

**Documentation of statistics for  
Census of Housing 2016**

## **1 Introduction**

The purpose is to produce statistics monitoring housing conditions in Denmark. Until 1981 the information on housing was collected via the questionnaire-based census on population and housing, which were conducted quennially until 1970. Following the establishment of the Central Register of Buildings and Dwellings (BBR) in 1977, Statistic Denmark has since 1981 conducted on the basis of information from administrative registers annual housing censuses on 1 January.

## **2 Statistical presentation**

The statistics are produced on a yearly basis. The statistics are compiled from a full-scale census based on data integration of the registers on buildings and dwellings (BBR) and population (CPR). The published statistics describe partly the stock of dwellings for the whole country, communities or selected city spaces providing information on type of dwelling, type of ownership, type of heating installation, toilet, bathing, and kitchen facilities plus the year of construction and partly the stock of occupied dwellings analyzed by tenure (rented or owner-occupied dwellings) type of household etc. Furthermore a cross-section of the above-mentioned items of information is produced.

### **2.1 Data description**

The Census of Housing describe the stock of dwellings for the whole country and the housing condition of the population. The description is based on data from The Register of Buildings and Dwellings (BBR). Data is provided for type of dwelling, type of ownership, tenure, size, type of heating installation, toilet, bathing, and kitchen facilities and the year of construction. Dwellings are split in occupied dwellings, unoccupied dwellings and unoccupied cottages. Occupied dwellings are split on type of household and number of residents. Residents are furthermore described by sex and age.

## 2.2 Classification system

There are no standard classification in this area.

In the Census of Housing dwellings and cottages are split in:

1. Occupied dwellings which are units in BBR (register on buildings and dwellings), where there in CPR are at least one person with address on the address\* of the unit at the reference time. This therefore includes proper dwellings as well as units classified for other purposes
2. Unoccupied dwellings are units in the BBR classified as proper dwelling, mixed dwelling and business or single rooms, where there are no persons registered at the address in CPR at the reference time
3. Unoccupied cottages are units in the BBR classified as cottages where there are no persons registered at the address in CPR at the reference time. Cottages are most often not used as registered address in the CPR
4. See description of match between BBR- and CPR-addresses under 'Data compilation' and 'Quality assessment'

Use of the dwelling is split on the basis of BBR-codes:

1. Detached houses/farmhouses (110,120)
2. Terraced, linked or semi-detached houses (130 vertical separation between units)
3. Multi-dwelling houses (140 horizontal separation between units)
4. Student hostels (150)
5. Residential buildings for communities (160)
6. Cottages (510, (540,590))
7. Other uses (other BBR-codes)

(Note that residential buildings for communities and student hostels do not reflect the real number of dwellings with these uses)

The classification of the ownership of the units is based on BBR-codes:

1. Individuals inclusive partnerships (10)
2. Non-profit building society (20)
3. Limited liability company etc. (30)
4. Housing societies (41)
5. Public authorities (50,60,70,80 same municipality, other municipality, state, region)
6. Other or unknown (0,40,90 Unknown, union, independent institution, other ownership)

There has been problems with the quality of the ownership-data in certain years. See description under 'Quality assessment'

## 2.3 Sector coverage

Not applicable.

## 2.4 Statistical concepts and definitions

**Occupied dwelling:** A dwelling is occupied if there in the CPR is at least one person having address in the dwelling at the time of reference. A business unit can count as an occupied dwelling if a person has his address at the unit. See a more technical description under 'Data compilation'

**Dwelling:** A dwelling is defined as a unit in the BBR with own address that has either a use classified as proper dwelling, mixed dwelling and business or single room or that at least one person has address in the CPR at the time of reference at the address of the unit. See more technical description under 'Data compilation'

**Area of dwelling:** The area of the dwelling includes the area of all living space including kitchen, bath, toilet and utilized attic. Basement area is included if it legally may be used for residential purposes. The area is measured from the outer side of the outer walls and includes in multi-dwelling houses also the share of stairwell area associated with the dwelling.

**Type of household:** In the Census of Housing is used the same definition of households as in the general population statistics for most dwellings. Here households are split in single men, single women, married couples, other couples, children below 18 years not living with parents, other households including more than one family. There is though one more category 'More than one household within the home' in the Census of Housing. This is because some dwellings in the BBR is not split into sufficient number of units to match the CPR-addresses at the same floor. This is the case for some residential dwellings for communities etc.

