Documentation of statistics for Household Budget Survey 2018

1 Introduction

The Household Budget Survey describes in detail the Danish households' expenditure on goods and services. The statistics are used to compile weightings in the Consumer Price Index and for calculation of the private consumption in the National Accounts. The statistics were first compiled in 1897 and annually since 1994.

2 Statistical presentation

The Household budget survey is calculated at Households level. The survey is based on a combination of interviews, accounting and administrative data from the participating households. 99 per cent of the total population is covered by the survey, which covers all private households in Denmark.

2.1 Data description

The Household Budget Survey is based on a combination of interviews and accounting from the participating households. In areas where data already are known through registers, data are taken from those registers. All participating households have to register their consumption over a period of 14 days. When a household has finished the registration of its consumption – the household is visited by our computer-assisted personal interviewers (CAPI). The CAPI-interviewers ask questions about the households fixed costs for the last 12 months. The survey covers all private households in Denmark, these accounts for approx. 99 percent of the total population.

2.2 Classification system

Consumption covers expenditure on goods and services, used for the direct satisfaction of individual needs. Consumption is grouped by purpose in the international standard *Classification Of Individual Consumption by Purpose*, also known as COICOP.

The international recommendations only give instructions on the division of consumption at an overall level, but Statistics Denmark makes a further division in order to meet specific needs.

Total consumption can in the statement immediately be grouped as follows:

- Level 1 12 groups
- Level 2 46 groups
- Level 3 114 groups
- Level 4 282 groups
- Level 5 512 groups
- Level 8 approx . 1,300 individual items

see the variable list at: https://www.dst.dk/forbrug

For fundamental reasons, Statistics Denmark does not conduct a breakdown of the consumption of certain brands.

In addition , a large number of other groups which are documented on the website of Statistics Denmark: Nomenklaturer. This is and example, region and education.

2.3 Sector coverage

Not relevant for these statistics.

2.4 Statistical concepts and definitions

Household in the Household Budget Survey: One or more persons living at the same address, who share meals and have joint income and expenses. In the Household Budget Survey, this delimitation is made by the participating households in collaboration with the interviewer.

Consumption in the Household Budget Survey: Private households' total expenditure on goods and service, when the intention is direct utility satisfaction.

2.5 Statistical unit

The survey calculates the consumption at the level of a household.

2.6 Statistical population

The target population is all private households in Denmark. A private household is defined as an economic unit, ie. a group of people who live together and have a high degree of common economy, ie. share income and expenses. People in various forms of joint households (prisons, long-term patients in hospitals and other institutions.) is not covered, since it often will be impossible to separate the private economy from the economy of such a kind of institution. It is necessary to pay attention to this omission, if the surveys data for example are use to an analysis of hospital use.

The private economy illuminated. Goods consumed in production (equipment, etc..) And other business expenses are not included.

2.7 Reference area

The survey covered the entire country, incl. Bornholm (except non-mainland islands).

2.8 Time coverage

Since 1994 the survey has been published annually.

2.9 Base period

The base period for constant price calculations are at present year 2005.

2.10 Unit of measure

Consumption is measured as DKK per household per year.

In addition, a number of characteristics are calculated, on average, for the persons in the households. These are; persons per household (including the number of children and adults), age of head of household, share of homeowners in the household and share of households with a female head of household.

Furthermore, characteristics are calculated, on average, for the dwelling itself, including size of dwelling in square meters and year of construction.

2.11 Reference period

Consumption is calculated as an annual average for the year.

2.12 Frequency of dissemination

Two yearly versions are published. First a preliminary version is published and later a final one. The preliminary only contains information about the consumption, while the final one contains detailed information about the income.

2.13 Legal acts and other agreements

The Household budget Survey is not based on an EU directive. The Survey is based on a so-called "Gentleman agreement", which means that the individual member states alone decide if they want to provide Household budget data.

2.14 Cost and burden

No response burden has been estimated since participation in the survey is voluntary.

2.15 Comment

Additional information can be obtained by contacting the Section for the Household Budget Survey.

3 Statistical processing

The survey is based on a sample where the number of households accounts for about 2,200 out of Denmark's total of approximately 2.6 million households.

The survey included data from three different data sources: Accounting booklets, CAPI interviews and data from registers. In this way the sample can give results which are good approximations for all private households. The data from the 3 different sources are validated. We are constantly looking at how we can improve and compile the statistic in a more efficient way.

The data is collected annually from approximately 1,100 households. Such a sample is too small to form the basis of very detailed statistics and therefore we averaged data from two consecutive years to a single sample. All expenses, income, etc. are converted to the price and volume level of the end year.

