

Eurostat metadata

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1. Contact

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1.1. Contact organisa tion	HELLENIC STATISTICAL AUTHORITY - ELSTAT
1.2. Contact organisa tion unit	Population and Labour Market Statistics Division Special Household Surveys Section (G53)
1.5. Contact mail address	Pireos 46 & Eponiton 185-10 Piraeus

2. Statistical presentation

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2.1. Data description

The main focus of the Household Budget Survey (HBS) is Consumption Expenditure, though

Household Characteristics and to some extent Income, are also covered. HBS micro-data can be used to measure economic well-being.

1. Title of the survey

Household Budget Survey

2. Title of the survey at a National level

Έρευνα Οικογενειακών Προϋπολογισμών

3. Year of the survey

2015

4. General comments about the survey

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.

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 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.

Legal basis

The 2015 HBS was conducted by ELSTAT, upon decision of the President of ELSTAT, on a sample of 6,150 private households throughout the Country. The data were fully harmonised with the survey data of other EU Member States.

Survey history

The 2015 HBS is the sixteen survey conducted in Greece. The first Household Budget Survey was conducted by the NSSG during the interval April 1957 - March 1958, on a sample of 2,500 households over the total number of households of the urban areas in the Country. The survey continued in the next years and until 1972, but in a smaller scale, in a smaller sample of households over the total number of households of the cities with 30,000 inhabitants and over.

In April 1963, the NSSG conducted simultaneously with the survey in urban areas a large-scale survey in semi-urban and rural areas of the Country, that is in municipalities and communes with less than 10,000 inhabitants. The survey lasted one year, 3,755 households of the pre-mentioned areas were surveyed, and continued to be conducted until the year 1972, but in smaller sample of households.

During the years 1974, 1981/82, 1987/88, 1993/94, 1998/99 and 2004/2005 Household Budget Surveys were conducted covering all Country areas/regions. in samples of approximately 7,500 households for the first one and approximately 6,000 to 6,800 for the other five each one lasting for one year.

From 2008 it was decided for national needs (revision of the Consumer Price Index with greater reliability comparable statistics for the needs of National Accounts), that the survey should be annual and consistent namely it should have duration one year and take place every year.

More information on the survey is available on the webpage of the Hellenic Statistical Authority (ELSTAT) www.statistics.gr. Section: Population and Social Conditions > Family Budget.

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2.2. Classification system

Name	Version Used
COICOP	COICOP-HBS(2013)
NUTS	NUTSII
ISCED	ISCED - 2011
ISCO	ISCO -08
NACE	NACE (REV.2)
Other	

2.3. Coverage - sector

The HBS 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.

2.4. Statistical concepts and definitions

1. Consumption expenditure

For the purpose of measuring living conditions the essential reference for the HBS is the concept of household consumption expenditure, that is, the expenditure incurred by private households on individual consumption goods and services.

For further details concerning Consumption Expenditure, the reader is referred to the HBS methodology:

(http://ec.europa.eu/eurostat/cache/metadata/Annexes/hbs_esms_an1.pdf)

Consumption Expenditure approaches applied

Actual final consumption	Final consumption	
X	X	X

2. Income

Income components reported

Income in kind from employment	Income in kind from non-salaried activities	Imputed rent	Monetary net income	Total net income
X	X	X	X	X

3. Imputed rent

Method applied to calculate Imputed Rent

Self-assessment	Stratification	Log-linear regression	Heckman regression	User cost	Other (indicate)
X					

Variables used

4. Other definitions, explanations, comments

Self-assessment is made by the interviewee. The interviewer checks and corrects, where necessary, the answer taking into account the locality, mean actual rent per locality, number of rooms in the dwelling, area of the dwelling, year of construction and quality of the building/dwelling. Data are collected both for main and secondary residence.

2.5. Statistical unit

The basic unit of data collection and analysis in an HBS is the household. A household is a social unit which meets one or more conditions of “living together” in addition to sharing a common accommodation.

1. Definition of Household used:

Household defined as persons sharing

Accommodation	Expenditure	Income	Family or emotional ties
X	X	X	X
Other			
.....			

2. Definition of Household member used:

Household membership

Usually resident, related to other members	Usually resident, not related to other members	Resident border, tenant	Visitor	Live-in domestic servant, au pair	Resident, absent from dwelling in the short-term	Children in household in education away from home	Long-term absence with household ties: working away from home	Temporary absence with household ties: in hospital, nursing home or other institution

X	X	X	X	X	X	X	X	X
Other								
.....								

3. Definition of Reference Person

In the context of the EU HBS surveys, a 'Reference person' is the Household member (≥ 16) who contributes most to the total income of the household.

Definition of Reference Person used, <u>if different from the above</u>

2.6. Statistical population

All the HBSs aim to measure private household expenditure. In this respect, collective households (elderly homes, military barracks, boarding schools, jails...) are normally excluded from the survey.

List of exceptions
The survey covered all the private households throughout the Country, irrespective of their size or social composition. <i>The following were excluded from the survey:</i> • Institutional households of all types (hotels, hospitals, boarding houses, elderly homes, prisons, etc.) • Households with more than five lodgers are considered as such. • Households with foreigners serving in diplomatic missions.

