

Household budget survey in the Candidate Countries

Methodological analysis 2003



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FOREWORD

The promotion of economical and social progress in Europe, as set out in the Treaty of the European Union, calls for more in-depth knowledge and greater comparability of data on social and economic conditions in the EU. Household Budget Surveys (HBS) are among the most comprehensive household surveys, conducted in all Member States of the Union. Through the years, their scope and content have expanded greatly, giving them a particularly important role in the statistics on households.

Despite the common focus of the surveys on the study of patterns of consumption of private households in different population groups, the national household budget surveys represent a diversity of structures and designs, as well as differences in the topics covered. In order to know more about this diversity and reduce it, Eurostat produced in 1993, 1997 and 2003 three methodological manuals¹ on HBS giving some specific recommendations on many technical issues. These exercises have allowed improving dramatically the comparability of HBS data, and consequently their usefulness for European purposes.

The enlargement process of the European Union has requested Eurostat to focus on the Candidate Countries as well. With regard to HBS, the achievement of this objective has been started by means of two complementary actions:

Collection of a simplified set of data tables from the HBS of twelve Candidate Countries for the reference year 1999 (with the exception of Turkey), which complemented the existing data,

Compilation of methodological information about the HBS of the thirteen Candidate Countries with a twofold goal:

- to serve as a reference for the users of the HBS data supplied by the CC.
- to serve as a source of information for proposing suitable recommendations for the CC in order to harmonise their HBS with the EU-HBS methodology.

The present manual strives to capture and describe the diversity between the thirteen Candidate Countries from a comparative perspective, taking national surveys conducted around the reference year of 1999 as a basis. It represents one of the continuing efforts of Eurostat to harmonise the surveys and make their results more widely accessible, and complements the guides on the same topic issued for the old Member States.

This study has been carried out by Eurostat with the help of the national delegates of the Candidate Countries participating in the Eurostat Working Group on Household Budget Surveys, the contributions of which have been essential for the achievement of this methodology. The publication has been written by Antonio Puente, with the collaboration of several colleagues of Eurostat, who have read over the manuscript and have proposed numerous improvements.

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Director of Social Statistics
Eurostat, Mai 2004

¹ 'Family Budget Surveys in the EC: Methodology and Recommendations for Harmonisation - Luxembourg 1993', 'Household Budget Surveys in the EC: Methodology and Recommendations for Harmonisation - Luxembourg 1997' and 'Household Budget Surveys in the EC: Methodology and Recommendations for Harmonisation - Luxembourg 2003'.

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1. INTRODUCTION

1.1. Historical notes and overview

The Household Budget Surveys (HBS) in the European Union are sample surveys of private households carried out regularly under the responsibility of the National Statistical Offices (NSIs) in each of the fifteen Member States (European Statistical System). Essentially, they provide information about household consumption expenditure on goods and services, with considerable details in the categories used; information on income, possession of consumer durable goods and cars; basic information on housing and many demographic and socio-economic characteristics. Contrarily to other European statistical domains, the transmission of HBS data to Eurostat is voluntary and no EU regulation exists. HBS are national surveys, and there is therefore a great degree of freedom for each Member State to decide on the objectives, methodology, programming and resource assignment for their respective HBS.

The Working Group (WG) on Household Budget Surveys (HBS) was created by a decision of the DGINS Conference on 29.11-1.12.1989. The aim was to compile the existing information in the Member States (MS) on household budgets in order to make all this information available at European level as well as to improve harmonisation of surveys, in terms of concepts used, classification of variables, data collection and data processing methods.

This project filled a gap in the area of social statistics, allowing the completion of the social portrait of Europe. Contrarily to ECHP² and EU-SILC³, which focus on household income, HBS relies on the concept of household final consumption expenditure.

So far, this project has not had any legal basis and it was therefore run as a “gentlemen’s agreement” between the MS, some EFTA countries and Eurostat. Essentially, each country keeps the targets, the uses and the programming of its national HBS and, at the same time, it collaborates with Eurostat in order to compile a European-wide data set on household budgets with a frequency of about five years⁴. The approach of these statistics is cross-sectional rather than longitudinal.

One of the features of these statistics, and probably one source of the problems, is the wide variety of uses and users. Traditionally, their main use has been to collect information on household consumption expenditure for updating the ‘weights’ for the basket of products used in the Consumer Price Indices. This is done at national level. However, following that major use, many other uses have arisen either at national or European level: to estimate the household consumption accounts for National Accounts purposes, to carry out a wide variety of analyses on consumers and consumption (i.e. consumption patterns, nutritional studies, etc.), to supply complementary information for studies on poverty and social exclusion, to conduct research on economic and consumption issues, and so forth.

² European Community Household Panel

³ European Union - Statistics on Income and Living Conditions

⁴ Although several EU countries and many accession and candidate countries conduct annual surveys, this is an international comparison exercise and can only proceed at the pace of the slowest participant.

The key concept of the data collected by the HBS is “household final consumption expenditure”. The COICOP-HBS classification is used to disaggregate these data. Together with these data, the HBS collect numerous cross-sectional variables regarding households and household members. These variables allow the HBS results to be used in many different ways.

Since 1989, Eurostat has collected three rounds of data for the following reference years:

- 1988, with the participation of 10 Member States;
- 1994, with the participation of 15 Member States;
- 1999, with the participation of 15 Member States.

In the first round, the methodologies used by the MS to carry out the HBS were very far from being harmonised. Since then, all the countries participating in this project and Eurostat have made great efforts to harmonise their HBS and to improve data comparability. However, there is still some room for improvement.

In order to allow Eurostat to process the data received so as to perform ex-post harmonisation and to answer specific requests of the users, countries deliver micro-data to Eurostat. However, the gentlemen’s agreement only allows Eurostat disclosing aggregated tables or indicators.

In relation to the HBS results, Eurostat has a dissemination plan in four specific forms:

- the incorporation of the most significant aggregated data in an electronic format (Eurostat's reference data base 'NewCronos');
- analyses on specific subjects ('Statistics in Focus');
- other publications: the publication in the series “Panorama of the European Union” entitled “Consumers in Europe. Facts and Figures” issued in 2001 was largely based on the 1999 HBS data;
- replies to ad-hoc requests sent by specific users.

1.2. Objectives

As mentioned in the previous section, there are fairly complete data sets collected from the HBS of the present Member States and some EFTA countries. However, the available data from the Candidate Countries (CC) are very scarce, in spite of the requests from some users (including some Commission departments and other EU Institutions). In order to fill this gap, Eurostat launched a project in mid-2002 to collect some aggregate HBS data from the CC for the reference year 1999. The aim was to have a picture of the “household final consumption expenditure” in the CC.

All the CC agreed to participate in this project and all of them sent two types of information:

- A set of tables with aggregate data following a common format proposed by Eurostat. The data sent by all the CC were collected during 1999, except for Cyprus (1996-97) and Turkey (1994).
- A document giving methodological information about how these data were collected.

This document puts together all the methodological information sent by the thirteen CC and analyses the most significant differences from the methodology proposed by Eurostat. The objective of this document is twofold:

- To serve as a reference for the users of the HBS data supplied by the CC. In particular, to give information about the real meaning of each item of data and all the concepts actually measured, as well as to allow the assessment of data comparability.
- To serve as a source of information for proposing suitable recommendations for the CC in order to harmonise their HBS with the EU-HBS methodology.

For this reason, the approach of the information compiled is a dual one as well:

- HBS methodology used to collect the data of the reference year 1999.
- Latest and planned changes in the HBS methodology.

This document does not claim to be an exhaustive methodological guide. For this reason, it does not contain any definition or explanations about the basis of the concepts used by the HBS. Readers interested in these topics could refer to the publication “Household Budget Surveys in the EU: Methodology and Recommendations for Harmonisation. 2003”. Instead, this document will focus on the identification of the methodological differences among the CC and the methodological recommendations of Eurostat.

Most of the information included in the tables throughout this document has been supplied by the national delegates of the CC participating in the HBS Working Group.

1.3. Scope

The conceptual scope of this document is the description of the main methodological features regarding the Household Budget Surveys in the Candidate Countries. The list of CC and the names of their HBS are as follows:

Table 1: Names of the HBS in the Candidate Countries

Country	Name of the survey
Bulgaria	Household Budget Survey
Czech Republic	Statistika rodinných účtů
Estonia	Household Budget Survey
Cyprus	Έρευνα Οικογενειακών Προϋπολογισμών
Latvia	Majsaimniecību budžetu pētījums
Lithuania	Namu ukiu biudžetu tyrimas
Hungary	Háztartási költségvetési felvétel
Malta	Household Budgetary Survey
Poland	Budżety Gospodarstw Domowych
Romania	Household Budget Survey
Slovenia	Anketa o porabi v gospodinjstvih
Slovakia	Rodinné účty
Turkey	Household Income & Consumption Expenditures Survey

The timeframe for the methodological descriptions is twofold:

- HBS methodology used to collect the data of the reference year 1999 (except Turkey, 1994);
- the latest changes in the HBS methodology from 1999 till 2003 and the changes planned for the future, which are already known. The absence of specific indications means that the 1999 methodology remains unchanged.