Consumption survey is published annually. Preliminary figures 20 months. After the reference year, while the final figures are published 27 months. After the reference year.

3.1 Source data

The Household Budget Survey is calculated at household level, and is based on a combination of interviews and accounting of the participating households. All households are simply randomly selected. In areas where data are already known through registers, data are taken from those registers. The survey used records from:

- Income Register
- CPR register
- BBR register
- Training Register
- Hospital Statistics Register

3.2 Frequency of data collection

Data are collected annually. Households participate continuously throughout the year in the survey. In this way we ensure that seasonal consumption are represented in the survey.

3.3 Data collection

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- Income Register
- CPR register
- BBR register
- Training Register
- Hospital Statistics Register

The survey included information from three different sources :

- Interview
- Accounting
- registers

** Interview **: Households have participated in an extensive interview. The Households´ participants are asked about regular expenses during the past 12 months, possession on and expenditure of a number of durable consumer goods, the use of health care, education and child-care arrangements on certain income and taxes as well as retirement plans. Since the households are visited spread evenly over the year, the information will partly be about spending in the previous year.

Accounting: Households have for a period of 2 weeks kept a detailed account of all expenses. This accounting guidance is for individual households and is spread out over the year to ensure that seasonal changes in consumption are covered by the survey. The accounts have 2 main purposes: It ensures total coverage by, for example, new products on the market comes with, and by rarely consumed products , as it is too big to ask in the interview, in principle, be covered . The accounting also ensures that more everyday purchases that you normally do not remember for a long time will be covered.

Records: To save time for households and Statistics Denmark, the Households are asked about topics that Statistics Denmark already has useful information about. Statistics Denmark has in particular income and tax information, housing information and information on education and occupation.

3.4 Data validation

The data validation takes place on many research levels. In the interviewees program, for example, there are built a large number of controls. These can be both monetary terms, but may also be more involved, for example, if a household has indicated that they have to dispose of a car and then answering no to the payment of vehicle excise duty or car insurance.

Finished interviews and accounting records validated subsequently manually by Statistics Denmark with specially developed software that also examine the appropriateness of described amount.

3.5 Data compilation

When we have finished the validation of the interviews and accounts booklets the registry variable are linked in the data set. Sometimes it's difficult to find the household in the sample in the register data, this kind of difficulties can often be attributed to differences in the calculation date. When this happens we make manual imputation of for example, an individual's level of education.

After finishing the processing of Micro-data the enumeration process of making the data representative for the entire country begins. The figures in all tables are weighted this is done in order to partially resolve the gaps, as different dropout and pure random coincidences leads. Those types of Household where the risk for not participating in the survey is relatively large, which therefore results in too few households in the survey are assigned a relatively large weight, while household types, as there are too many of, is assigned a relatively small weight.

Information about both the enumerated number of households in Denmark after the weighting and on the actual number of households in the survey can be found in most tables. This last statement is relevant to assessing the sampling uncertainty, since a small number of households results in a relatively large uncertainties.

The weights are calculated using a regression estimate. The focus is on each characteristics of the relationship between sample and population. The advantage of this method is that many more features are considered than in the former method were post-stratification was used. Following characteristics are involved in the estimation:

- Household size and composition
- Income
- Main Income Recipient's socio-economic status
- The household owns or rents the dwelling
- What type of urban household lives in
- Education
- Gender
- Geography

3.6 Adjustment

We do not make other corrections of data besides those corrections described during data validation and data processing.

4 Relevance

In addition to the general public the Household Budget Survey has a wide application. Internally in Statistics Denmark during the compilation of national accounts and price indexation. Public authorities' planning and feasibility studies, etc. Internationally, where especially EUROSTAT is very active in order to establish comparable figures between countries. Research in a number of areas, as well as for marketing purposes.

4.1 User Needs

In addition to serving the general public interests the survey has a broad group of users:

- It is used internally at Statistics Denmark in compiling price indices and national accounts statistics.
- Government bodies use the survey for purposes of planning and for conducting analyses of the consequences of new legislation, etc.
- The survey is used for researches purposes within several fields.
- The survey can be used for marketing purposes, etc.
- Internationally, the survey is widely used. Especially, Eurostat is very active in enabling comparability of the survey results among the EU Member States.

The statistics are very rich in detail and have a relatively long production time.

4.2 User Satisfaction

A user satisfaction survey has not been conducted.