**Children:** In the Census of Housing are only children living with parent counted. Children are defined as persons under the age of 25 living with one or both parents, who are not part of a couple and do not have children themselves.

**Owner occupied dwelling:** A dwelling occupied by owner and which is owned by individuals inclusive partnerships

**Owner-occupied flat:** An owner-occupied flat is part of a building which can have independent ownership. This concept fits badly with its common use of the concept as it can refer to many units (ex. dwellings) and can refer to units used solely for business purposes. Data in the statbank cannot be used for counting number of owner-occupied flats.

**Unoccupied dwelling:** A dwelling is unoccupied if the BBR-unit has use classified as proper dwelling, mixed dwelling and business or single room and there is no person registered in the CPR at the address at the time of reference. Residential buildings for communities and cottages with no persons registered is not counted as unoccupied dwellings. A part of the dwellings are unoccupied only for a short time in connection to relocations, some are used as cottages, while other are genuinely vacant.

**Unoccupied cottage:** An unoccupied cottage is a unit in the BBR classified as cottage where there is no persons registered at the address in CPR at the time of reference

## 2.5 Statistical unit

Number of dwellings and number of residents.

## **2.6 Statistical population**

BBR units with information on the building, which are either occupied or have dwelling type as proper dwelling, mixed dwelling and business, single room or cottage. A dwelling is occupied if at least one person in CPR has address at the unit at the time of reference. See description of the address-match under 'Data compilation'.

## **2.7 Reference area**

Denmark.

## **2.8 Time coverage**

2010-2016.

Data from 1981 and forward is available.

## **2.9 Base period**

Not applicable.

## **2.10 Unit of measure**

Units are dwellings and their residents.

## **2.11 Reference period**

The reference period is 1st January.

Population data per January 1st, but registrations up to 30 days after January 1st, are taken into account, while data from the Central Register of Buildings and Dwellings are drawn per 15. January.

## **2.12 Frequency of dissemination**

Yearly.

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

Act on Statistics Denmark.

## **2.14 Cost and burden**

No response burden.

## **2.15 Comment**

No other information is available.

## **3 Statistical processing**

BBR- and CPR-data are matched via addresses and dwellings are split in occupied and unoccupied dwellings. Inconsistencies are corrected and data summed.

### **3.1 Source data**

Data integration using administrative registers: The Central Register of Buildings and Dwellings (BBR) and the Central Population Register (CPR). The Central Register of Buildings and Dwellings consists of a register on building permits, new buildings, extensions and alterations and a register on all existing buildings and dwellings. The Central Register of Buildings and Dwellings was established in 1977 (Act No. 243 of May 12, 1976). The purpose of the register is, through arrangements made by the local authorities, to provide for the systematic registration of information relating to buildings and dwellings for use in the administration and planning of both central and local government. The main purposes were primarily property assessment and the population and housing censuses. For mainly municipal uses, several other purposes have later been added to the use of the register. With respect to the Central Population Register information from the statistics on households and families is used, see Population and Education.

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

Quarterly.

### **3.3 Data collection**

Registers.

### **3.4 Data validation**

Only BBR-units, which can be placed in a building, are included. (Buildings owned by the military is discretioniced in our delivery, which means that associated unit is not included in the census ex. all units at Christiansø)

CPR-addresses are 'cleaned' to match BBR-addresses. Only door numbers are changed, so if it contain letters they will be prefixed. Ex. '0tv9' is changed to 'tv09'. Less than 100 addresses are changed.

Inconsistencies between tenure, ownership and the result of the match between BBR- and CPR-addresses (occupied, unoccupied dwelling) are corrected. Less than 1 pct. of the dwellings get another tenure (to either unknown or unoccupied)

### 3.5 Data compilation

Input data from the BBR and CPR-register are available in databases in Statistics Denmark. Data compilation consists mainly of matching data from these two databases via the addresses.

The address match includes:

A. More than one unit are placed on some addresses in BBR. One unit is chosen to represent the dwelling. In order of priority is:

1. Only one dwelling unit (dwelling type 1-5, ie. only one unit with dwelling area)
2. Only one proper dwelling (dwelling type 1)
3. The unit with the largest dwelling area

B. If there at the floor level is only one address in the BBR but more than one in CPR, all CPR-households will be placed in the BBR-unit. This is the case in some residential buildings for communities.