1.4. National aim and users of the HBS

The main objectives of the HBS at national level in the CC are as follows:

Table 2: Main objectives of the HBS at national level in the Candidate Countries

Country	Aims of the survey
Bulgaria	Estimation of household income, expenditure, food consumption
Czech Republic	Detailed view of spending patterns of various kinds of households
Estonia	Information about the economic situation of households, calculation of socio-economic indicators, updating the weights for CPI ¹ , data for NA ² and consumer price index
Cyprus	Information on the consumption structure for the revision of the weights of CPI
Latvia	Information on the household income, expenditure, updating the weights for CPI, data for NA, calculation of poverty indices
Lithuania	Information on the income and expenditure of the population
Hungary	To provide CPI weights, data source of NA household final consumption, poverty research, social indicators based on HBS data
Malta	Updating the weights for CPI, research studies
Poland	To provide data for CPI calculations and NA, living conditions analyses, including poverty analyses
Romania	Poverty measurement and social protection
Slovenia	Calculation of weights for CPI, income and expenditure structure, NA, poverty analysis
Slovakia	Data for social policies, price statistics and NA
Turkey	Determination of base-year weights for CPI, indication of structural changes in consumption patterns of private households, NA

(1) CPI = Consumer Price Index

(2) NA = National Accounts

As for EUR-15, the calculation of weights for consumer price indices is the main use of the HBS results in most CC. Besides this, there are a number of other uses with variable importance depending on the country: estimation of household national accounts, data for social policies, poverty measurement, etc. The following tables show the importance of HBS as a source for NA and CPI broken down by COICOP division:

Table 3: Importance of HBS as a source for NA by COICOP division, reference year 1999^{*)}

COICOP	BG	CY	CZ	EE	HU	LV	LT	MT	PL	RO	SK	SI	TR
Food and non-alcoholic beverages	1	1	:	1	1	1	1	1	1	2	1	1	3
Alcoholic beverages, tobacco and narcotics	2	2	:	2	3	3	4	1	2	2	1	2	3
Clothing and footwear	3	1	:	1	2	1	1	1	1	2	1	2	3
Housing, water, electricity, gas and other fuels	2	1	:	1	1	1	3	1	2	2	1	1	3
Furnishing, household equipment and routine maintenance of the house	3	1	:	1	1	1	1	1	2	2	1	1	3
Health	3	1	:	1	1	1	2	1	2	2	1	4	3
Transport	3	1	:	1	1	1	2	1	2	2	1	2	3
Communication	3	1	:	1	1	1	3	1	2	2	1	3	3
Recreation and culture	3	1	:	1	1	1	2	1	2	2	1	2	3
Education	3	1	:	1	3	1	2	1	2	2	1	4	3
Restaurants and hotels	3	1	:	2	1	1	4	1	3	2	1	2	3
Miscellaneous goods and services	3	2	:	1	3	1	1	1	3	2	1	2	3

* 1=very important; 2=important; 3=comparatively unimportant; 4 =not a source; ":"=information not available.

** The Czech Republic uses HBS as a source for NA but did not specify the importance.

Table 4: Importance of HBS as a source for CPI by COICOP division, reference year 1999 ^{*)}

COICOP	BG	CY	CZ	EE	HU	LV	LT	MT	PL	RO	SK	SI	TR
Food and non-alcoholic beverages	1	1	:	1	1	1	1	1	1	1	1	1	1
Alcoholic beverages, tobacco and narcotics	1	1	:	3	3	2	1	1	2	1	1	3	1
Clothing and footwear	1	1	:	1	2	1	1	1	1	1	1	1	1
Housing, water, electricity, gas and other fuels	1	1	:	1	1	1	1	1	1	1	1	2	1
Furnishing, household equipment and routine maintenance of the house	1	1	:	1	1	1	1	1	1	1	1	1	1
Health	1	1	:	2	1	1	1	1	2	1	1	4	1
Transport	1	1	:	2	1	1	1	1	1	1	1	3	1
Communication	1	1	:	2	1	1	1	1	2	1	1	4	1
Recreation and culture	1	1	:	1	1	1	1	1	1	1	1	2	1
Education	1	1	:	2	3	1	1	1	2	1	1	3	1
Restaurants and hotels	1	1	:	2	1	1	1	1	1	1	1	2	1
Miscellaneous goods and services	1	1	:	1	3	1	1	1	1	1	1	2	1

* 1=very important; 2=important; 3=comparatively unimportant; 4 =not a source; “:”=information not available.

** The Czech Republic uses HBS as a source for CPI but did not specify the importance.

It can be seen that, while the HBS is a very important source for the CPI in most CC, it is an important source of information for the NA in only half of the CC.

The main users of the HBS data at national level in the CC are as follows:

Table 5: Main users of the HBS data at national level in the Candidate Countries

Country	Users of the survey
Bulgaria	Ministries, private users, media and research institutes
Czech Republic	NA, price statistics, ministries and research institutes
Estonia	Ministry of Social Affairs, universities and Bank of Estonia
Cyprus	Government, academic and research institutions and general public
Latvia	Government, NA, mass media, researchers and mass media
Lithuania	NA, price statistics, government and researchers
Hungary	Public and private institutions
Malta	NSO, Eurostat, ministries and University of Malta
Poland	Central Statistical Office, government institutions and universities
Romania	State and government institutions, research institutes and international bodies
Slovenia	Statistical Office, institutes, universities, ministries, researchers and companies
Slovakia	Ministries and research institutions
Turkey	Government, state organisations and research institutes

1.5. Timing and frequency

The HBS are annual or continuous in ten CC. Turkey has switched very recently to an annual survey. Only Cyprus and Malta have five-yearly surveys.

Table 6: Frequency of the HBS in the Candidate Countries

Country	Frequency of the survey	
	Continuous or annual	Every five years
Bulgaria	X	
Czech Republic	X	
Estonia	X	
Cyprus		X
Latvia	X	
Lithuania	X	
Hungary	X	
Malta		X
Poland	X	
Romania	X	
Slovenia	X (since 1997)	
Slovakia	X	
Turkey	X (since 2002)	Until 1994

Historically, eight CC began to carry out their HBS in the middle of the last century. Generally, these surveys are therefore well established and have a long tradition. The following table gives an overview of HBS programming in the CC:

Table 7: Timing of the HBS in the Candidate Countries (in 2003)

Country	Timing of the survey		
	Date of the first survey	Date of the last survey	Date of the next survey
Bulgaria	1951	01.02.2002-31.01.2003	01.02.2003-31.01.2004
Czech Republic	1956	Continuous	Continuous
Estonia	1995	2002	2003
Cyprus	1966	1996-97	2003
Latvia	09/1995-12/2000	05/2001	annual
Lithuania	1952	2002	2003
Hungary	1949	2001	2002
Malta	08/1971-07/1972	03/2000-03/2001	Not decided
Poland	1957	2001	2002
Romania	1995	2000	2001
Slovenia	1983	2002	2003
Slovakia	1957	2001	2002
Turkey	1987	2002 (available 1994)	2003

2. SAMPLE DESIGN

This chapter describes the main sampling characteristics of Household Budget Surveys in the CC. From the perspective of comparability, it is by no means necessary for the national sample designs to be similar, or even comparable. Rather, the requirement is that in each survey, the design is determined by specific national circumstances, constraints and survey objectives. Any sample should, nevertheless, meet the basic requirements of representative or probability sampling both in design and in implementation, and should be of a sufficient size to permit the type of tabulation and analysis envisaged for the survey. These requirements are met to varying degrees in the national Household Budget Surveys.

This and the following sections discuss various features of sample design and implementation from a comparative angle, covering aspects such as survey coverage, sample size and allocation and sampling stages.

2.1. Unit of measurement and coverage

All Household Budget Surveys are restricted to the population residing in *private households*. Collective or institutional households (old persons' homes, hospitals, hostels, boarding houses, prisons, military barracks, etc.) are excluded, as are generally persons without a fixed place of residence. In most cases the population excluded in this way amounts to no more than 2% of the total population, though the effect is more significant for particular groups such as old persons, and certainly the homeless.

As to geographical coverage, most Household Budget Surveys cover the entire population residing in private households in the national territory.

As shown in the following table, there also are a few small differences in the exact definition of coverage: some countries include foreign households living in the country while others exclude them, certain countries exclude households whose head is a student or has been unemployed for a long time, etc.