4.3 Data completeness rate

The Household Budget Survey is indirectly subject to the Council Regulation (EC) No. 2494/95 (1) of 23 October 1995 concerning harmonised indices of consumer prices. The Household Budget Survey provides data to Eurostat every 5 years and meets in this respect the guidelines sent out by Eurostat.

5 Accuracy and reliability

Consumption applies throughout the year as a reference time. The Household Budget Survey is slightly under-reported in several areas, such as alcohol, tobacco, prostitution and undeclared work. The uncertainty is greater if the consumption of goods that are bought seldom. The uncertainty is greater when data are based on the accounting instead of the interview and it will be greater when studying detailed groups.

5.1 Overall accuracy

A survey like the Household Budget Survey is subject to a number of inaccuracies. Most errors and shortcomings are not of a kind that can be measured, and it is therefore not possible to measure the total inaccuracy in the survey. The sample-related coefficient of variance for total consumption per household is estimated at less than 1 pct. Detailed Household Budget Survey figures for sample-related coefficient of variance is published on the subject page within the folder 'Dokumentation' (in Danish). The total inaccuracy of which the sample related coefficient of variance is only a part can, as noted, not be measured, because it is not possible to measure the other types of errors. What other kinds of errors should be taken into account are described in the next section. In general, the inaccuracy is higher, the more detailed level data are broken down to and the fewer households on which the average is based.

5.2 Sampling error

The sampling error for the Household Budget survey for both the total average and the respective under groups for latest figures can be obtain from the spreadsheet Sampling error (in Danish).

5.3 Non-sampling error

The following factors may further affect uncertainty:

· Households´ lack of recollection might influence the interview, since it can be difficult for individual households to accurately remember whether a particular expense was made 11 or 13 months ago. Therefore, our CAPI interviewers try to the get households participating in the study to have found the relevant documents, before the interviewer come to visit. This is done, inter alia, by sending "do lists" to the household before the visit and contact the household by phone before visiting. · Participating households can forget to note some spending, when they full out the - especially at the end of the 2- week period. Studies show that more expenses are in week 2 than in Week 1. To adjust for this is all accounting data listed by 4 per cent. · Households´ lack of knowledge might influence by the complicated issue of life insurance. The CAPI interviewers conducting visits interviews all have local knowledge. · Households´ unwillingness to give the correct answer can be a problem. For example, there is reason to believe that the information about undeclared work will be underestimated as some households have withheld information. Similarly may occur with consumption that are either illegal (drugs), or at least be perceived as a negative value (e.g. a large alcohol consumption). · But in general, feel that the participating households are very open and honest. An imbalance occurs rather because households have much to hide do not participate in the study. · Flaws in the used records can cause problems. One cannot, for example, assume that the tax authorities always correct incorrect information, if it does not have a tax consequence. In addition, the records are defective for households where one person has died, and for households (typically with complicated income), the tax authorities had not finished imitated at the time the Statistics Denmark downloaded information.

5.4 Quality management

Statistics Denmark follows the recommendations on organisation and management of quality given in the Code of Practice for European Statistics (CoP) and the implementation guidelines given in the Quality Assurance Framework of the European Statistical System (QAF). A Working Group on Quality and a central quality assurance function have been established to continuously carry through control of products and processes.

5.5 Quality assurance

Statistics Denmark follows the principles in the Code of Practice for European Statistics (CoP) and uses the Quality Assurance Framework of the European Statistical System (QAF) for the implementation of the principles. This involves continuous decentralized and central control of products and processes based on documentation following international standards. The central quality assurance function reports to the Working Group on Quality. Reports include suggestions for improvement that are assessed, decided and subsequently implemented.

5.6 Quality assessment

The Household Budget Survey is a sample survey, combined with a wide range of register variables. The survey is based on a simple randomly drawn sample. The survey has over a number of years been conducted by the same procedure.

The study's annual sample is not large enough to only give a reliable estimate of consumption. Therefore included sample data from the previous years also in the total charge for the year. The study has the character of a sort of "moving average".

Through several years the study has been conducted by the same procedure. This has been conducted partly to ensure a better comparison over time and partly to provide faster results and to minimise errors.

The Household Budget Survey was in the period 1994-2013 based on a three-year sample. From 2014 and onwards, the Household Budget Survey is based on a two-year sample. This is an improvement of the Household Budget Survey, since the figures brought forward by 12 months.

5.7 Data revision - policy

Statistics Denmark revises published figures in accordance with the Revision Policy for Statistics Denmark. The common procedures and principles of the Revision Policy are for some statistics supplemented by a specific revision practice.