2.7. Reference area

NUTSII

2.8. Coverage - Time

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.
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2.9. Base period

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 non 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, soap, toilet paper, etc.), pharmaceutical products (drugs, alcohol, etc.), household members' personal expenditure (cigarettes, newspapers, magazines, tickets, tissues, etc.), restaurants, taverns, café, 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, 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, etc.

3. Statistical processing

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3.1. Source data

Main sampling characteristics

Ultimate sampling unit	Private Household	X
	Other	
Probability sampling	X	
Other type of sampling scheme		
Number of sampling stages	The two-stage area sampling was applied for the Household Budget Survey 2015. 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.	
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) Regions corresponding to the European NUTS 2 level. The two former major city agglomerations of Greater Athens and Greater Thessaloniki constitute separate major geographical strata. So, the number of geographical strata in the first level is 15. - The second level of stratification entails grouping municipal and local communities within each NUTS 2 Region by degree of urbanization, i.e., according to their population size. The scaling of urbanization was finally designed in three groups:	
		Municipal or Local Communities with 10.000 inhabitants or more
		Municipal or Local Communities with 2.000 to 9.999 inhabitants
		Local Communities up to 1.999 inhabitants

	The number of the final strata in the thirteen (13) geographical regions was 39. 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. Thus, the total number of strata of the survey was 79. The two Major City Agglomerations account for about 38% of total population and for even larger percentages in certain socio-economic variables.												
Over-sampling of special domains	No												
Sampling frame	The last population census of the year 2011.												
Description	Type of sampling design 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. Stratification and sub-stratification criteria 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:												
	Table: Strata – degree of urbanization <table><tr><th>Areas</th><th>Stratum</th><th>Urbanization</th></tr><tr><td>Urban</td><td>1</td><td>Municipal communities with 10,000 inhabitants or more</td></tr><tr><td>Semi-urban</td><td>2</td><td>Municipal or local communities with 2,000 to 9,999 inhabitants</td></tr><tr><td>Rural</td><td>3</td><td>Local communities up to 1,999 inhabitants</td></tr></table> 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 about 37% of the total population and for even larger percentages in certain socio-economic variables. The total number of strata coming from the survey design was amounted to 79. The total initial sample size of households was amounted to 6.284 (sampling fraction 1.42‰) and was equally divided within the reference year, so as to have four (4) different equivalent independent samples which correspond to the four quarters of the year. Sample selection schemes 1st stage of sampling In this stage, from any final stratum h (crossing of Region with the degree of	Areas	Stratum	Urbanization	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
Areas	Stratum	Urbanization											
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											

urbanisation), n_h primary units were drawn. The number n_h of draws was approximately proportional to the population size X_h of the stratum (where X_h is defined as the number of households in the last population census of the year 2011).

In each final stratum attention was paid so as the primary units drawn, to be a multiple of four. Thus, the sample of primary units can be divided in 4 sub-samples of equal size. The reference period for the household data of each one of the 4 sub-samples corresponds to each one of the 4 quarters of the year, in order to allow for full representativeness of the household consumption expenditures.

Each area unit (primary sampling unit) of the stratum had a selection probability proportional to its size. So, if X_{hi} was the number of households, according to the 2011 population census, of the unit in the sample of order i , then the selection probability of the unit was:

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

The total number of the primary sampling units was 1.023. Due to non-response, the actual total number of primary sampling units was 1.004.

Additionally, 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 secondary units (households) was selected. Actually, in the second stage we drew a systematic sample of dwellings. However, in most cases, there is one to one relation between household and dwelling. If in the selected dwelling live 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.

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 the m_{hi} households has the same chance to be included in the survey, equal to: $\frac{m_{hi}}{M_{hi}}$.

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

sampling units will be
$$m_h = \sum_{i=1}^{n_h} m_{hi}.$$

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

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

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

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

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

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

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

$$\begin{aligned} \frac{1}{n_h} \cdot \frac{1}{P_{hi}} \cdot \frac{M_{hi}}{m_{hi}} &= \lambda \Rightarrow \\ \frac{1}{n_h} \cdot \frac{1}{P_{hi}} \cdot \delta_{hi} &= \lambda \Rightarrow \\ \delta_{hi} &= \frac{M_{hi}}{m_{hi}} = \lambda \cdot n_h \cdot P_{hi} \end{aligned}$$

Renewal of the sample: rotational groups

The survey is under the simple rotational design scheme. 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 the 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.

3.2. Frequency of data collection

From 2008 onwards the HBS has been conducted annually

3.3. Data collection

1. Reference year

2015

2. Survey instruments

Diaries

Traditional paper

Y

Computer-based Diary	
Web-Diary	
Cash Register Receipts	
Receipt Scanner	
Metadata from Customer loyalty cards?	
Other (e.g. Administrative Data)	

Recording unit

Household	X
Household Member	X

Recording period

The recording period used is 14 days. The sample's distribution over space and over time is controlled simultaneously. The sample is divided into 48 parts for this purpose.