Table 8: Unit of measurement and coverage of the HBS in the Candidate Countries

Country	Unit of measurement	Coverage
Bulgaria	Household	Whole country, all private households. Main exclusion: households living in institutions and foreigners.
Czech Republic	Household	All private households of key types. Geographically the whole country. The more important exceptions are the following: (1) The head of household has been unemployed for a long time. (2) The head of household is an economically inactive pensioner and there is at least one economically active member in the household. (3) The head of household is a student or is an economically inactive receiver of parental benefit and his/her income exceeds 1.4 x subsistence level. Neither institutional households nor homeless people are surveyed.
Estonia	Household member	All household members who live legally and permanently in Estonia are considered as the population to be studied.
Cyprus	Household Household member	All private households and household members. Collective or institutional households and foreign households are excluded
Latvia	Household	The target population of the HBS consists of all households in Latvia. Persons living in institutional households (old people's homes, disabled children's homes, student hostels, hotels, barracks, hospitals, sanatoriums, penal institutions, etc.). Homeless people are excluded from the current survey.
Lithuania	Household	All private households in the whole country. Collective or institutional households are excluded. Resident foreigner households are included (very rare cases).
Hungary	Household	All Hungarian citizens living in private households in the country. Consequently, the survey does not cover persons living in institutions, Hungarian households living abroad, foreign households with permission to reside in Hungary and foreign citizens working in the country.
Malta	Dwelling	All private households in the entire national territory. Collective and institutional households were excluded from the survey.
Poland	Household	Whole country, all private households. Main exclusions: households in which at least one member is a foreigner, persons living in institutions, homeless people.
Romania	Household	The survey was carried out on a sample of households from the urban and rural areas selected randomly from all the counties of the country and from the City of Bucharest. The research includes households from all social and economic categories: employees, employers, own-account workers in agricultural activity (peasants), and members of agricultural associations, own-account workers in non-agricultural activities (crafts, worker in trade, etc.), members of non-agricultural cooperatives, unemployed persons, pensioners and others. The survey covers all persons with permanent domicile in Romania, members of the selected households who are present, temporary absent or who have left for a longer period and who contribute totally or partially to the budget of the household (income and/or expenditure). Institutionalised persons (old people's homes, disabled persons' asylums, homes for workers, sanatoriums, etc.) are not included in the survey.
Slovenia	Household Household member	Whole country, all private households. The survey does not cover collective households, foreigners temporarily living in Slovenia and the homeless.
Slovakia	Household	Whole country (only private households): households of employees (including households of retired persons with active earners), farmers (including households of employers in agricultural divisions or without employees), retired persons including not active earners, self-employed households (including retired persons and not active earners, and households of employers in non-agricultural divisions with or without employees). All other types of households are excluded
Turkey	Household	The 1994 survey covered all households and household members of Turkish nationality living in the territory of the Republic of Turkey, excluding those living in schools, dormitory hostels, hotels, nursing homes, homes for the elderly, hospitals, penitentiaries, barracks and officers' clubs.

2.2. Sampling frame

Three main arrangements exist for obtaining the HBS sample:

1. *Population registers.* Where available, population registers can provide up-to-date lists of households or individuals, with many relevant characteristics useful for stratification and efficient selection of the sample.
2. *Use of an area frame.* Another common arrangement is to obtain a sample of area units from a suitable source such as the population census (Greece, Spain and Ireland), or a master sample of areas (Portugal), and then to prepare or update lists of households or dwellings in the selected areas for the final sample.
3. *Electoral register.* Although less suitable for HBS than population registers, poll registers may also be used for building HBS sampling frames.

In the first arrangement, the frame is in the form of lists of the ultimate units (dwellings, households, individuals) from which the sample for the HBS can be drawn directly. In practice, the sample selection may, of course, involve multiple stages and/or *phases*.

In the second arrangement, the frame is used to draw a sample of area units. The areas may be drawn from the whole frame, as for example from the population census, or from a 'master sample' specially constructed for the purpose. In the areas selected, lists of addresses, households or persons may be prepared or updated from other sources to complete the process of sample selection.

In most cases lists exist which can be used after appropriate updating. Supplements are often added to the main frame to improve coverage.

The sampling frames are taken either from the last census (seven countries), from population registers (four countries) or from the electoral database (Malta), depending on the country.

Table 9: Sampling frames of the HBS in the Candidate Countries

Country	Sampling frame
Bulgaria	10% master sample from the 1992 census
Czech Republic	Not applicable, quotas allocated by local experts' decisions
Estonia	Population register (minimum 15 years)
Cyprus	List of households from the 1992 census and a supplementary list of newly constructed housing units from the Electricity Authority of Cyprus
Latvia	Population register – more than 99% of the total population of Latvia
Lithuania	Population register
Hungary	Updated census data
Malta	Electoral database of Malta – people eligible to vote in Maltese elections
Poland	Register prepared by the National Census
Romania	Master sample based on the 1992 census
Slovenia	Central Population Register
Slovakia	The sources to establish quotas are: 1991 Population Census and 1996 micro census
Turkey	Census Enumeration Sheets from 1990

2.3. Population and sample sizes

The following table gives the sample size and the size of the population. Where not otherwise indicated, the data refer to 1999. Sample sizes vary between 1 276 households in Slovenia and 36 072 households in Romania. Six countries have sample sizes of fewer than 5 000 households, while three countries have sample sizes of more than 25 000 households.

Table 10: Population and sample size of the HBS in the Candidate Countries for the reference year 1999

Country	Population size (number of households)	Net sample size
Bulgaria	Census 2001: 2 921 887 households	1999: 3 000 households
Czech Republic	3 800 000 households	2001: 3 650 households
Estonia	2000: 575 296 households	Gross sample in 2000: 10 171 households Net sample in 2000: 6 256 households
Cyprus	around 209 000 households	2 645 households
Latvia	Census 2000: 802 848 households	1999: 3 929 households
Lithuania	Census 2001: 1 356 800 households	8 250 households
Hungary	Census 2001: 3 837 048 households	2000: 10 191 households
Malta	127 970 private households	6 798 households
Poland	Micro census 1995: 12 501 000 households	1999: 31 428 households
Romania	1999: 8 235 000 households	36 072 households
Slovenia	1999: 636 575 households	1 290 households (using moving averages a larger sample is achieved for detailed analyses; for 1999 it was 3 859 households)
Slovakia	1999: 1 877 000 households	1999: 1 640 households
Turkey	1994: 13 342 055 households	1994: 26 256 households

2.4. Sampling methods

Probability sampling means a sampling scheme in which each and every unit in the study population is given a known, non-zero chance of being selected in the sample. Probability sampling requires that (i) all units in the population be represented in the frame used for selecting the sample; (ii) the selections are done by applying a proper randomised procedure which gives definite selection probabilities to all eligible units; and (iii) the sample as selected is successfully enumerated in the survey.

The methods followed by each CC to design their HBS samples are shown in the following table. Although the most common method was stratified random probability selection (as recommended by Eurostat), there are also some non-random methods, such as quota sampling (Czech Republic and Slovakia) or combinations of random and systematic sampling (Cyprus and Estonia).

Table 11: Sample design of the HBS in the Candidate Countries

Country	Sample design
Bulgaria	Two-stage random probability selection
Czech Republic	Quota sampling with income, social group and number of dependent children as sampling characteristics (sample designed on the basis of these) Each local (NUTS3) unit of the CZSO is given a detailed plan of household recruitment with prescribed numbers for each household category
Estonia	Simple systematic sample design was used to obtain the sample from the Population Register until the year 1999. Since the year 2000 independent samples are taken from three strata formed of counties on the basis of the size of their population. As a result of sampling procedure the reference persons forming the basis for the household sample are fixed. Earlier (1995-1999) the corresponding households were repeatedly interviewed according to the rotation scheme. The rotation period was 3 months and each household was interviewed, in general, three times. Since 2000 each household is interviewed twice, the rotation period is 12 months, whereby every year half of the sample is replaced. Compared to former surveys, instead of person-based sampling two sampling procedures are used – address-based and person-based sampling. <ul style="list-style-type: none"> • If the address of the sampled person is complete and is represented by fewer than 9 persons aged 15 and more, then the address-based approach is used, i.e. all households living at the given address are included in the survey (whether the reference person lives at the address or not). • Otherwise if the address is represented in the database at least 9 times (e.g. in some administrative units all the inhabitants of a village have the same address), then the person-based approach is used. Then only the reference person's household is included in the survey. The household is traced in the case where it lives in some other place in the same county. The persons who have left the county are excluded and not replaced.
Cyprus	Cyprus was divided into urban and rural areas. Each of the 4 urban areas was stratified into 9 strata according to a) size of the household and b) social class of the head of household. In each area households were selected using simple systematic sampling. For the rural areas two-stage sampling was used. Villages were ordered according to size, and in the first stage villages were sampled using PPS. The households of the selected villages were then stratified according to variables a and b above. Households were selected using systematic sampling.
Latvia	Stratified two-stage probability sampling is applied. Households are stratified by the degree of urbanisation and by geographical allocation. The sample allocation between strata is made proportional to the population sizes within strata. In urban areas the population register was chosen as the sampling frame, while the lists of households were used in rural areas. In the new survey the primary sampling units are Population Census enumeration districts. The PSU are included by systematic probability proportional to size design within each stratum. The units within each PSU with simple random sampling are sampled households. The same sampling procedure is used in all strata.
Lithuania	Stratified two-stage probability sampling.
Hungary	Stratified two-stage probability sampling. Rate of selection depends on the size of settlements
Malta	Households were first sorted by locality and street, and a systematic random sample was drawn. This method approximates to a proportional stratified random sample.
Poland	1999 Random probability sample (use of monthly rotation method). Two-stage geographically stratified sample with different selection probabilities at first stage was applied. The first-stage sampling units were the area survey units and the second-stage units were dwellings. It was assumed that each dwelling should have the same sampling probability. In 1999, the HBS was carried out on two separate sub-samples: <ol style="list-style-type: none"> 1. Sub-sample selected in 1995 and entering the survey in 1996. 2. Sub-sample selected in 1996 and entering the survey in 1997. Each sub-sample consisted of 675 area survey units. Each sub-sample consisted of permanent and variable parts. Every month 2 dwellings in each area survey unit were surveyed. In each area survey unit 12 dwellings (1 for each month) were selected for the permanent part and 48 for the variable one (12 dwellings for each year, 4 consecutive years, one dwelling for each month). Households inhabiting dwellings from the permanent part were surveyed in the same month over four consecutive years. Households inhabiting dwellings from the variable part were surveyed only once.