C. CPR- and BBR-addresses are matched and the vast majority of the addresses are matched one CPR-address to one BBR-address with only one unit (dwelling).

D. CPR-addresses, that do not match a BBR-address, is then placed in an empty unit at the same floor, if available.

E. CPR-addresses still not placed in a BBR-unit is then placed in an empty unit at the same staircase, if available.

Match on same floor or staircase (D and E) are saved from quarter to quarter, so if a household does not change address in CPR, it will also be placed in the same BBR-dwelling next quarter, if no new address in BBR is matching 100 percent. This means that the match will be reused between quarters and households are not technically moved between dwellings.

The vast majority of CPR-addresses - 98.8\* pct. - are matched perfect to a BBR-address with only one unit.

- 99.4\* pct. of the CPR-addresses are matched completely to an address in BBR.
- 0.3\* pct. of the CPR-addresses are matched to an empty dwelling at the same floor or same staircase.
- 0.1\* pct. of the CPR-addresses are aggregated with one or more CPR-addresses at the same floor
- 0.3\* pct. of the CPR-addresses find no dwelling in the BBR. These includes households on secret addresses and other not physical addresses ie. homeless, few allotment houses, houseboats and possibly new not yet completed dwellings.

\*1. January 2014-data

Inconsistencies between residential status, ownership and tenure are corrected. Tenure is supplied with the BBR-delivery. It is constructed on basis of match between the BBR, CPR and the ESR (joint Municipal property register. If the owner(s) of a property at the time of the match has his address in CPR at a dwelling within this property, this dwelling has tenure as occupied by the owner. Residents in Housing societies are in this context renters as it is the Housing society which owns the dwellings. Are there no residents at an address, the dwelling has the tenure 'Unoccupied'. Tenure is corrected in the Census of Housing so there are no inconsistencies between ownership, residential status and tenure.

### **3.6 Adjustment**

No adjustments are made.

## **4 Relevance**

Census of Housing is used by ministries, municipalities, companies and private persons.

### **4.1 User Needs**

- Users: Municipalities, counties, government departments, private and semi- private organizations, firms, the news media and private persons.
- Application: Public and private planning, education and public debate.

### **4.2 User Satisfaction**

User satisfaction is only measured in relation to tailor made solutions. Here the user satisfaction is generally high.

### **4.3 Data completeness rate**

Almost complete coverage.

## **5 Accuracy and reliability**

No investigation has been conducted on the overall accuracy and reliability, but the degree of unknown information on the dwellings are low.

All property owners have by law the obligation to report changes as extensions, demolitions or new roof to the municipal BBR authority. It is largely up to the property owners themselves to update the information in the BBR. Therefore it is doubtful that all changes in for example, number of rooms, toilet/bath facilities or heating are reported.

The accuracy of the Central Population Register is known to be very high. A close co-operation between the municipal authorities of the Register of Buildings and Dwellings and the Central Population Register ensures a high consistency between the addresses of the two registers.



## 5.1 Overall accuracy

A survey of the overall accuracy of the Register of Buildings and Dwellings has never been conducted. However, the degree of unknown variables is very small. According to the rules and regulations laid down by the Ministry of Economics and Business Affairs, public authorities and owners of buildings and dwellings are asked to provide information for maintaining the register. Owners are obliged to ensure that real and actual figures are continuously supplied. At the same time, the extensive administrative use of the register by the municipalities also insures a high data quality.

Quality and accuracy of information in the BBR:

**Ownership:** Before 2010 ownership information was not available for owner-occupied flats (see definition). In 2012 and 2013 there was a problem obtaining correct ownership on dwellings especially those owned by non-profit building societies and housing societies. This was caused by the Land Registration being digitized.

**Use:** The number of dwellings with the use as residential buildings for communities are not at all representative of the total number of dwellings for this purpose. These dwellings will most often be placed with use as terraced, linked or semi-detached houses or multi-dwelling houses.

The Central Register of Buildings and Dwellings was established in 1977 by compiling information collected from owners of real property. Figures on living space and time of construction for older buildings may be subject to errors. Especially in cases where the building has not later been involved in an administrative building or development case. This is, of course, due to the lack of accurate data by the owners as far back as 1977.

The accuracy of the Central Population Register is known to be very high. A close co-operation between the municipal authorities of the Central Register of Buildings and Dwellings and the Central Population Register ensures a high consistency between the addresses of the two registers.