Items covered in the diaries

All types of expenditure

3. Collection of substantive information

Instrument	Questionnaires (household/individual)
Recording unit	Household and its individuals
Items covered	Generally speaking, background characteristics are covered in the first interview and income questions in the second one.

4. Additional remarks about Data collection

Data collection involves a combination of (a) one or more interviews, and (b) diaries or logs maintained by households and/or individuals, generally on a daily basis. The information collected pertains to the household as a whole and to its individual members. Using individual-type diary special (expanded) version for the member mainly responsible for purchases for the household, normally the housewife as well as each individual of the household.

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

In particular the following separate questionnaires were used:

1. Household Questionnaire (register, dwelling information, expenditure) - «HBS:1»
2. Personal questionnaire for members aged 14 and over (personal expenditure, employment, income) - «HBS: 2».
3. Personal questionnaire for members aged less than 14 years old (personal expenditure) - «HBS:3

In order to conduct the survey as properly as possible, auxiliary documents were used:

1. **Map** of the sampling areas and the Sampling Frames (constructed and updated)
2. **Diary** where the goods and services bought from the surveyed household within the concrete reference period were written down (quantities and prices)
3. **Introductory letter** signed by the Central Service, informing the household that has been selected for the survey and asking for its cooperation and the provision of reliable information as well
4. **Document with codes** concerning: goods and services, dwelling and household characteristics, income, Regional Offices, countries etc.

Way of Questionnaires' Completion

- Duration of the survey Conduct period: The total duration of the survey is 14 continuous days (working and non-working)
- Timetable for the questionnaires' completion: In order to complete the survey questionnaires the following procedure should be followed by the interviewer:
 - a) During the **first day** the interviewer must 1) ensure the approach and reliable cooperation of the household, 2) complete 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, 3) complete Part B of the HBS.2 which concerns the employment status of the household members, 4) Provide the Diary to the households in order to write down the daily purchases for goods and services during the next 13 days (the first day is included as well) and explain to the household members aged 7+ how this should be filled-in.
 - b) In order to facilitate the daily cooperation with the household members, during the next 12 days there should be a gradual completion for both Parts B and JB of the HBS.1 (they concern the main dwelling's data and the income sources of the household respectively) and for the expenditures of the Parts C- JA of the HBS.1 by allocating them within the next 2 weeks. In addition, the expenditures written down by the household members in the Diaries should be checked and transferred to HBS.1 or to HBS.2 (part A: personal expenditure) or to the HBS.3.
 - c) During the last day (14th day) all the expenditure of the 13th day should be written down and completed in Part C of the HBS.2 (concerns: the income of the household members) as well. Finally, all mistakes should be corrected and all cases in abeyance should be settled.

Households' expenditure

As household expenditure was considered the value in cash, of the goods and services the household bought or received in kind (from own production, own store or from elsewhere) in order to cover family and social needs.

As expenditure were not considered:

- Payments increasing households' assets or reducing debts to third parties, such as purchase or extension of the house, bank deposits, loan payments, direct taxes, etc.
- Money transfers to household and non-household members.
- Occupational expenditure on tools necessary for member's job / business, fuel for professional cars, professional trips, seeds, pharmaceutical products for cultivating land, food for animals of domestic livestock, etc.
- Expenditure on medical and pharmaceutical care paid by the insurance organizations.

It should be noted that when occupational and family expenditure were common, like sharing lodgings of the family enterprise with the household, using a professional car for vacations, etc. effort has been made to separate and calculate the part of the expenditure corresponding to the household. e.g. part of expenditure for rent, electricity, water supply, fuels, circulation fees.

insurance, etc.

Ways of goods' and services' acquisition

The survey also collected information on the ways households obtained goods and services in order to cover their needs.

Goods' and services' can be acquired by the two following ways:

a) PURCHASES

• Purchases – «P»

As purchases were recorded the expenditure on goods the households acquired by paying their value "in cash or with installments",

irrespective of whether these goods were meant to cover household's needs or to be offered as gifts to other households. Also, as purchases

were recorded expenditure on services the households used by paying their value in cash or with installments.

Was not recorded under «P» expenditure on services paid by other households, the state or the employer. The specific amounts were

recorded for the households that used the services with other ways «OW» or from the employer «E».

b) RECEIPTS IN KIND

• From own production – «OP»

As receipts in kind from own production were recorded goods consumed by the households coming from own agricultural and livestock production, fishery or hunting (oil, wine, vegetables, fruits, milk, eggs, meat, cheese, wool, fish, etc.) Here were also included products collected by the

households as being free goods (e.g. wild seeds, mushrooms, firewood, etc.). Was not recorded under «OP» expenditure for the goods of the pre-mentioned cases, when those goods were offered to other households. The specific expenditure was recorded for the households that received them at consuming stage with «OW» or with

«Employer», in case the household that provided the goods was also employer.

• From own enterprise – «OE»

Here were recorded goods obtained for free from households' own store, either to cover its needs or to be offered "as gifts" to third parties (bread from own bakery, furniture made in own workshop, etc.). It should be noted that imputed rent for owners or for households providing main or second dwelling for free, was recorded as from «OE».