	<p>2001</p> <p>Random probability sample (use of monthly rotation method). Two-stage geographically stratified sample with different selection probability at first stage was applied. The first-stage sampling units were the area survey units and the second-stage units were dwellings. It was assumed that each dwelling should have the same sampling probability. In 2001, HBS was carried out on two separate sub-samples, each consisting of 675 area survey points, i.e. :</p> <ul style="list-style-type: none"> - Sub-sample 1 selected in 1999 for the surveys in 2000 and 2001. - Sub-sample 2 selected in 2000 for the surveys in 2001-2002. <p>From each of the area survey units 12 dwellings were selected - one for every month. This way households living in selected dwellings were to participate in the survey twice - in the same month during two consecutive years.</p>
Romania	<p>The survey is organised over a period of 12 consecutive months, on a sample of 36 072 dwellings, distributed in monthly independent sub-samples of 3 006 dwellings. The sampling plan had two stages.</p> <p>In the first stage the "EMZOT master sample" was selected on the basis of the data recorded in the 1992 Census of the Population and Dwellings. EMZOT is a very large sample (about 250 000 dwellings), drawn with a view to serving as the sampling basis for further research through testing within the dwellings, during an inter-census period. It is a systematic sample of 501 geographical areas, called research centres, distributed in all the counties, in both urban and rural areas. These 501 research centres are assimilated to primary sampling units. EMZOT includes 259 research centres in urban areas and 242 research centres in rural areas. The representativeness of the localities' network was ensured using the main characteristics of the dwellings and households: average number of households in a dwelling, average number of persons per household, occupational status of the household head.</p> <p>In the second stage dwellings were selected from each research centre. Individual dwellings were not selected directly. Groups of three dwellings were selected according to a random selection algorithm. These groups are called clusters and they are assimilated to secondary selection units. The algorithm of random selection was based on calculation of selection intervals and a random start for each research centre. From each research centre six dwellings were included each month in the two sample clusters. For the sample size in the second stage (36 072 dwellings) it was considered to obtain estimates for the main characteristics of the survey which could be affected by errors within a limit of 3% and guaranteed with a probability of 97%.</p>
Slovenia	<p>Random probability sample. For large towns (more than 10 000 inhabitants), a one-stage sample is used (simple random). For other areas, a two-stage sample is used (clusters of 4 households are selected).</p>
Slovakia	<p>Quota sample. To create it, last population census and last micro census in a micro-simulation model have been used.</p>
Turkey	<p>1994 Household Income and Consumption Expenditures Survey was carried out in two stages. In the first stage, the 1994 Household Consumption Expenditures Survey was applied to 2 188 sample households (total of 265 256 households) changing every month in 1994 from 1 January to 31 December . In the second stage, the 1994 Household Income Distribution Survey was applied to 26 256 sample households, the same as the sample covered by the 1994 Household Consumption Expenditures Survey at the beginning of 1995 to collect data on income received in the whole of 1994.</p>

Most countries design their samples in multiple stages and stratify them according to certain criteria during the sampling procedure in order to obtain samples which are representative of the population. There are a number of advantages in using clustered, multi-stage sampling. By concentrating the units to be enumerated, it reduces travel costs and other costs of data collection. The work involved in sample selection can also be reduced. The major disadvantage is the loss of efficiency of the sample due to clustering. The complexity of design and analysis is also increased.

As can be seen from the following table, the most common practice is to use a two-stage design. First, a stratified sample of suitable area units is selected, typically with probabilities proportional to size after stratification by geographical and other variables. The second stage consists of the selection, within each sample area, of households or addresses for inclusion in the survey.

Table 12: Stratification of the HBS in the Candidate Countries

Country	Stratification
Bulgaria	Stage 1: regions (28) Stage 2: size of household
Czech Republic	Not applicable
Estonia	3 groups: 1) large counties, 2) small counties, 3) Hiiumaa as the smallest county
Cyprus	9 strata according to a) household size, b) social class
Latvia	Stratification using 3 main domains 1) Riga and 6 large cities 2) Medium-sized and small towns 3) Rural areas
Lithuania	2-stage sampling with 3 strata: 5 largest cities, other towns, rural areas
Hungary	Stage 1: 15 000 inhabitants and Stage 2: 2 000-15 000 inhabitants sampling, respectively
Malta	:
Poland	1999: 49 voivodships, each with 2 strata 2000/01: 16 voivodships, each with 2 strata
Romania	:
Slovenia	3 strata: 1) region, 2) settlement size, 3) proportion of farmers
Slovakia	Slovakia used quota sample for its HBS. Household sample reflected society by the following criteria: region, social group of household head, income, number of children in household with economically active head and number of persons in pensioner household
Turkey	5 strata: 1) region, 2) rural and urban areas, 3) stratification of the rural areas, 4) stratification of the urban areas, 5) stratification of quarters

Over-sampling of small population groups is carried out in Czech Republic, Hungary (pensioners and poor households), Slovakia (farmers and self-employed) and Turkey (small population groups).

Five countries (Bulgaria, Hungary, Latvia, Poland and Turkey) allow household substitution in order to improve the response rates.

2.5. Response rates

High rates of non-response are a common and major problem in Household Budget Surveys. In a number of surveys the sample initially selected is substantially, even several-fold, larger than the total number finally required. At worst, the sample may become essentially self-selected and hence quite unrepresentative of the population of private households. It is therefore important to keep track of the response rates achieved. Table 13 shows the response rates achieved. Where not otherwise specified, the data refer to 1999. The figures vary from 38% in Malta to 93.9% in Cyprus.

Table 13: Response rates of the HBS in the Candidate Countries in the reference year 1999

Country	Response rates
Bulgaria	60.3%
Czech Republic	Not applicable (quota sampling)
Estonia	54%
Cyprus	93.9%
Latvia	76% after substitution
Lithuania	77%
Hungary	1999: 86.0 % after substitution, 58.8 % before substitution 2001: 87.3% after substitution, 61.9 % before substitution
Malta	38%
Poland	60.1%
Romania	88.4%
Slovenia	2000: 81% (questionnaires), 74% (questionnaires and diaries)
Slovakia	Not applicable (quota sampling)
Turkey	Not specified

2.6. Sampling representativeness

Most CC have sent some comments about the representativeness of their samples. These comments are reproduced below.

Table 14: Sampling representativeness of the HBS in the Candidate Countries

Country	Representativeness
Bulgaria	:
Cyprus	No categories underrepresented
Estonia	Very rich households are underrepresented
Czech Republic	:
Latvia	Underrepresented: - households of entrepreneurs and self-employed - very rich households
Lithuania	Underrepresented: - young single persons, - very rich households - homeless
Hungary	Underrepresented: - very old and young households - very rich households - households in the capital - households of self-employed - homeless
Malta	:
Poland	No categories underrepresented
Romania	:
Slovenia	:
Slovakia	Households with very low and very high income are underrepresented
Turkey	:

3. SURVEY STRUCTURE AND CONTENT

3.1. Reference and recording periods

In all Household Budget Surveys, 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 period for which a diary is maintained is called the *recording period* and its duration and distribution over time is the primary determinant of the structure of the survey. On the other hand, the *reference periods* mean the periods of time for which the household consumption expenditure is calculated.

Table 15: Reference and recording periods of the HBS in the Candidate Countries

Country	Recording periods	Reference periods
Bulgaria	Each month of the year	:
Czech Republic	Income and expenditure : monthly Characteristics : once a year (1 January)	One year
Estonia	Food : half a month Income, taxes, expenditure: once a month	One month
Cyprus	Diaries: 14 days Main questionnaires: Sample households are evenly distributed throughout a calendar year and data are recorded during the whole year Recording periods depend on the consumption functions: - 12 months for furniture, cars, etc. - 3 months for clothing, footwear, etc. - 2 months for electricity, etc. - 1 month for recreation, pharmaceuticals, etc.	One year
Latvia	Income : the last month Food : 2 weeks Non-food, services : once a month	One month
Lithuania	Income : once a month Food : 2 weeks Non-food expenditure : once a month	One month
Hungary	a) Income and expenditure recorded in the diary: one month b) Rare expenditure, annual income: retrospective interview at the end of a calendar year	Calendar year
Malta	Moving, expenses in a 3-week period, income refers to the previous 12 months	One year
Poland	a) Income and expenditure recorded in the diary: one month b) Rare expenditure: retrospective interview at the end of a calendar quarter	One quarter
Romania	Calendar month	One month
Slovenia	Diaries: 14 days Questionnaires with different periods for each consumption function, e.g. - Last receipt or payment: pension, some social receipts and housing costs - Last 12 months: major durables and larger expenditure, household income, some social receipts - Last 6 months: medical expenses, holidays - Last 3 months: clothing and footwear - Monthly payment: rent, kindergarten	One year
Slovakia	:	Calendar year
Turkey	Expenditure: survey month Income: survey month	One year

3.2. Survey instruments

The HBS in the CC use two main instruments: interviews and diaries. The way each country use these instruments is shown in the following table:

Table 16: Survey instruments of the HBS in the Candidate Countries

Country	Interviews	Diaries
Bulgaria	Introductory Additional each month	One diary filled in by only one person
Czech Republic	Once a year	Distributed and collected monthly
Estonia	Preliminary interview before the reference period	Two kinds of diaries: for food and non-food
Cyprus	Questionnaire completed through a face-to-face interview	To be filled in by all household members (minimum age 15 years)
Latvia	Preliminary Final	One diary
Lithuania	Several times (at least two) during the reference period	Two diaries: a) for food, alcohol, tobacco, b) for non-food goods and services
Hungary	Initial At the end of the year	One-month diary (divided into two parts, 15-15 days)
Malta	4 visits per household	Diaries over a 3-week period, diary divided into 5 parts
Poland	Initial Final At the end of the calendar quarter	Two diaries each for two weeks
Romania	3 times	One diary daily
Slovenia	Initial After 14 days	Two kinds of diaries: a) main purchaser, b) other members of the household
Slovakia	Yes	One diary monthly
Turkey	Each month another sample is interviewed	Weekly records

4. MAIN CONCEPTS AND DEFINITIONS

This chapter gives descriptions of the concepts and definitions actually used by the Candidate Countries. This information is essential to assess the comparability of the figures supplied by each CC. Whenever possible, these descriptions are compared with the Eurostat recommendations, so that the changes that would be required in order to harmonise the HBS in the CC with the current Member States can be assessed.

4.1. Main concepts and definitions

The basic unit of data collection and analysis in Household Budget Surveys is the household. How the household is defined is important for two reasons. Firstly, as a unit for selection of the sample, the definition as adopted influences the survey's coverage of the population. The objective is to define the household in such a way that each person in the study population belongs to one and only one household.

Definition of the household

Table 17: Definition of the household in the Candidate Countries

Country	Household definition
Bulgaria	Persons living in a dwelling with a common budget
Czech Republic	Same address, share housekeeping and living expenses
Estonia	Persons living in the same dwelling and using common financial resources
Cyprus	Co-residence and sharing expenditure
Latvia	People tied by personal relationship, having common subsistence expenditure and inhabiting the same dwelling unit
Lithuania	People tied by relationship or other personal bonds, with common budget, sharing meals and living in one housing unit
Hungary	Persons with common income sharing their current costs
Malta	According to Eurostat's recommendations
Poland	One-person household is defined as a self-sufficient person, i.e. not sharing his/her income with any other person, whether living alone or not. Multi-person household is defined as a group of persons living together and sharing their income and expenditure.
Romania	Two or more persons living together and integrally or partially forming and using the income
Slovenia	Persons living together and sharing their income for covering expenditure
Slovakia	Persons sharing a common dwelling and having common expenditure
Turkey	The household is a group consisting of one or several persons, irrespective of the existence of a family tie among them, who live in the same house or a part of it and eating from the same kitchen, pooling their income and expenditure and participating in the household services and management.

Eurostat recommends that the definition of the household for the purpose of HBS is based on the following two criteria: co-residence and sharing of expenditure.

Bulgaria, Cyprus, Czech Republic, Malta and Slovakia follow Eurostat's recommendation. All the other countries mention other conditions, such as sharing of income, existence of personal ties, etc.

Members of a household

In practice these rather succinct definitions need to be amplified to specify exactly what categories of persons are included and excluded from the definition. The definition adopted has a bearing, for instance, on whether or not resident employees, lodgers, boarders and other unrelated persons living at the sample address are included in the same or as a separate household. This affects the average household size and composition, as well as the coverage achieved in the survey. Furthermore, the definition is often extended to include certain categories of persons who are absent from the household for some specified reason, such as full-time education or military service. The CC differs in the exact rules applied for this purpose, as shown in the following table.

Table 18: Definition of household membership in the Candidate Countries

	BG	CY	CZ	EE	HU	LV	LT	ML	PL	RO	SK	SI	TR
Normal resident, related to head/spouse	X	X	X	X	X	X	X	X	X	X	X	X	X
Resident employee, domestic servant living in household	X	X		X				X		X		X	X
Resident border, tenant	X			X				X		X			X
Long term absentee present during recording period		X		X		X		X		X	X		X
Visitor				X						X			X
Resident temporarily away		X	X	X	X	X	X		X	X	X	X	
Long term absence with household ties:													
- students, boarding school pupils		X	X	X	X	X	X				X	X	
- hospitalised persons etc.		X	X	X	X	X	X		X		X	X	

Eurostat recommends using for the HBS the definition of household membership proposed for the EU-SILC project, which covers all the categories mentioned in the above table, provided that they fulfil certain conditions specified by the EU-SILC regulation.

Head of household and reference person

It is necessary to identify a particular individual in a household as its head (or reference person) whose personal characteristics can be used in the classification and analysis of the information on the household. The social group, occupation and employment status, income, sex and age, etc. of the head are often used to classify the sample households for presentation of the results and for weighting classifications used in the derivation of the survey estimates.

In order to clarify the terminology, from now on we shall call *head of household* the person designated in each original national survey and *reference person* the person complying with the harmonised criteria recommended by Eurostat and designated for the European Household Budget Survey statistics (*main income earner*).

The following table shows the concept of head of household used in each CC.

Table 19: Definition of head of household in the Candidate Countries

Country	Head of household
Bulgaria	Person chosen by the household members
Czech Republic	In complete families: always the male spouse/partner In other family types: others
Estonia	Person with the highest income
Cyprus	Depends on the decision of the household members and/or is the main breadwinner
Latvia	The household member considered as such by the other household members Aggregated data for 1999 were calculated using the concept of reference person recommended by Eurostat
Lithuania	Person with the highest income
Hungary	One-family household: husband or male partner Lone-parent household: parent Multiple-family household: the oldest family head
Malta	Person contributing most to the budget of the household
Poland	The person aged 18 or over with the highest income among all members of the household providing the source of maintenance according to socio-economic group of household. There are six basic socio-economic groups: employees, employee-farmers, farmers, the self-employed, retirees and pensioners, those living on unearned income
Romania	Based exclusively on the decision of the household members
Slovenia	Person with the highest income
Slovakia	Person with the highest income
Turkey	Person who manages the household income and expenditure

Eurostat recommends that the designation of the reference person should be based on objective criteria. For the tabulation of consumption patterns in the Household Budget Surveys, the appropriate criterion is the contribution to household income. Preferably, the person to be chosen should be the adult with the highest income in the household (*main income earner*). There are seven CC that do not fulfil this recommendation.

Child-adult definition

For various purposes it is also necessary to classify household members into adults and children. Different age limits or other criteria may be used in this classification for different purposes. One of them is the calculation of household size using the OECD scale of adult equivalents. Another one is the requirement to identify persons who have to complete the individual diary in surveys where this type of diary is used. The following table gives the child-adult definitions used by each CC.

Table 20: Child-adult definitions in the Candidate Countries

Country	Child-adult definition	Age of each member registered individually
Bulgaria	Persons younger than 18 are children	:
Czech Republic	All persons under 16 or students under 27 are children	:
Estonia	Children are household members aged 0-15	:
Cyprus	Child-adult definition can be adapted to the purpose of the analysis	Yes
Latvia	Children are people under 18 years old	:
Lithuania	Usually children are persons under 18	Yes
Hungary	As a general rule children are dependent persons under 20 attending school For the calculation of equivalence scales: under 15	Yes
Malta	Children are people aged under 15	
Poland	Data on all the basic demographic variables such as age, marital status, economic activity are recorded for all the household members	Yes
Romania	Persons under the age of 18 are children	:
Slovenia	Child-adult definition can be adapted to the purpose of the analysis. Questionnaires are filled in for persons aged 15 years or over	Yes
Slovakia	Persons younger than 15 are children, if students under 28	:
Turkey	No child-adult distinction; everybody over the age of 12 has been asked to complete the questionnaire	:

As shown in the above table, the definitions differ significantly among the thirteen countries. Consequently, all the variables depending on child headcount cannot be harmonised. We must emphasise here that recording the age of each household member enables age limits to be adapted for different purposes. Eurostat therefore strongly recommends this practice.

4.2. The concept of household consumption expenditure

There are three relevant conceptual bases in ESA and HICP for household consumption expenditure:

- ‘household actual final consumption’ (ESA 95, 3.81-84),
- ‘household final consumption expenditure’ (ESA 95, 3.75-3.77),
- ‘household final monetary consumption expenditure’ (conceptual base of the HICP).

The relationship between these three concepts is described below:

Household actual final consumption	
- Social transfers in kind by the government to the households	
- Social transfers in kind by the NPISH to the households	
= Household final consumption expenditure	<i>ESA 95, 3.74 and 3.86</i>

- Non-monetary expenditure	
= Household final monetary consumption expenditure	<i>HICP</i>

The following table gives additional information about the concepts of consumption expenditure used by each CC.

Table 21: Concepts of consumption expenditure used in the HBS of the Candidate Countries

Country	Actual final consumption	Final consumption expenditure	Monetary consumption expenditure	Other
Bulgaria			X	X
Czech Republic		X	X	
Estonia			X	X
Cyprus		X		
Latvia		X	X	X
Lithuania		X		
Hungary		X		
Malta			X	
Poland		X		
Romania		X		
Slovenia		X		
Slovakia			X	X (in kind)
Turkey	X (1994)	X (2002)		

Despite this table, the exact contents of the “household final consumption expenditure” in each country should be analysed in more depth using the information given in section “4.3 Borderline cases”, because this concept does not include exactly the same components that Eurostat recommends in each CC.

