion must be explained to all the household members aged 7 +.

b) In order to be facilitated the daily cooperation between the interviewer and the household members, during the next **12 days** must be gradually completed both the Parts B and JB of the HBS.1 (they concern the main dwelling's data and the income sources of the household respectively) and the expenditures of the Parts C- JA of the HBS.1 by allocating them within the next 2 weeks. In addition, must be checked the expenditure which have been written down by the household members in the Diaries and be transferred either to the HBS.1 or to the HBS.2 (part A: personal expenditure) or to the HBS .3.

During **the last day** (14th day) must be written down all the expenditure of the 13th day and must be completed the Part C of the HBS.2 (concerns: the income of the household members) as well. Finally all the mistakes must be corrected and all the cases in abeyance must be settled.

21.4 Data validation

Data validation is implemented by conducting qualitative and quantitative tests based on:

- Longitudinal checks on raw data (with data of previous years)
- Comparisons of key variables with variables / data of other statistical sources

Calculation of sampling errors, also used as a criterion for the final validation of data

21.5 Data compilation

Below there is a description of the weighting, estimation and imputation processes.

Weighting procedure

Design Weight

The household design weights, , were calculated using the formula below (inverse of probabilities of selection):

$$1/n_h \cdot 1/P_{hi} \cdot M_{hi}/m_{hi} = DW_{hi}$$

where 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 stratum h P_{hi} = the selection probability of the hi primary unit.

Let W_{hij} (>0) stand for the survey weight attached to the sample ultimate unit (household) of order j ($j=1, \dots, m_{hi}$), belonging to the selected area of order i , of stratum h . The W_{hij} is the product of three factors: a) the inversion of the inclusion probabilities of the ultimate sampling units, b) the inversion of the response rate r_h in stratum h and c) a factor t_{hij} , which makes weighted sample estimates to conform to external total values (values from known totals from censuses, administrative sources, population projections etc). The weight W_{hij} is defined

as follows:

$$W_{hij} = p_{hij}^{-1} \cdot r_h \cdot t_{hij}^{-1}$$

where:

p_{hij} : Inclusion probability of the hij ultimate unit

r_h : Response rate of the ultimate units in stratum h

t_{hij} : Factor that adjusts the total of households and individuals to external data

Inclusion probabilities of households

A two-stage sampling scheme was applied, according to which in the final strata the areas were selected with probabilities proportional to their sizes and within the selected areas the households were selected with equal probabilities. Then the inclusion probabilities of households are defined, as follows:

$$p_{hij} = n_h \cdot P_{hi} \cdot m_{hi} / M_{hi} \quad p_{hij}^{-1} = 1 / n_h \cdot 1 / P_{hi} \cdot M_{hi} / m_{hi}$$

where:

$P_{hi} = X_{hi} / X_h$: Selection probability of the area hi

X_{hi} : The number of households that belong to the hi area, according to the population census of 2011

X_h : The number of households that belong to stratum h , according to the population census of 2011

M_{hi} : The number of households in the hi area that are recorded in the updated sampling frame

m_{hi} : The initial sample size of households in the hi area that were selected from the M_{hi} units

Non-response adjustments Within each final stratum non-response adjustment of the responding households was carried out by the inverse of the response rate, so as to adjust for non-responding cases in that stratum.

Adjustments to external data The adjustment to external data was conducted. This involves the calibration of the household weights in conjunction with external sources. It enables the distribution of auxiliary variables at both household and individual level to coincide with the corresponding population distribution of the external data. The auxiliary variables used at household level are the household size and at individual level the gender and age (ten years age groups). By applying calibration: a) the estimated households by size conform to the number of households of the reference period resulting from the projection of the trend observed between the population 2001 and 2011 and b) the estimated population by gender and age conforms to the population projections for the reference period. These projections are based on vital statistics (population census, births, deaths, migration) and the Population Census 2011.

Estimation and imputation

Estimation of survey characteristics The general procedure applied in order to estimate the

survey characteristics (mean household final consumption expenditures), as well as their standard errors and coefficients of variation is presented below.

Let y_{hij} be the value of the characteristic y of the sampling household of order j , in the area.

h_i . Moreover, Y_h stands for the stratum total, which results when adding the characteristic y for all households or household members included in the stratum h :

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

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

where

w_{hij} is the final (adjusted) weight of the household.