There were not recorded as «OE» expenditure for foodstuffs coming from household's enterprise, but were offered as "gifts" to other households. The specific expenditures were recorded to the households that consumed them as «OW» or as «E» in case some member was working in the enterprise. Also, were not recorded as «OE» services used coming from own stores or enterprises (surgeries, law offices, tuition centers, athletic halls, kindergarten, private schools, barber shops, cleaner's shop, clothes repair shop, clothes and footwear shops, car workshops, etc.)

• Other ways – «OW»

Here were recorded goods and services received "in kind" for free:

a. From other households (only services, such as rent of main or secondary dwelling provided for free or paid by third parties, electricity, water, telephone bills paid by others, etc. as well as food and beverages).

b. From the state, municipal, church authorities, insurance organizations, etc. as receipts in kind, e.g. meals, food for households with more than 3 children, toy offers from municipalities, clothes from churches, etc.

c. From abroad, e.g. food stuffs, clothes, furniture, etc.

• From the employer – «Employer»:

Here were recorded goods and services received "in kind" for free or at reduced price from their employer as payment "in kind", under the condition that they constitute net profit for the employees, meaning that the households would certainly purchase them.

There were not considered as receipt in kind. goods coming from the employer for practicing their

profession (uniforms, helmets, etc.) or in order to compensate for job's disadvantages (milk, refreshments, etc.). It should be noted that if those goods were transferred at home and were consumed by the household for its needs, they were recorded under «Employer». Finally, it should be noted that when the household received goods or services for free, the whole current value (for the good or service) was recorded, while in cases where the household received goods or services at reduced price, the amount paid by the employer was recorded under «employer» and the amount paid by the interviewee under «P».

Conditions for expenditure record

For expenditure record, the following conditions should be satisfied:

a) The realization of the expenditure within the reference period specified for the corresponding goods or services, e.g. 14 days for food stuffs, 1 month for clothing, 12 months for the consumption of durables, etc.

b) The good corresponding to the expenditure should have already been possessed by the household and the service should have been offered within the reference period mentioned, irrespectively of whether it was meant to cover its own needs or to be offered to other households. The way of possession of goods and services could have been «P» (in cash or by credit), from own enterprise «OE», from others «OW» or from the employer «Employer», e.g. expenditure on clothing was recorded if the household “possessed” them within the last 30 days (including the 14 days of survey conduction) before the survey end, even if their value would be paid in the future with installments, the expenditure on tuition fees was recorded if the service was offered in the last 12 months before the survey end, etc.

c) Goods from households' agricultural – livestock own production, fishery, woodland or hunting, should have been consumed during the reference period, e.g. the quantity of oil consumed by the household from own production, during the last 12 months, was recorded if it had not been stored. The same applies for vegetables from own vegetable garden or agricultural enterprise, meaning that only those consumed during the 14 days were recorded.

It should be noted that all the pre-mentioned criteria didn't entirely apply for regular expenditure, e.g. electricity, water, drainage, telephone bills, circulation fees, insurances, etc. In these cases, the last bill was recorded with reference period the one mentioned on it (1 month, 2 months, 3 months, 4 months, 6 months, year), e.g. electricity bill was, usually, recorded with reference the 4 month period, car's insurance with 6 or 12 months period (and usually referring to future services), circulation fees were usually recorded at 12 months period, etc.

Estimation of goods and services value

- For the purchases : In the value of goods and services obtained by the households has also been included any other expenditure necessary for them to be consumed/used, e.g. transportation, setting of electric devices, etc. When goods or services had been obtained by paying in installments or with credit card, the total value was recorded and not only the part of installments paid within the reference period.
- For the receipts in kind: The value of goods and services obtained by the households for free was self-estimated from the households or from the interviewer, based on retail prices of the closest local market.

5. National Questionnaire

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 \(2015\)](#)

<http://www.statistics.gr/en/statistics/-/publication/SFA05/2015>

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 being 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.)

3.4. Data validation

Basic Data validation workflow

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

- Longitudinal checks on raw data (checks with data of previous years)
- Comparisons of key variables with variables / data of other statistical sources
- Calculation of sampling errors is also used as a criterion for the final validation of data.

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:

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 hi area.

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:

$$\hat{Y}_h = \sum_{i=1}^{n_h} \sum_{j=1}^{m_{hi}} w_{hij} \cdot y_{hij} \quad (3)$$

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

$$\hat{Y} = \sum_h \hat{Y}_h \quad (4).$$

Estimation of a ratio

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

$$\hat{X}_h = \sum_{i=1}^{n_h} \sum_{j=1}^{m_{hi}} w_{hij} \quad (5)$$

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

$$\hat{X} = \sum_h \hat{X}_h \quad (6).$$

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

$$\hat{R} = \frac{\hat{Y}}{\hat{X}} = \frac{\sum_{h=1}^H \sum_{i=1}^{n_h} \sum_{j=1}^{m_{hi}} w_{hij} \cdot y_{hij}}{\sum_{h=1}^H \sum_{i=1}^{n_h} \sum_{j=1}^{m_{hi}} w_{hij}} \quad (7).$$

