

**Documentation of statistics for  
Home Appliances 2023**

## 1 Introduction

These statistics shows Danish families' possession of electronics in the household. New electronic products are constantly being developed, which over time become commonplace in Danish homes. The products in the statistics are replaced on an ongoing basis, so that new ones are included, while others are removed as they have become commonplace, e.g. smart TV. The survey has been compiled since 1990 and the statistics have been comparable ever since. Before 2000, the surveys were conducted in October. Since 2001, data are collected in April.

## 2 Statistical presentation

These statistics are an annual survey of how many percent of Danish families who possess different types of electronics, e.g. robot vacuum cleaners, smart TV and smart phones etc.

### 2.1 Data description

In 2011 the survey changed the name from Consumer Durables to Home appliances. The type of home appliances, which are included in the surveys, have changed over the years, as attention is focused on new home appliances especially as a result of the technological development - whereas home appliances, which are generally owned by almost all households, are excluded.

The statistics show the number and the percentage of households possessing home appliances. in the month of April. The total number of families is shown, so that one can calculate the number of families that have the different types of electronics.

### 2.2 Classification system

For the year 2023, the following home appliances are included: - Dryer - Washing machine - Dishwasher - Microwave oven - Espresso machine, espresso capsule maker - Robot Vacuum Cleaner - Electronic Control of heating (Smart Home) - Electronic Control of el (Smart Home) - Alarm monitoring software/ Home surveillance system - Camera (not on a mobile telephone - android or iPhone) - Smart-TV - PC - Stationary computer - Portable computer - Tablet PC or other mini-computers - Mobile telephone - Of this smart phones - Landline / wired telephone (not mobile) - DAB-radio - GPS-navigation - Activity tracker watch - GPS-watch - Play station - VR headset / VR glasses - E-book-reader - Electric vehicles , except car - Electric bicycle

### 2.3 Sector coverage

Not relevant for these statistics.

## **2.4 Statistical concepts and definitions**

**Family Weight:** The questions on home appliances do not concern the individual person, but the family he/she is living with. For that reason the answers are given a family weight, which ensures that the families with different numbers of persons aged 16 years or over are represented in the sample with varying probability. A family is defined as one or several persons between 16 and 74 years who live in the same accommodation and are related (includes also cohabiting couples) and their children, though there can only be one married or cohabiting couple in the family. The sum of the family weight for all completed interviews, gives the number of families in Denmark that have persons aged between 16 and 74.

**Type of consumption:** Durable consumer goods included in the study are replaced so that new goods which, especially as a result of technological development become interesting, are added, while conversely, goods that have become common property in almost all households (e.g. color TV's) are removed.

## **2.5 Statistical unit**

Families. which include persons in the age from 16-74 years.

## **2.6 Statistical population**

Families. which include persons in the age group from 16-74 years.

## **2.7 Reference area**

Denmark.

## **2.8 Time coverage**

These statistics cover the time period from 1990 and onwards.

## **2.9 Base period**

Not relevant for these statistics.

## **2.10 Unit of measure**

The statistics show the number and the percentage of households possessing home appliances.

## **2.11 Reference period**

The reference period is the month of April of the year in question.

## **2.12 Frequency of dissemination**

Yearly.

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

The Act on Statistics Denmark.

No EU regulation.

### **2.14 Cost and burden**

The response burden is not calculated because participation is voluntary.

### **2.15 Comment**

Additional information can be obtained by Statistics Denmark.

## **3 Statistical processing**

For the time being the sample of an omnibus survey consists of 1,500 persons, drawn from a population of persons aged 16-74 residing in Denmark.

As it is not possible to interview all 1,500 persons, each completed interview is given a personal weight, which corrects the effects of non-sampling and non-response (including no telephone) and ensures that the results cover the whole population in the sample.

However, the questions on home appliances do not concern the individual person, but the family he/she is living with. For that reason the answers are given a family weight, which ensures that the families with different numbers of persons aged 16 years or over are represented in the sample with varying probability. A family is defined as one or several persons between 16 and 74 years who live in the same accommodation and are related (includes also cohabiting couples) and their children, though there can only be one married or cohabiting couple in the family. The sum of the family weight for all completed interviews, gives the number of families in Denmark that have persons aged between 16 and 74 years.

In the frame of data validation the check of the data correctness is conducted by checking the consistency of the responses by every single respondent, comparison of the results with the results of the previous year, as well as comparison of the non-response rate are also undertaken.

### **3.1 Source data**

The data is collected through Statistics Denmark's Omnibus Surveys. These surveys are sample surveys, where a representative sample of persons between 16 and 74 years is interviewed about different topics that alone would be too small to be carried out as an independent survey. Since 1974, one of these subjects has been the possession of home appliances. The results are adjusted on the basis of a post stratification by age, sex, geography and marital status, and thus cover the whole population in the relevant age groups. The sample size is approx. 1,500 persons.

### **3.2 Frequency of data collection**

Yearly.

### **3.3 Data collection**

Omnibus survey.

### **3.4 Data validation**

In the frame of data validation the check of the data correctness is conducted by checking the consistency of the responses by every single respondent, comparison of the results with the results of the previous year, as well as comparison of the non-response rate are also undertaken.

### **3.5 Data compilation**

The information is collected through the so-called omnibus surveys. For the time being the sample of an omnibus survey consists of 1,500 persons, drawn from a population of persons aged 16-74 residing in Denmark.

