

**Documentation of statistics for  
Household Budget Survey 2020**

## 1 Introduction

The Household Budget Survey describes in detail the Danish households' expenditure on goods and services and the economic condition of the households. 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 an annual statement of the detailed private consumption at household level for private households in Denmark.

### 2.1 Data description

The Household Budget Survey is an annual statement of consumption in private households. 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. Persons in various types of joint households (prisons, long-term hospitalizations, certain institutions, etc.) are not covered, as it will often be impossible to separate the private economy from the institution's finances. For some of the information in the study, it is necessary to be aware of this omission, eg when analyzing hospital use (as more permanent hospital admissions are not covered). It is the private economy that alone is highlighted. Goods consumed in production (operating assets, etc.) and other business expenses are not included.

The results of the Household Budget Survey are published in nine annual tables describing consumption per. household for a given year and background information about the households such as income levels, housing conditions, geography, type of household etc. The average consumption for all Danish households as a whole (not by type) is distributed on a detailed item level (ECOICOP at 5-digit level), which includes almost 300 items and is shown in both current and fixed prices. In six tables, consumption is calculated at a less detailed level, namely at almost 50 items (calculated at a 3-digit level in ECOCIOCP). On the other hand, consumption is broken down by type of household, socio-economic status, total income, type of housing, region or age. The last table shows income and consumption by income type. Consumption here is not divided into product groups.

## 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 *European Classification Of Individual Consumption by Purpose*, also known as [ECOICOP](#).

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 an 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

Households.

## 2.6 Statistical population

All private households in Denmark.

## 2.7 Reference area

Denmark

## **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 2015.

## **2.10 Unit of measure**

Consumption is measured as DKK per household per year. All amounts include VAT.

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**

The figures are published annually.

## **2.13 Legal acts and other agreements**

Up to and including 2024, the Household Budget Survey is based on a “Gentlemen’s Agreement”, which means that it is voluntary for the individual member states to provide Household Budget Survey data to the EU. In 2019, it was decided that the Household Budget Survey with effect from 2024 will be based on the IESS Regulation, see REGULATION (EU) 2019/1700 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL 2019/1700 of 10 October 2019

## **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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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**

With only 19 pct. of the households who have been contacted participating in the Household Budget Survey. This creates uncertainty, not least for detailed consumer groups. For total consumption, this means that there is an uncertainty margin of +/- 1.2 per cent. while that for that for bread is 1.9 per cent. and 58 per cent. for a rarely purchased item such as condensed milk. There is underreporting in a number of areas such as alcohol, tobacco, prostitution and undeclared work. The uncertainty is greater when data is based on accounting rather than interviews, and it will be greater if one looks at smaller subgroups of households.

#### **5.1 Overall accuracy**

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## 5.2 Sampling error

The total sample for FU2019 consisted of a total of 13,473 households drawn in respectively 2019 (5,974) and 2020 (7,499). In 2019, 1,0102 households participated, while 1,1033 households participated in 2020, a total of 2,233 for FU2020. The participation rate for FU2020 was thus 17 per cent.

Sample uncertainty is calculated for the individual consumer product groups based on the households that have chosen to participate in the survey. In FU2019, sample uncertainty is based on the responses from 2,166 participating households. The sampling uncertainty is quantified by the coefficient of variance (the relative standard error). The estimated variance coefficients for the different statistical banking tables can be found [here](#).

The coefficient of variance for the total consumption per household in FU2019 was 1.2 per cent. This means that at 95% the confidence interval for the total consumption per household is DKK 323,254 kr. +/- 7,476.

There is great variation in the sampling uncertainty between total consumption and specific consumptions categories. Consumables that are bought often have a lower sample uncertainty than consumables that are seldom bought.

Bread, for example, is a product group that most households often buy during the week-long accounting they have had in connection with participation in the survey. The coefficient of variance on bread for an inspection household is 1,9 per cent, while that for eg preserved milk is 58,3 percent.

Similarly, the coefficient of variance is 2,7 percent in the region of the capital, while it is 3,9 percent in the region of Zealand. Tables [xxxx](#) (link) shows the detailed coefficients of variation

## 5.3 Non-sampling error

The sample basis for the study is inhabited private household addresses in Denmark for a given year. The pull-out frame contains not only private households, but also common households. Attempts are made to avoid this in the Household Budget Survey, by only extracting households with a maximum of 8 inhabitants. This may give rise to a bias in that we do not extract large private households (households with more than 8 people), but this problem is estimated to be minimal.

The framework population is based on two calendar year populations and must affect the target population in one given year. The target population is thus represented by a framework population from 2018 merged with one from 2019. In general, the framework population, which is based on 2018, largely covers 2019. However, some households may change character from 2018 to 2019.

In FU2019, there were 8 participating households which had a different household address per. 31 December 2019 than the one they had when they participated in the survey in 2018. These households are included in the sample with the household address that they had when they participated in the survey.

## 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 months 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**

The Danish Household Budget Survey is 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 Calendar can be accessed on our English website: [Release Calendar](#).

### **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](mailto:slr@dst.dk)

### **9.1 Contact organisation**

Statistics Denmark

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