4.3. Borderline cases

Goods or services retained for own final consumption

In ESA 95, goods and services retained by the household for own final consumption are part of final consumption expenditure. Typical examples of products⁵ retained by the household for own final consumption are (ESA 95, 3.76.b.2):

“Goods or services produced as outputs of unincorporated enterprises owned by households that are retained for consumption by members of the household. Cases in point are food and other agricultural goods, housing services by owner-occupiers and household services produced by employing paid staff (servants, cooks, gardeners, chauffeurs, etc.).”

A number of **non-material cultural, everyday-life and public service activities** intended to meet specific needs of both each individual and society as a whole - categories c) and d) excluded - are not counted as production in ESA and as a result are not part of own consumption, even when ‘produced’ and consumed within the same household:

1. cleaning, decoration and maintenance of the dwelling as far as these activities are also common for tenants;
2. cleaning, servicing and minor repair of household durable goods;
3. preparation and serving of meals;
4. care, training and instruction of children;
5. care of sick, infirm or old people;
6. transportation of members of the household or their goods.

Contrarily, any material bought for these service activities should be accounted as consumption expenditure (ESA 95, 3.76).

ESA 95 states that own-account consumption should be recorded when the output retained for own final consumption is produced (ESA, 3.91); and output for own final use (ESA 95, 3.49), in general, is to be valued at the **basic prices** (ESA 95, 3.48 and 3.49) of similar products sold on the market. However, when applying these rules for HBS, some practical difficulties arise. For this reason, for the HBS, Eurostat recommends to use **purchasers’ prices** and to record the consumption expenditure at the moment when the product is retained for own final consumption by the household. In this case the recommendation for HBS is therefore slightly different from the recommendation of ESA 95.

The following table shows that the practices in the CC generally follow Eurostat’s recommendations for HBS.

⁵ ‘Product’ is the generic term applied to goods and services together.

Table 22: Evaluation of goods and services for own final consumption in the Candidate Countries

Country	Households questioned	Evaluation method	Evaluation of price	Included at time of
Bulgaria	All households	Average price quantity	At purchaser's price	Consumption
Czech Republic	All households	Average price quantity	At purchaser's price	Consumption
Estonia	All households	Evaluation by the household	At purchaser's price	Consumption
Cyprus	All households	Average price quantity	At purchaser's price	Consumption
Latvia	All households	Evaluation by the household	At purchaser's price	Consumption
Lithuania	All households	Evaluation by the household	At purchaser's price	Consumption
Hungary	All households	Average price quantity	At purchaser's price	Production Consumption
Malta	Not measured	Not measured	Not measured	Not measured
Poland	All households	Evaluation by the household	At purchaser's price	Consumption
Romania	All households	Average price quantity	At purchaser's price	Consumption
Slovenia	Farmers and households with a vegetable garden	Average price quantity	At purchaser's price	Consumption
Slovakia	All households	Evaluation by the household Average price quantity	At purchaser's price	Consumption
Turkey	:	:	:	:

Imputed rent

In ESA 95, which is the reference for the HBS, the purchase of the dwelling as such is regarded primarily as capital formation (investment) and not consumption expenditure. However, the ownership of a dwelling is considered to produce a service – a shelter –, which is actually consumed over time by the households. As a consequence, ESA requires the estimation of the *price* of the shelter, by imputation of a rent, since no monetary transaction is involved. This imputed rent is part of household consumption expenditure. So, for the HBS to be consistent with the ESA principles, it is recommended to exclude the acquisition of dwellings, whereas the consumption of the service of the dwelling should be included.

Major repairs must be separated from minor repairs and treated as gross capital formation and not as consumption expenditure. The guidelines for distinguishing between major and minor repairs can be found in ESA 95 3.70 e) and 3.76 c).

The evaluation of this component presents two main problems:

- The coverage, i.e. which dwellings are considered for this imputation
- The estimation of the value of housing services.

For the purpose of valuing the owner-occupied housing services Eurostat recommends applying as far as possible the principles laid down by ESA 95 and the Commission Decision of 18 July 1995 (95/309/EC, Euratom). This Commission Decision proposes to use a stratification method, which can be difficult to implement in countries with small rental markets. In this case, the regression method proposed by the EU-SILC Regulation would be acceptable also.

The estimated values are then used to impute the rents for those households that did not report paying rent (either because they were owner-occupiers or because their housing was rent-free).

In cases where the household just pays a reduced rent and where this is known for the household the countries can – if possible – also impute the value of the reduction in the rent.

If possible, the output of services of secondary dwellings (holiday residences) and dwellings occupied by households paying a reduced rent or housed free should also be valued in accordance with the market value principle. Appropriate corrections are necessary for secondary dwellings located abroad. In the case of time-share apartments, a proportion of the service charge should be recorded as such. The estimated values should be recorded separately from the output of services of main dwellings.

The expenditure on newly built dwellings and dwellings new to the household sector should also be estimated.

The following table shows that less than half of the CC imputed some rent for the main dwellings occupied by their owners and that the most commonly used method of evaluation was self-assessment, which is not recommended by Eurostat (unless it can be proved that no other method works properly).

Table 23: Evaluation of imputed rents for owner-occupiers of households' main dwellings in the Candidate Countries

Country	Categories	Method used	Stratification variables
Bulgaria	-	-	-
Czech Republic	-	-	-
Estonia	-	-	-
Cyprus	Owner-occupiers and tenants with free rental	Self-assessment	-
Latvia	-	-	-
Lithuania	<u>1999:</u> No data <u>Since 2002:</u> owner-occupiers, tenants-free rental and tenants-reduced rental	<u>Since 2002:</u> self-assessment	-
Hungary	-	-	-
Malta	Tenants-free rental Owner-occupiers	User-cost method	
Poland	-	-	-
Romania	-	-	-
Slovenia	Tenants-free rental Owner-occupiers	Self-assessment	-
Slovakia	Tenants-free rental Tenants-reduced rental	Self-assessment	-
Turkey	Tenants-free rental Tenants-reduced rental Owner-occupiers	Self-assessment Stratification Extrapolation	Size Location

Leasing and hire purchase

In addition to purchasing durable goods directly, households can obtain the use of them in the form of **operating leasing, financial leasing and hire purchase**. In all three cases the institutional unit in question acquires the right to use a durable good, although the good legally remains the property of another unit. For the purpose of recording the acquisition of durable goods by households by means of operating leasing, financial leasing and hire purchase, Eurostat recommends applying as far as possible the principles laid down by ESA 95 as summarised below.

Recording and valuation of leasing and hire purchase is in line with the 'acquisition' principle in the concept of actual consumption. Under financial leasing and hire purchase contracts, ESA requires the durable good to be recorded as if bought by the purchaser the day he takes possession of it at the price he would have paid in a cash transaction. The lessee becomes the *de facto* owner from the beginning of the leasing period. Under an operating lease construction, the lessor remains the owner. Consequently, the rental payments during the leasing period are part of the household's final consumption expenditure. If the durable good concerned is for instance a car, the expenditure should be recorded as a service under COICOP category 07.2.4.1. The situation in which the car is hired together with a driver is not considered as a leasing construction in ESA. In this case, the service should be recorded as a service under heading 7.3.2 of COICOP.

If the lessee does not buy the durable good under a financial leasing construction at the end of the leasing period, the ownership of the good changes to the lessor again and ESA 3.150d rule applies. This rule says that negative final consumption expenditure should be recorded, equalling the nominal price offered by the lessor at the end of the contract period. The transaction in these so-called existing goods should be recorded at the time ownership changes.

The following table shows that some CC follow Eurostat's recommendations while others do not yet do so.

Table 24: Treatment of leasing and hire purchase in the HBS of the Candidate Countries

Country	Leasing and hire
Bulgaria	Recorded at cash price at the time of taking possession
Czech Republic	Whole price entered as expenditure on the product
Estonia	By payments
Cyprus	The phenomenon of leasing and hiring was extremely rare during 1996/97 and has not occurred in the sample
Latvia	At the time of taking possession
Lithuania	Recorded at full price at the time of taking possession
Hungary	Accounted at the time of purchasing, value is the amount paid
Malta	Leasing excluded, hire-purchase included
Poland	Recorded at purchaser's price
Romania	<ul style="list-style-type: none"> – If purchased before reference month, the amount of money paid is recorded as expenditure – If purchased during the reference month, recorded in both income and expenditure
Slovenia	Recorded at cash price
Slovakia	The whole price
Turkey	-

Transactions in existing goods

Transactions in existing goods mostly involve consumer durable goods, such as a second-hand car. These transactions require specific treatment. In ESA 95, the transfer of existing goods is recorded at the time ownership changes and as a negative expenditure for the seller and a positive expenditure for the purchaser (ESA 95, 3.149). In the case where ownership of an existing good is transferred from a household to an enterprise, negative final consumption expenditure should be recorded for the household. If the ownership of an existing good is transferred from an enterprise, positive consumption expenditure for the household is recorded. Inter-household transactions are to be recorded as a negative expenditure for the selling and a positive expenditure for the buying household.