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:

$$T_{hi} = n_h \cdot \sum_{j=1}^{m_{hi}} w_{hij} \cdot y_{hij} \quad (8)$$

$$F_{hi} = n_h \cdot \sum_{j=1}^{m_{hi}} w_{hij} \quad (9).$$

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

then $V\left(\hat{Y}_h\right)$ is calculated as:

$$V\left(\hat{Y}_h\right) = \frac{1}{n_h \cdot (n_h - 1)} \cdot \left[\sum_{i=1}^{n_h} T_{hi}^2 - \frac{1}{n_h} \cdot \left(\sum_{i=1}^{n_h} T_{hi} \right)^2 \right] \quad (10)$$

and

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

$$V\left(\hat{Y}\right) = \sum_h V\left(\hat{Y}_h\right) \quad (11).$$

Correspondingly, $V\left(\hat{X}_h\right)$ is given by

$$V\left(\hat{X}_h\right)=\frac{1}{n_h \cdot\left(n_h-1\right)} \cdot\left[\sum_{i=1}^{n_h} F_{hi}^2-\frac{1}{n_h} \cdot\left(\sum_{i=1}^{n_h} F_{hi}\right)^2\right] \quad (12)$$

and

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

$$V\left(\hat{X}\right)=\sum_h V\left(\hat{X}_h\right) . \quad (13)$$

The mean household consumption expenditure is defined as

$$\hat{R}=\frac{\hat{Y}}{\hat{X}} \quad (14)$$

The variance of $\hat{R}$ can be calculated using the formula below

$$V\left(\hat{R}\right)=\frac{V\left(\hat{Y}\right)+\hat{R}^2 \cdot V\left(\hat{X}\right)-2 \cdot \hat{R} \cdot Cov\left(\hat{Y}, \hat{X}\right)}{\hat{X}^2} \quad (15)$$

where

$$Cov\left(\hat{Y}_h, \hat{X}_h\right)=\frac{1}{n_h \cdot\left(n_h-1\right)} \cdot\left[\sum_{i=1}^{n_h} T_{hi} \cdot F_{hi}-\frac{1}{n_h} \cdot\left(\sum_{i=1}^{n_h} T_{hi}\right)\left(\sum_{i=1}^{n_h} F_{hi}\right)\right] \quad (16)$$

and

$$Cov\left(\hat{Y}, \hat{X}\right)=\sum_h Cov\left(\hat{Y}_h, \hat{X}_h\right) \quad (17)$$

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:

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

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

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.

3.5. Data compilation

1. Calculation of the household design weights

Weighting procedure

For the estimation of the characteristics of the survey, the data from each person and household of the sample were multiplied by a reductive factor. The reductive factor results as product of the following three factors (weights):

- a. The reverse probability of selection of an individual, that coincides with the reverse probability of selection of a household.
- b. The reverse of the response rate of households inside the strata.
- c. A corrective factor, which is determined in such a way so that:
 - i) The estimation of persons by gender and age groups that will result by geographic region coincides with the corresponding number, which was calculated with projection for the period of survey year and was based on the Vital Statistics of Population (2011 Population Census, and births, deaths, immigration).
 - ii) The estimation of households by order of size (1, 2, 3, 4 or 5 members) and by tenure status to coincide with the estimation of the report year that was calculated with projection based on the longitudinal tendency of the 2001 and 2011 Population Census.

For more information see the formulas below:

Weighting procedure

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:

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

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:

$$p_{hij} = n_h \cdot P_{hi} \cdot \frac{m_{hi}}{M_{hi}} \Rightarrow p_{hij}^{-1} = \frac{1}{n_h} \cdot \frac{1}{P_{hi}} \cdot \frac{M_{hi}}{m_{hi}} \quad (2)$$

where:

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

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

2. Weight adjustments for non-response at household level

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.

3. Any other weight adjustments

3.6. Adjustment

Weight adjustments to external data sources (calibration)

The adjustment to external data was conducted, which involves the calibration of the household weights in conjunction with external sources. It enables the distribution of auxiliary variables on both household and individual level. The auxiliary variables used at household level are the household size and at personal level the auxiliary variable used is the distribution of population by age (five years age groups) and sex.

Applying calibration a) the estimated households by size conform to the number of households of the reference period resulting from projection of the trend observed between the population censuses of 2001 and 2011 and b) the estimated population by sex and age conforms to the population calculated by projecting data of the reference period coming from vital statistics (population census, births, deaths, migration).

4. Quality management

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4.1. 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 methodology.

4.2. Quality management - 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.

5. Relevance

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5.1. Relevance - User Needs

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.