5.8 Data revision practice

Since the publication of the Household Budget Survey 2017, there is only an annual publication, therefore no revisions will be made in the future.

6 Timeliness and punctuality

The statistics are usually published according to the time announced. The statistics are published annually 12 months after the end of the year.

6.1 Timeliness and time lag - final results

The statistics are updated twice yearly, where approximately one half of the households are new, while one half was also included in the previous survey. Preliminary figures are published approximately 9 month after the last data collection. Final figures are published approximately one and a half year after.

6.2 Punctuality

The statistics are usually published without delay in relation to the scheduled date.

Revised FU2013, preliminary and revised FU2015 was delayed in relation to announced scheduled date.

7 Comparability

The Household Budget Survey is conducted in accordance with guidelines from the European statistical agency Eurostat. Comparable figures are published by Eurostat. Since 1994, the survey has been methodologically rearranged and is now conducted annually by the same method and on a comparable basis.

Data for 2014 and onwards are based on a two-year-old sample and COICOP5 nomenclature. To ensure comparability and continuity over time, data from 1994 to 2013 were recalculated in compliance with the new nomenclature in both current and constant prices

7.1 Comparability - geographical

The calculation of the Household Budget Survey is based on international recommendations and therefore there is a good correlation with figures from countries of the European Union. Eurostat publishes every five years each country's Household Budget Survey in their databases called statbank.

7.2 Comparability over time

Since 1994 it has been possible to compare data from Household Budget Survey without particular problems. This means that data from the participating households since 1994 has been collected every year and as the year progressed. The collection method has been to be collected data for three consecutive years, which were averaged to form a sample. Data from year t-1, and t + 1 year was price and quantity converted to year t (middle year) level. The disadvantage of the model has been to thereby only exchanged data for the year t + 1 and the price and quantity converted to the new middle year, t. Thus, the study had the character of a kind of moving average. By basing the sample on a 2-year sample don't solved the problem completely, but it speeds up the production of data and thus made the investigation more timely and relevant. The method will continue to be annual data collections. The sample consists now of year t-1 and t. The sample for 2018 consists of data from 2017 (t-1) and 2018 (t), these are price and volume converted to the price level in 2018.

Since 2012 the survey has been supplemented with data at constant 2005 prices. This makes it possible to determine the amount of development over time.

7.3 Coherence - cross domain

The classifications and definitions used are aimed to be as comparable as possible with the national accounts. But the methods, etc., in these two kinds of statistics are very different. The classification of consumption is based on the international COICOP5 classification, which is also used in compiling price indices. It is difficult to conduct comparisons with the general population statistics and other register-based statistics, as the household definition in the survey is different: In the survey the household definition is the economic unit, which is decided by the household members themselves, while in the general population statistics the household definitions are derived from the administrative registers-based information.

7.4 Coherence - internal

The Household Budget Survey is based on three data sources, interviews, accounting and registers.

8 Accessibility and clarity

These statistics are published in a Danish press release, at the same time as the tables are updated in the StatBank. In the StatBank, these statistics can be found under Household Budget Survey. For further information, go to the subject page.

8.1 Release calendar

The publication date appears in the release calendar. The date is confirmed in the weeks before.

8.2 Release calendar access

The Release Calender can be accessed on our English website: Release Calender.

8.3 User access

Statistics are always published at 8:00 a.m. at the day announced in the release calendar. No one outside of Statistics Denmark can access the statistics before they are published.

8.4 News release

These statistics are published in a Danish press release.

8.5 Publications

The Household Budget Survey does not feature in any Publications from Statistics Denmark.

8.6 On-line database

The statistics are published at StatBank under the Household budget survey

8.7 Micro-data access

Researchers and other analysts from authorized research institutions, can be granted access to the underlying Micro-data by contacting Research Services.

8.8 Other

Eurostat publishes internationally comparable statistics, including Danish, for the Household Budget Survey in their database.

8.9 Confidentiality - policy

Data Confidentiality Policy at Statistics Denmark are followed.

8.10 Confidentiality - data treatment

The survey is performed under full anonymity. The publication is published so that it is not possible to identify individuals.

8.11 Documentation on methodology

Documentation on methodology only exists in Danish.

8.12 Quality documentation

Results from the quality evaluation of products and selected processes are available in detail for each statistics and in summary reports for the Working Group on Quality.

9 Contact

The administrative placement of these statistics are in the division of Prices and Consumption. The person responsible is America Solange Lohmann Rasmussen tel. +45 39 17 31 56, e-mail: slr@dst.dk

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