As it is not possible to interview all 1,500 persons, each completed interview is given a personal weight, which corrects the effects of non-sampling and non-response (including no telephone) and ensures that the results cover the whole population in the sample.

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### **3.6 Adjustment**

No furtherer adjustments are undertaken, beyond those that have already been described under Data validation and Data compilation.

## **4 Relevance**

The press use the information to inform about developments in home appliances.

### **4.1 User Needs**

The press use the information to inform about developments in home appliances.

### **4.2 User Satisfaction**

Relatively large press coverage.

### **4.3 Data completeness rate**

All data needed for statistics compilation is available.

## **5 Accuracy and reliability**

As the results are based on a sample survey, they are subject to a certain degree of statistical uncertainty. This depends on both the size of the sample and the number of completed interviews, which vary from survey to survey. With a sample of approximately 1,500 persons and a response rate of about 65 pct., which has normally been achieved in the last few years, the statistical uncertainty is in 95 pct. of the cases estimated to range between +/- 3 percentage points.

### **5.1 Overall accuracy**

As the results are based on a sample survey, they are subject to a certain degree of statistical uncertainty. This depends on both the size of the sample and the number of completed interviews, which vary from survey to survey. With a sample of approximately 1,500 persons and a response rate of about 65 pct., which has normally been achieved in the last few years, the statistical uncertainty is in 95 pct. of the cases estimated to range between +/- 3 percentage points.

### **5.2 Sampling error**

As the results are based on a sample survey, they are subject to a certain degree of statistical uncertainty. This depends on both the size of the sample and the number of completed interviews, which vary from survey to survey. With a sample of approximately 1,500 persons and a response rate of about 65%, which has normally been achieved in the last few years, the statistical uncertainty is in 95% of the cases estimated to range between +/- 3 percentage points.

### **5.3 Non-sampling error**

These surveys are sample surveys in which a representative sample of persons between the ages of 16 and 74 are asked about their family's ownership of electronics in the home. The results have been corrected for biases in selection and nonresponse and are presented so that the figures can be directly attributed to the population of adults and families in Denmark. Measurement errors may occur in connection with the interviews, where interviewed individuals may misunderstand e.g. where to classify their respective education in the provided frames. Measurements errors are negligible, and have no impact on the results. Nonresponse will be corrected using the regression method. The weights are attached to each respondent so that population totals can be recreated/calculated from the sample.

### **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**

For the time being the sample of an omnibus survey consists of 1,500 persons, drawn from a population of persons aged 16-74 residing in Denmark.

As it is not possible to interview all 1,500 persons, each completed interview is given a personal weight, which corrects the effects of non-sampling and non-response (including no telephone) and ensures that the results cover the whole population in the sample.

However, the questions on home appliances do not concern the individual person, but the family he/she is living with. For that reason the answers are given a family weight, which ensures that the families with different numbers of persons aged 16 years or over are represented in the sample with varying probability. A family is defined as one or several persons between 16 and 74 years who live in the same accommodation and are related (includes also cohabiting couples) and their children, though there can only be one married or cohabiting couple in the family. The sum of the family weight for all completed interviews, gives the number of families in Denmark that have persons aged between 16 and 74 years.

## **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**

Provisional figures are not estimated.

## **6 Timeliness and punctuality**

There is no difference between planned and actual release time.

### **6.1 Timeliness and time lag - final results**

Home appliances for a given year is published at the beginning of May and about 2 weeks after completing the collection of data, which takes place in the first two weeks of April.

## **6.2 Punctuality**

The results are published in News from Statistics Denmark in May. The reference period is the survey year, when the data collection takes place in the first two weeks of April. There is no difference between planned and actual release time.

## **7 Comparability**

The number and nature of the electronic products, that are included in the studies are replaced along the way, so that new products that - especially as a result of technological development - become interesting are added. Products that have become common property in almost every family are discontinued. Therefore comparison over longer periods some times could be difficult.

### **7.1 Comparability - geographical**

Not applicable.

### **7.2 Comparability over time**

The number and type of home appliances included in the surveys have changed over the years, as attention is focused on new consumer durables especially as a result of the technological development - whereas home appliances, which are generally owned by almost all families, are excluded. Therefore comparison over longer periods some times are impossible. Before 2000, the surveys were conducted in October. Since 2001, data are collected in April.

### **7.3 Coherence - cross domain**

It is not possible to make direct comparisons with other statistics.

### **7.4 Coherence - internal**

Not relevant for these statistics.

## **8 Accessibility and clarity**

These statistics are published in a Danish press release and in the StatBank under [Home appliances](#).

### **8.1 Release calendar**

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

### **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.



## **8.2 Release calendar access**

The Release Calendar can be accessed on our English website: [Release Calendar](#).

## **8.4 News release**

These statistics are published in a Danish press release.

## **8.5 Publications**

Not relevant for these statistics.

## **8.6 On-line database**

The statistics are published in the StatBank under [Home appliances](#).

## **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**

Not relevant for these statistics.

## **8.9 Confidentiality - policy**

[Data Confidentiality Policy](#) for Statistics Denmark.

## **8.10 Confidentiality - data treatment**

Observations are omitted to avoid the possibility of deducing the omitted observation.

## **8.11 Documentation on methodology**

Not relevant for these statistics.

## **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 is in the division of Prices and Consumption. The contact person is Zdravka Bosanac, tel.: + 45 6115 1674, and e-mail: ZBO@dst.dk.