5.2. Relevance - 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 : www.statistics.gr/el/user-satisfaction-survey.

5.3. Completeness

Variable Name	Label	Delivered
HE00	TOTAL CONSUMPTION EXPENDITURE	X
HE01	FOOD AND NON-ALCOHOLIC BEVERAGES	X
HE02	ALCOHOLIC BEVERAGES_ TOBACCO AND NARCOTICS	X
HE03	CLOTHING AND FOOTWEAR	X
HE04	HOUSING_ WATER_ ELECTRICITY_ GAS AND OTHER FUELS	X
HE042	Imputed Rents for housing	X
HE05	FURNISHINGS_ HOUSEHOLD EQUIPMENT AND ROUTINE HOUSEHOLD MAINTENANCE	X
HE06	HEALTH	X
HE07	TRANSPORT	X
HE08	COMMUNICATION	X
HE09	RECREATION AND CULTURE	X
HE10	EDUCATION	X

HE11	RESTAURANTS AND HOTELS	X
HE12	MISCELLANEOUS GOODS AND SERVICES	X
HH099	Net Income	X
HH032	Imputed rent (as Income)	X
HI11	Main Income Source	X
HI12	Main Income Source Primary/Secondary	X
HA09	Population Density-Level	X
HB05	Household Size	X
HB061	Equiv. OECD Household Size	X
HB062	Modified OECD Equiv. Household Size	X
HB074	Household Type	X
HB075	Household Type 2	X
HC04	Age in completed years of the Reference Person.	X
HC23	Socio-Econ. Situation of the Reference Person	X
HC24	Socio-Econ. Situation of the Reference Person (Aggregated Classification)	X
HD20	No. of Household members economically active	X
HQ*	Quantities Consumed variables	X
HJ00	Total consumption expenditure effected abroad	X
HJ90	Consumption expenditure on travelling and holidays abroad	X

5.3.1. Data completeness - rate

Groups of HBS 2015 variables	Total number of Variables per sub-group	Number of delivered Variables per sub-group	%
Basic variables at household level			
[HA] Identification, weighting, demographic characteristics	7	7	100
[HC] Reference Person variables	6	6	100
[HH] Income	5	5	100
[HI] Main source of the household's income	2	2	100
[HE] Household's consumption expenditure	475	475	100
[HJ] Cross border consumption expenditure	14	14	100
[HQ] Household's consumption in Quantities	87	87	100
Derived variables at household level			
[HB] Household size and Type	14	14	100
[HD] Activity	1	1	100
Basic and derived variables at household level			

[MA] Identification, weighting, demographic characteristics	2	2	100
[MB] Basic demographic characteristics	8	8	100
[MC] Education	2	2	100
[ME] Activity	7	7	100
[MF] Income	1	1	100
Total	631	631	100

6. Accuracy and reliability

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6.1. Accuracy - overall

Like in any sample survey, the statistics generated from the HBS data may be liable to errors which are inherent in the survey method used. Usually, a sample of households is selected in a way that the probability of a household being selected is known. In this way, the results can be reliably projected from the sample to the household reference population with known levels of precision, i.e. standard errors and confidence intervals for survey estimates can be constructed.

The HBS data are weighted. Sample weights are needed to correct for imperfections in the sample that might lead to bias and also to rectify other departures between the sample and the reference population. The design weights are calculated for each sampled household as the inverse of its probability of selection as part of the sample.

6.2. Sampling error

The size of the sampling error depends on the sample size: the higher the sample size, the higher the accuracy. In the past, in comparison to other EU household surveys, e.g. Labour Force Survey (LFS) or Statistics on Income and Living Conditions (EU-SILC), the HBS sample sizes attained have been rather low. Furthermore, the effective sample size can be even smaller as a result of the way the sample has been designed.

6.2.1. Sampling error - indicators

1. Achieved sample size

6,150 households

Eurostat will calculate the Effective Sample Size, Deff and estimate the Variance, as well as calculate the structure of household consumption expenditure and Confidence Interval for all the Countries that deliver 2015 HBS micro-data, using the same method as for the 2005 and 2010 waves, to ensure comparability of these data between countries.

Another key HBS indicator is the structure of household consumption expenditure: this is the distribution of the total mean expenditure between the different 2-digit COICOP groups. This indicator is essential to examine how households split their expenditures among the COICOP categories, and to monitor how the structure can be affected over time by price changes.

2. Comments on Sampling errors and measures to reduce them

Estimated standard errors, confidence intervals, design effects

Indicator	Achieve	Estimated	Estimate	Confiden	Confidence	Estimate
Mean total household consumption expenditure broken down by:						
Two-digit COICOP divisions						
Total expenditure	6,150	16,455.36	1.5	15,975.89	16,934.82	2.9
Food and non-alcoholic beverages	6,150	3,519.62	1.2	3,436.01	3,603.24	2.6
Alcoholic beverages and tobacco	4,606	687.28	2.6	652.82	721.73	2.3
Clothing and footwear	4,721	996.71	3.1	936.91	1,056.51	2.4
Housing	6,150	2,253.52	1.2	2,200.29	2,306.75	1.6
Durable	5,670	797.90	3.3	745.93	849.87	1.9
Health	5,234	1,284.72	3.0	1,209.32	1360.11	1.9
Transport	5,396	1,978.95	3.1	1,859.09	2,098.81	2.2
Communications	6,059	701.55	1.5	681.05	722.05	2.3
Recreation and culture	6,148	815.43	3.8	754.22	876.64	2.9
Education	1,479	560.40	5.4	500.99	619.81	1.9
Hotels, cafes and restaurants	5,185	1,692.63	2.6	1,606.50	1,778.77	2.5
Miscellaneous goods and services	5,919	1,166.65	2.5	1,109.19	1,224.10	2.2
Age of household's reference person						
Less than 30	311	15,289.05	5.8	13,542.82	17,035.27	2.2
30-44	1,276	20,154.31	2,6	19,137.01	21,171.61	1.9
45-59	1,700	19,970.20	2.4	19,046.62	20,893.79	1.6
60_years	2,863	12,062.95	1.9	11,617.69	12,508.21	1.6
Household type						