The following table shows that the practices of most CC regarding this topic differ from Eurostat's recommendations.

Table 25: Recording of transactions in existing goods in the HBS of the Candidate Countries

Country	Transactions in existing goods
Bulgaria	-
Czech Republic	Sales treated as income. Purchases of second-hand goods as purchases of brand-new goods. Direct inter-household transfer of goods (non-money mediated) as gifts
Estonia	Second-hand goods are treated as other goods
Cyprus	Recorded for both the receiving and giving households
Latvia	Second-hand goods are treated as new goods
Lithuania	-
Hungary	Accounted as sales of property
Malta	Impossible to identify except in the case of second-hand cars
Poland	Included in Final Consumption Expenditure
Romania	-
Slovenia	Old car collected, not considered as negative expenditure (possible for second car)
Slovakia	-
Turkey	Included in the total expenditure if coming from the same month

Health and education expenditure, and other social benefits in kind

Social transfers in kind consist of individual goods and services provided as transfers in kind to individual households by government units and NPISH, whether purchased on the market or produced as non-market output by government units or NPISH. They may be financed out of taxation, other government income or social security contributions, or out of donations and property income in the case of NPISH. (ESA 95, 4.104)

Services for collective consumption (‘collective services’) are provided simultaneously to all members of the community or all members of a particular section of the community, such as all households living in a particular region. (ESA 95, 3.83)

All household final consumption expenditure is individual. By convention, all goods and services provided by NPISH are treated as individual. (ESA 95, 3.84)

The most important social benefits in kind are health and education goods and services provided as transfers in kind to individual households by government units and NPISH. Consequently, only a relatively small part of health and education goods and services received by the individual households are actually paid for by them. This fact creates an important problem of incomparability for the recording of these items because of the great differences between the social protection systems of each country.

Eurostat’s recommendation on this point is not good from a theoretical point of view but takes into account the huge practical difficulties of evaluating the actual consumption of this type of goods and services. Eurostat recommends that the concept of actual use of health and education services will not be included in the conceptual base of household consumption expenditure of HBS; only the part of these services actually paid for by the individual households will be recorded as consumption expenditure. The same will be applicable for all the other social benefits in kind except housing.

The following table shows the practices of most CC regarding these topics.

Table 26: Recording of health, education and other social benefits in kind in the HBS of the Candidate Countries

Country	Concept selected for health and education expenditure	Recording principle	Other social benefits in kind
Bulgaria		Net expenditure	Non-monetary income
Czech Republic		Gross expenditure	-
Estonia		Net expenditure	Some included in income in kind
Cyprus		Net expenditure	-
Latvia		Gross expenditure	Evaluated services received from social assistance
Lithuania	Actual final consumption plus some benefits in kind, received in the form of reduced price for specific groups of the population	Net expenditure	Included in consumption expenditure in kind
Hungary		Net expenditure	-
Malta	Impossible to identify	-	Excluded
Poland			No government transfers included
Romania	Actual final consumption		Together with other goods and services received free of charge
Slovenia		Net expenditure (Most health and education services are free. Cost paid by households is recorded. Reimbursements are not taken into account).	Layette assistance for a newborn child
Slovakia	Actual final consumption	Net expenditure	-
Turkey		Net expenditure	1994: Covered both consumption expenditure and disposable income 2003: excluded from the expenditure

Wages and salaries in kind

Wages and salaries in kind consist of good and services, or other benefits, provided free or at reduced prices by employers, that can be used by employees in their own time and at their own discretion, for the satisfaction of their own needs or wants or those of other members of their households. Those goods and services, or other benefits, are not necessary for employers' production process. For the employees, those wages and salaries in kind represent an additional income: they would have paid a market price if they had bought these goods or services by themselves. (ESA 95, 4.04)

The most common salaries and wages in kind are:

- the use of vehicles or other durable goods provided for the personal use of employees and/or free fuel;

- benefit from free or reduced cost provision of housing or accommodation services;
- benefit from free or reduced cost supply of gas, electricity, water and telephone;
- other benefits such as:
 - benefits accruing to the employees of transport companies when they are granted reduced fares;
 - purchase of a vehicle below market price (for the employees of vehicle manufacturers);
 - free meals and drinks obtained in exchange for work;
 - uniforms or other forms of special clothing which employees choose to wear frequently outside of the workplace as well as at work;
 - transportation to and from work, except when organised in the employer’s time, car parking;
 - crèches paid for by the employer for the children of the personnel;
 - the provision of sports, recreation or holiday facilities for employees and their families;
 - salaries in kind may also include the value of interest waived by employers when they provide loans to employees at reduced, or even zero, rates of interest.

Eurostat recommends including the wages and salaries in kind supplied to households in the form of goods or services by employers for free or at a reduced rate, to the extent that they are believed to be quantitatively significant to the household. It ought to be possible to identify the non-monetary part of this consumption expenditure.

The following table shows that most CC already follow Eurostat’s recommendations regarding this point.

Table 27: Recording of wages and salaries in kind in the HBS of the Candidate Countries

Country	Free or reduced cost housing	Company car	Gas, electricity or water	Telephone	Other
Bulgaria	X	X	X	X	X
Czech Republic	-	-	-	-	-
Estonia	-	X	-	X	X
Cyprus	X	X	X	X	X
Latvia	X	-	X	X	-
Lithuania	X	X	X	X	X
Hungary	X	X	X	X	X
Malta	X	X	X	X	X
Poland	-	-	-	-	X
Romania	:	:	:	:	:
Slovenia	-	X	X	X	X
Slovakia	X	X	X	X	X
Turkey	X	X	X	X	X

5. CLASSIFICATIONS AND VARIABLES

The following table gives additional information about the main classifications and nomenclatures used by each CC in the production of their HBS.

Table 28: Main classifications used in the HBS of the Candidate Countries

Country	Classifications			
	Consumption expenditure	Education	Occupation	Income
Bulgaria	COICOP-HBS	National classification	ISCO-99	Bulgarian HBS Classification
Czech Republic	COICOP-HBS	Czech HBS	KZAM (compatible with ISCO-88)	Czech HBS classification
Estonia	COICOP-HBS	ISCED	ISCO	
Cyprus	COICOP-HBS	ISCED	ISCO-88	In line with 1997 HBS methodology in the EU
Latvia	COICOP	ISCED-97	ISCO, ISCE	
Lithuania	COICOP	National classification	ISCO-88	
Hungary	COICOP-HBS	ISCED	ISCO-99	Hungarian HBS classification
Malta	COICOP	National classification	ISCO	
Poland	COICOP-HBS	ISCED-97	ISCO-88	Polish HBS classification
Romania	COICOP-HBS	ISCED	ISCO-99	NACE
Slovenia	COICOP-HBS	National classification harmonised with ISCED	National classification compatible with ISCO-88	
Slovakia	COICOP	National classification	ISCO-99	
Turkey	COICOP-HBS	Modified ISCED	1999: ISCO-68 2002: ISCO-88	1994: ISIC Rev.3 2002: NACE Rev.1

Eurostat recommends using the most recent versions of the standard nomenclatures and classifications wherever applicable. The following table presents the most important nomenclatures and classifications for HBS:

Table 29: Main classifications proposed by Eurostat

CLASSIFICATION	CONCEPT TO BE BROKEN DOWN BY THE PROPOSED CLASSIFICATIONS
COICOP-HBS 2003 (i.e. including the modifications approved by the HBS Working Party of May 2003)	Consumption expenditure of households
NUTS-2003, level 1	Territorial units and regions
ISO 3166	Codes for the representation of the names of the countries
ISCED-1997	Education level
ISCO-1988 (COM)	Occupation
ICSE-93	Status in employment

Detailed information about all these nomenclatures can be found in RAMON, Eurostat's classification server, at the URL:

<http://europa.eu.int/comm/eurostat/ramon/>

Most CC support many of the variables proposed by Eurostat but not all of them. For instance, the variable “HA09 population density domain” is supported only by very few CC.

6. DATA TREATMENT

6.1. Grossing up and weighting

The need to weight data from the Household Budget Survey is generally recognised. For some variables, double weighting is required:

- Spatial weighting aims to improve the representativeness of the sample in relation to the size, distribution and characteristics of the population under investigation. Methods for calculating coefficients may differ, and here we will look at the gradual approach recommended by Eurostat.
- The temporal weighting of data stems from the fact that the household observation period is often different from the reference period.

Grossing up is a concept strongly linked to the weighting concept because it involves the estimation of values for the whole surveyed population.

The following table summarises the grossing up and weighting procedures used by each Candidate Country.