For estimating the characteristic y in country level, all stratum estimates

\hat{Y}_h should be added, as follows :

$$\hat{Y} = \sum_h \hat{Y}_h$$

Estimation of a ratio

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

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

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

$$\hat{X} = \sum_h \hat{X}_h$$

The form of the estimator R (mean household consumption expenditure) on the basis of the two-stage design is:

$$R = \hat{Y}/\hat{X} = \frac{\sum_H \sum_{n_h} \sum_{m_{hi}} w_{hij} \cdot y_{hij}}{\sum_H \sum_{n_h} \sum_{m_{hi}} w_{hij}}$$

Variance estimation

In order to estimate the variances of the required characteristics (mean household consumption expenditure for the various categories of expenditures), the following steps should be implemented :

a. For every selected PSU i of the stratum h , we calculate the quantities T_{hi} and F_{hi} using the following formulas:

$$T_{hi} = n_h \sum_{j=1}^{m_{hi}} W_{hi.j} \cdot y_{hij}$$

and

$$F_{hi} = n_h \sum_{j=1}^{m_{hi}} W_{hij}$$

b. Since T_{hi} and F_{hi} have been calculated for every PSU i ($i = 1, 2, \dots, n_h$) of the stratum h , then

$\hat{V}(Y_h)$ is calculated as:

$$\hat{V}(Y_h) = 1/n_h \cdot (n_h - 1) \cdot \left\{ \sum_{i=1}^{n_h} T_{hi}^2 - 1/n_h \cdot \left[\sum_{i=1}^{n_h} T_{hi} \right]^2 \right\}$$

and

$\hat{V}(Y)$ (country level) is calculated by adding $\hat{V}(Y_h)$ for all strata h , that is :

$$\hat{V}(Y) = \sum_h \hat{V}(Y_h)$$

Correspondingly, $\hat{V}(X_h)$ is given by

$$\hat{V}(X_h) = 1/n_h \cdot (n_h - 1) \cdot \left\{ \sum_{i=1}^{n_h} F_{hi}^2 - 1/n_h \cdot \left[\sum_{i=1}^{n_h} F_{hi} \right]^2 \right\} \text{ and}$$

$\hat{V}(X)$ (country level) is calculated by adding $\hat{V}(X_h)$ for all strata h , that is

$$\hat{V}(\hat{X}) = \sum_h \hat{V}(\hat{X}_h)$$

The mean household consumption expenditure is defined as :

$$\hat{R} = \hat{Y} / \hat{X}$$

The variance of R can be calculated using the formula below

$$\hat{V}(\hat{R}) = \hat{V}(\hat{Y}) + \hat{R}^2 \cdot \hat{V}(\hat{X}) - 2 \cdot \hat{R} \cdot \text{Cov}(\hat{Y}, \hat{X}) / \hat{X}^2$$

where

$$\text{Cov}(\hat{Y}_h, \hat{X}_h) = 1/n_h \cdot (n_h - 1) \cdot \left\{ \sum_{i=1}^{n_h} T_{hi} \cdot F_{hi} - 1/n_h \cdot \left[\sum_{i=1}^{n_h} T_{hi} \right] \left[\sum_{i=1}^{n_h} F_{hi} \right] \right\}$$

and

$$\text{Cov}(\hat{Y}, \hat{X}) = \sum_h \text{Cov}(\hat{Y}_h, \hat{X}_h)$$

Also in order to estimate the variances for mean household consumption expenditure for certain population subsets, the procedure described above is used. For that case, we also defined domain indicator variables in order to represent the specific population subsets (domains) required, e.g. (employment status of the household reference persons = manual worker in industry and services, non manual worker in industry and services, e.t.c.)

Let,

- the specific population subset (the domain) be denoted U_d , where $U_d \subset U$ (whole population)
- the size of U_d be denoted N_d

then the value for the j th element (household or household reference person) in the selected area i of the final stratum h of the domain indicator variable is denoted as:

$$y_{hij} = \begin{cases} y_{hij} & \text{if } i \in U_d \\ 0 & \text{otherwise} \end{cases}$$

U_{hij}

$$w_{hij} = \begin{cases} w_{hij} & \text{if } i \in U_d \\ 0 & \text{otherwise} \end{cases}$$

With the use of the domain indicators above and the procedure and formulas already described, we estimated the characteristics and the sampling errors of the mean household final consumption expenditure of the specific sub-populations.

Concerning **Substitution** we can mention the following

Dwellings being substituted

Main dwellings being occupied were substituted if the cooperation with the household became

impossible due to any of the following reasons:

- Incapacity of the interviewee
- Refusal
- Temporary absence
- Other reasons

Dwellings with which contact was not possible due to objective incapacity (ill, deaf-mute, etc.) or due to temporary absence, were substituted. In the cases of refusal, any possible effort should be made in order to persuade the household to cooperate. In case the interviewers did not succeed in this, the dwelling was substituted. Finally in the cases of temporary absence, the interviewee should visit the households at least three times.

- ***Dwellings not being substituted***

The dwellings that have been selected for the survey and have not been substituted, are:

- Empty dwellings
- Secondary or country dwellings, whether occupied or not
- Dwellings with members in diplomatic missions (e.g. ambassadors, other countries armed forces personnel, etc.)

- **Way of Substitution**

The substitution of households not co-operating should be as less arbitrary as possible. The interviewee should substitute the non-responding households with others having similar basic characteristics, e.g. similar synthesis, same type of ownership, same household's head profession. That is, each non-responding household should be substituted with the next household, from the list, having as much as possible, similar characteristics, except for the last household in the list. The way of substitution was checked by "HBS: 5".

21.5.1 Imputation – rate

20%

21.6 Adjustment

21.6.1 Seasonal adjustment

22 Comment

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