Single person	1,595	9,703.89	2.5	9,219.79	10,188.99	1.6
Two adults	1,974	19,974.10	2.7	18,907.94	21,040.25	1.7
Three adults and more	733	22,913.57	2.4	21,814.11	24,013.03	1.7
Single parent with dependent children	130	13,692.66	2.4	13,293.67	14,631.64	1.8
Two adults with dependent children	1,392	20,080.32	8.4	16,780.98	23,380.66	1.2
Three adults and more with dependent children	326	22,021.66	4.4	20,131.88	23,911.43	1.9
Socioeconomic category of the reference person						
Manual worker except agriculture	886		2.9	15,921.88	17,860.87	2.1
Non-manual worker except agriculture	905	23,314.77	2.7	22,097.17	24,532.37	1.6
Self-employed person and farmer or agricultural worker	916	22,748.08	3.3	21,256.20	24,239.95	1.8
Unemployed	322	12,457.76	6.3	10,927.17	13,988.35	1.5
Retired	2,492	13,065.07	1.9	12,567.79	13,562.36	1.6
Other inactive	629	9,177.34	3.3	8,582.01	9,772.67	1.5

Other inactive	629	9,177.34	3.3	8,582.01	9,772.67
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6.3. Non-sampling error

No measures

6.3.1. 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.

6.3.1.1. Over-coverage - rate
<i>Not applicable.</i>
6.3.1.2. Common units - proportion
<i>Not applicable.</i>
6.3.2. Measurement error
<i>1-The questionnaire</i> 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. <i>2-The interviewers and their training</i> 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. <i>3-The respondents</i> 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. <i>4-Errors in routing</i> There were no errors made in the routing. <i>5-Skills tested before starting the fieldwork</i> 98% of the interviewers were external collaborators of ELSTAT, experienced with household surveys. The remaining --% were permanent personnel of ELSTAT.

6.3.3. Non response error

1. Reasons for non-response

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.

2. Achieved Household response rates (%)

64,1%

3. Efforts to reduce non-response

Contact with households (letters, telephone, email etc)

4. Use of substitute Households to replace non-responding households

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".

Gross sample size	6,251
Number of eligible units	1,023
Number of units successfully contacted – BEFORE SUBSTITUTION	1,018
Number of units successfully contacted – AFTER SUBSTITUTION	1,018
Number of responding households – BEFORE SUBSTITUTION	4,003
Number of responding households – AFTER SUBSTITUTION	6,150
Response rate before substitution	64,1%
Response rate after substitution	98%
5. Comments regarding non-response errors	
6.3.3.1. Unit non-response - rate	
Comments regarding unit non-response rate	
6.3.3.2. Item non-response - rate	
Comments regarding item non-response rate	
6.3.4. Processing error	
Comments regarding 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.
6.3.4.1. Imputation - rate
Percentage of imputed values of all possible values
20%
6.3.5. Model assumption error
<i>Not applicable.</i>
6.4. Seasonal adjustment
<i>Not applicable.</i>
6.5. Data revision - policy
Comments regarding Data 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.
6.6. Data revision - practice
Comments regarding Data 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.
6.6.1. Data revision - average size
<i>Not applicable.</i>

7. Timeliness and punctuality		Top
7.1. Timeliness		
Data Collection Year	Data Published Year	
2015	5/10/2015	
7.1.1. Time lag - first result		
Time lag for the first published results, in terms of months		
9 months		
7.1.2. Time lag - final result		
Time lag for the final published results, in terms of months.		
HBS cross-sectional data are available in the form of tables, usually, 180 days after the end of the data collection period.		
7.2. Punctuality		
The number of months between the actual delivery of the data to Eurostat and the announced		

date for delivery
There was no time lag in the provision of survey results
7.2.1. Punctuality - delivery and publication
<i>Not applicable.</i>