Table 30: Grossing up and weighting procedures used by each Candidate Country

Country	Grossing up	Weighting
Bulgaria	No	No
Cyprus	Quotient of the estimated total population and the sample population	On the basis of the geographical distribution of households from which the original sample was derived
Czech Republic	Into national monthly and yearly files	As regards the social groups on the basis of the most recent micro census
Estonia	By weighting	Weights are calculated in four steps: 1) calculation of inclusion probabilities and design weights for households; 2) post-stratification by place of residence; 3) correction for the population size (to get the estimate equal to the last population census); 4) calibration by sex, age groups and counties. Weights are different for all parts of the survey (2 interviews and 2 diaries), as not all households agree to take part in all of them. To compensate for the overall low response rate, all data are used, regardless of the behaviour.
Cyprus	Quotient of the estimated total population and the sample population	On the basis of the geographical distribution of households from which the original sample was derived
Latvia	1) Estimates at domain level 2) National estimates using the Horwitz-Thompson estimator	Calculation of inclusion probabilities and design weights
Lithuania	By weighting	Calculation of inclusion probabilities and design weights, post-stratification by place of residence using the Horwitz-Thompson estimator
Hungary	Grossing-up made by using raising factors	Using mathematical-statistical method and updated census data by counties
Malta	Up to the population, using estimates based on the Census of Population	Based on the distribution of households by size and region
Poland	All households in the population on the basis of the LFS sample	1999: weighting with the household's structure 2000/01: on the basis of the LFS sample
Romania	1) Calculation of the basic weights 2) Non-response adjustment 3) Final adjustment of the sample population and calculation of the extension coefficients	(see grossing up)
Slovenia	Using information from the Central Population Register, Census 1991, LFS	4-step calculation of a final weight
Slovakia	(quota)	(quota)
Turkey	Population projection in two stages	Independent monthly estimates considering regions, population groups, provincial centres

6.2. Data processing

The following table summarises the means used for data processing in each Candidate Country.

Table 31: Data processing means used by each Candidate Country

Country	Data processing
Bulgaria	Not specified
Czech Republic	Own data-processing software
Estonia	- FoxPro, Blaise - for weights and sampling errors SAS, SUDAAN is used
Cyprus	- CAPI method applied using Blaise - data analysis in SAS
Latvia	SPSS
Lithuania	SPSS
Hungary	- data capture with Blaise 5.1 - tabulations with SAS, SPSS, TPL
Malta	Data entered manually using CADI (Computer Assisted Data Input)
Poland	Fox Pro
Romania	Visual Fox Pro
Slovenia	SAS
Slovakia	SAS
Turkey	Consistency checks by Blaise, main analysing tables created by TPL

6.3. Control procedures

The quality of the results obtained from the Household Budget Surveys may be affected by various types of error. One such error that affects the overall quality of the survey is the observation (or collection) error⁶, which should be corrected wherever possible. Other errors arise during input, encryption or data processing. Most CC compare the final aggregate result with other sources in order to check globally the coherence of the collected data.

The following table summarises the main control procedures used by each Candidate Country.

Table 32: Control procedures used in the HBS of the Candidate Countries

Country	Control procedures	Coherence with other statistics
Bulgaria	1) data entry controls 2) ex-post logical controls 3) external verifications on macro level	Aggregated data are compared with data from other sources
Czech Republic	1) control on computerising 2) further aggregation checks	No comparisons
Estonia	Special program is used for outlier treatment	Information from population statistics is used
Cyprus	Major check of the balance between income, expenditure, savings and debts	Expenditure results compared with the private final consumption from NA
Latvia	Data entry controls	Results compared with the final household consumption figures from NA
Lithuania	1) checks by supervisor 2) checks by data entry program	Income data are compared with official statistics on average salaries and pensions
Hungary	Automated data quality check, comparison of monthly and yearly data	Partly coherent
Malta	All questionnaires and diaries checked by Vettors, automatic control procedures, last check after data entry	Coherence with NA, LFS, Census of Population
Poland	Data entry checking Check of the balance between income, expenditure, savings and debts	Comparison with National Census, LFS, NA
Romania	Own software is used	For some indicators comparisons with other statistical domains (demography, employment and wages, pensions, etc.) are made.
Slovenia	Majority of the controls are carried out in Blaise; after transformation of the data to SAS, additional controls are performed.	HBS is coherent with other statistics
Slovakia	Standard error and decile structure	Wage statistics, pension statistics
Turkey	Control of the interviewers by supervisor Consistency checks by programs such as Blaise, STATA	Comparison of consumption expenditure with private final consumption of the NA: 57% of NA in 1994 Employment indicators are compared with LFS

⁶ This may, for example, be due to the omission of enumerated households, to the recording of expenditure incurred outside the reference period, or to false declarations. This is where enumerator training and backup come into their own.

6.4. Production time and dissemination

The following table summarises is the length of the period from the end of the survey until the first results are available in each Candidate Country.

Table 33: Production time of HBS results in the Candidate Countries

Country	Production time
Bulgaria	- 40 days after the reference month - 2 months after the reference year
Czech Republic	- Quarterly data: 2 months - Annual data: approx. half a year
Estonia	Annual data are published at the beginning of April
Cyprus	1 year after the end of the survey
Latvia	Production time is 3-4 months after the end of the survey year
Lithuania	- Quarterly results: 1.5 months - Annual results: 4-5 months
Hungary	- Statistics Yearbook: September (3 months after the end of entering retrospective interview yearly data), basic tables - Territorial Statistics Yearbook: October - Half-yearly publication: 1 month after the second quarter - HBS Yearbook: December
Malta	2 years from completion for publication, 1 year from completion for reports
Poland	- Annual data: 6-9 months - HBS publication: October - Statistical Yearbook: December
Romania	:
Slovenia	6-8 months after the end of the data collection for the last year
Slovakia	4 months after the end of year
Turkey	12 months for Household Income and Consumption Expenditure Surveys

The following table gives an overview of the dissemination of the HBS results carried out by each Candidate Country.

Table 34: Dissemination of HBS results in the Candidate Countries

Country	Forms of dissemination
Bulgaria	Publications of aggregate annual and monthly data
Czech Republic	Quarterly and yearly printed publications, Internet and other electronic data
Estonia	«Household Living Level» Yearbook, Statistical Yearbook of Estonia, tables on Internet
Cyprus	Results of the last survey published in May 1999 by the Statistical Service of Cyprus
Latvia	Survey results in printed and electronic form
Lithuania	Quarterly and annual publications, electronic forms
Hungary	Yearbooks, ad-hoc publications and half-yearly reports, tables on CDs, data sets on CDs
Malta	News releases, publications, tailor-made reports
Poland	«Household Budget Survey», «Living Conditions», yearbooks, micro-data files available after submitting an order
Romania	Statistical publications on paper and in electronic form
Slovenia	Paper and electronic publications: First Release, Statistical Yearbook, Results of the Survey for HBS and Slovenia in Figures; access to micro-data is possible in individualised form for research purposes
Slovakia	Publications on paper and in electronic form
Turkey	Several publications originating in 1994 Household Income and Consumption Expenditure Surveys derived from tables

7. METHODOLOGY CHANGES

The methodological information given in this document refers to the data collection for the year 1999. However, some Candidate Countries have introduced some changes since then. This chapter gives additional information about the updating of the national methodologies.

7.1. Last issues of the national methodology

The following table shows the dates when the last methodological references for the HBS were published in each CC.

Table 35: Last issues of methodological publications with regard to HBS in the Candidate Countries

Country	Last issue
Bulgaria	2000 – introduction of new expenditure nomenclature compatible with COICOP-HBS 2002 – reduction of sample size
Czech Republic	2001
Estonia	Included in the yearbooks 1996-2000
Cyprus	1999
Latvia	1997
Lithuania	2001, included each year in the annual publications since 1996
Hungary	2000
Malta	News releases, publications, tailor-made reports
Poland	1999
Romania	2001
Slovenia	1997
Slovakia	1997
Turkey	2000

7.2. Planned changes to the Household Budget Surveys

Some Candidate Countries have reported plans for updating their HBS methodologies. The following table summarises this information.

Table 36: Planned changes to the HBS of the Candidate Countries

Country	Planned changes
Bulgaria	2003: new program for data processing, changes in possible values for some variables
Czech Republic	-
Estonia	2002: samples of HBS and LFS are coordinated; reorganisation of the working structure of the interviewers: more widely distributed, more equally balanced workload
Cyprus	Sample increase, revised COICOP-HBS nomenclature, questionnaire modification due to Eurostat requirements. Foreign households to be included in the sample.
Latvia	In May 2001 the new redesigned HBS was launched (change of questionnaire design, reference period – last 12 months for data collection of non-regular income and durable goods, etc.).
Lithuania	Change of sample design seeking to obtain main indicators by counties (level NUTS-3) Change of diary design, collection of information about income for the last 12 months, retrospective interview for 3 months for major purchases, calibration method for sample weights will be applied.
Hungary	Diary-keeping period divided into 2x15 days, quarterly publications only twice a year (half-yearly publication), reduction of the content of Annual Interview (already done). Methodological investigations for other future changes are ongoing.
Malta	- Plans to perform HBS on ongoing basis starting in 2004-5 - 2003-4: 2-week period for diaries, individual diaries
Poland	2002: collecting more wide-ranging information on imputed rents 2003: additional questionnaire containing imputed rents 2005-2006: shortening of the recording period for expenditure in the budget diary to two weeks
Romania	-
Slovenia	2003: Some changes in definitions of social receipts due to legislative changes
Slovakia	Preparation of a random sample for the survey
Turkey	Estimates based on the whole of Turkey, urban and rural areas at the end of each year in 2002 Estimates based on 7 geographical regions and 19 province centres at the end of a 3-year period in 2002 The name of the survey was changed to Household Budget Survey EU-SILC in 2003. Income in kind as withdrawals from stocks will be covered in 2003.