8. Coherence and comparability		Top								
8.1. Comparability - geographical										
Comments regarding geographical comparability										
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.										
8.1.1. Asymmetry for mirror flow statistics - coefficient										
Not applicable.										
8.2. Comparability - over time										
Comments regarding 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.										
8.2.1. Length of comparable time series										
Not applicable.										
8.3. 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. 1. Comparison with EU-SILC Table1: At-risk-of-poverty threshold: 2015 EU-SILC –HBS <table><tr><th>2015 EU - SILC</th><th>2015 HBS</th></tr><tr><td>4.512,00</td><td>4.985,50</td></tr></table> Table 2: At-risk-of-poverty rate: 2014 EU-SILC –HBS % <table><tr><th>2015 EU - SILC</th><th>2015 HBS</th></tr><tr><td>21.4</td><td>19.7</td></tr></table> Table 3: Income quintile share ratio S80/S20: 2014 EU-SILC –HBS			2015 EU - SILC	2015 HBS	4.512,00	4.985,50	2015 EU - SILC	2015 HBS	21.4	19.7
2015 EU - SILC	2015 HBS									
4.512,00	4.985,50									
2015 EU - SILC	2015 HBS									
21.4	19.7									

2015 EU - SILC	2015 HBS
6.5	5.6

2. Comparison with HICP

Eurostat will calculate the structure of Consumption Expenditure at 2-digit COICOP level using HBS micro-data and compare these with similar values based on HICP data

3. Additional comments regarding cross-domain coherence

8.4. Coherence - sub annual and annual statistics

Not applicable.

8.5. Coherence - National Accounts

Eurostat will calculate the structure of Consumption Expenditure at 2-digit COICOP level using HBS micro-data and compare these with similar values based on NA data

8.6. Coherence - internal

Table 1. Average monthly household expenditure on good and services: 2015 - 2011 HBS

2015 HBS		2014 HBS		2013 HBS		2012 HBS	
Value	%	Value	%	Value	%	Value	%
1,419.57	100.0	1,460.52	100.0	1,509.39	100.0	1,637.10	100.0
293.30	20.7	299.79	20.5	307.33	20.4	328.57	20.1
57.27	4.0	58.80	4.0	62.80	4.2	62.71	3.8
83.06	5.9	85.70	5.9	87.38	5.8	95.34	5.8
189.21	13.3	195.29	13.4	206.99	13.7	227.07	13.9
66.49	4.7	72.76	5.0	83.94	5.6	94.97	5.8
107.06	7.5	105.76	7.2	104.44	6.9	104.71	6.4
181.64	12.8	184.82	12.7	189.19	12.5	209.88	12.8
58.46	4.1	60.08	4.1	61.91	4.1	68.19	4.2
67.95	4.8	68.71	4.7	68.82	4.6	72.87	4.5
46.70	3.3	50.84	3.5	50.83	3.4	57.33	3.5
141.05	9.9	143.49	9.8	145.55	9.6	160.47	9.8
127.37	9.0	134.49	9.2	140.19	9.3	154.98	9.5

Table 2. Average monthly expenditure by mode of acquisition of goods and services 2015 and 2014 HBS

n of goods and services	2015 HBS		2014 HBS	
	Value	Distribution %	Value	
Total receipts in kind	1,761.15	100.0	1,798.08	
Purchases	1,419.57	80.6	1,460.52	
Production	20.81	1.2	20.80	
Enterprise	265.83	15.1	259.21	
From sources	50.62	2.9	52.99	
From employer	4.32	0.2	4.55	

Table 3. Quintiles of median equivalent expenditure and inequality of expenditure consumption distribution S80/S20: 2015 and 2014 HBS

Quintiles of expenditure	Equivalent expenditure (purchases)		Final equivalent
	2015 HBS	2014 HBS	2015 HBS
1 st quintile	317.77	317.85	472.49
2 nd quintile	506.34	507.75	684.60
3 rd quintile	676.21	690.92	879.81
4 th quintile	918.86	929.99	1152.80
5 th quintile	1,787.19	1,813.76	2,086.14
<i>S80/S20</i>	<i>5.6</i>	<i>5.7</i>	<i>4.4</i>

Table 4. At risk of poverty threshold: 2015 and 2014 HBS

Annual equivalent expenditure (purchases)		Annual final equivalent expenditure	
2015	2014	2015	2014
4,985.50	4,944.74	6,320.81	6,341.40

Table 5. At risk of poverty rate: 2015 and 2014 HBS

Equivalent expenditure (purchases)		Final equivalent expenditure	
	2014	2015	
	20.6	13.2	

9. Accessibility and clarity

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9.1. Dissemination format - News release

[Press release calendar](#)

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

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

9.2. Dissemination format - 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](#)

9.3. Dissemination format - online database
Tabulation
9.3.1. Data tables - consultations
<i>Not applicable.</i>
9.4. Dissemination format - microdata 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
9.5. Dissemination format - other
Digital Library
9.6. Documentation on methodology
Detailed methodological information for the survey will be uploaded on ELSTAT's official website. Publications
9.7. Quality management - documentation
Quality documentation for the survey results will be included in the Quality Report. Quality documentation
9.7.1. Metadata completeness - rate
<i>Not applicable.</i>
9.7.2. Metadata - consultations
<i>Not applicable.</i>
10. Cost and Burden
1. Cost to the NSI (€)
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).
2. Burden on the Household (Hours)
3.30 per household

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3. Measures to reduce Costs and Burden

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11. Confidentiality

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11.1. 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](#)

11.2. 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.

12. Comment

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Annexes

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[Single Integrated Metadata Structure \(SIMS\) \(2015\)](#)

[User oriented quality report](#)