The vast majority of CPR-addresses - 98.8\* pct. - are matched perfect to a BBR-address with only one unit associated.

- 99.4\* pct. of the CPR-addresses are matched completely to an address in BBR.
- 0.3\* pct. of the CPR-addresses are matched to an empty dwelling at the same floor or same staircase.
- 0.1\* pct. of the CPR-addresses are aggregated with one or more CPR-addresses at the same floor
- 0.3\* pct. of the CPR-addresses find no dwelling in the BBR. These includes households on secret addresses and other not physical addresses ie. homeless, few allotment houses, houseboats and possibly new not yet completed dwellings.
- 0.5\* pct. of the population do not find a dwelling in the BBR-register.

\*1. January 2014-data

Match of addresses on floor or stairway-level are considered as giving a good result at the overall level, but are not necessarily correct at the record level.

The number of unoccupied dwellings is very dependant on correct registration of units being registered and especially deregistered, when they are no longer available as dwellings.

## 5.2 Sampling error

Not relevant for these statistics.

## 5.3 Non-sampling error

Only a very little share of the population cannot be placed in a dwelling.

## 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

No real measure of quality is performed on the information in the Census of Housing. The vast majority of population is placed in a dwelling and the information in the BBR are considered reasonable. Most homeowners are not aware of the obligation to update the information in the BBR.

Known errors in the Census of Housing are:

- Problems getting correct ownership codes for the dwellings, especially in 2012 and 2013. Especially the number of dwellings owned by Non-profit building societies is too low (3-4 pct. in 2012) -Most of the residential buildings for communities are no longer registered with use as residential buildings for communities at the dwellings level. Since 2000 most of the Municipalities has changed the registration of the use of these dwellings which means that by 2014 there has been a 70 pct. decline in the number of these dwellings.
- The Municipality of Frederiksberg has registered far to many dwellings owned by non-profit building societies (25-30 pct.) - The Municipality of Svendborg had in 2010 error in tenure on approx. 20.000 dwellings, ie. 75 pct. of their dwellings. This has implications for the country total. - Some unoccupied student hostel dwellings in Copenhagen have been unoccupied since 2010, which means that these units probably are not used for this purpose anymore. - Some vacation rentals are in the BBR registered with use as as proper dwelling, which means that they in the census is counted as unoccupied dwellings.

## 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

Only final statistics are published.

## 6 Timeliness and punctuality

Data is released timely around 4 month after the reference period.

### 6.1 Timeliness and time lag - final results

The production time is estimated to 4 months after the reference period.

### 6.2 Punctuality

Usually no delays.

## 7 Comparability

Then Census of Housing has been based on the BBR and CPR-registers since 1. January 1981. With the exceptions of a few variables the data are consistent from 1981. There are though certain reservations for comparison during this time period. In summary the most important changes in 2010 are:

1. Number of unoccupied dwellings is reduced by almost 23.000 dwellings of which 3.900 were unoccupied residential buildings for communities that are not considered as dwellings.
2. Data for cottages not used for permanent living is now included.
3. More people are placed in dwellings. This is partly because there in some dwellings are placed more than one household.
4. Ownership of owner-occupied flats are now available. This category is not part of the ownership variable anymore and the numbers in the other categories therefore increases. To compare the ownership data before and after 2010 in the statbank it is necessary to use the variable 'owner-occupied flat'.

Description of earlier changes is found under 'Comparability - over time'

### 7.1 Comparability - geographical

Having an almost complete Register of Buildings and Dwellings is unique in an international context. Census of Housings is internationally most often compared with Censuses of dwellings based on questionnaires. In these comparisons, we have problems identifying institutional dwellings.

## 7.2 Comparability over time

The traditional population and housing censuses included only occupied dwellings. With the possibilities to integrate administrative registers we are now also able to obtain figures on dwellings not occupied. From 2010 also cottages with no persons registered are included in Statbank tables. Then Census of Housing has been based on the BBR and CPR-registers since 1. January 1981. With the exceptions of a few variables the data are consistent from 1981. There are though certain reservations for comparison during this time period: From 1981-1987 the type of ownership was not maintained by linking data with the Real Property Taxation Register (ESR), but only due to the municipal administration of building and development cases. From 1. January 1988 first a monthly update of the ownership via the ESR was performed and later the update has been performed three times a year of which the last one is performed in week 51. From 2010 also ownership of owner-occupied flats is available (see definition), which means that the number of dwellings with all the other ownership categories rises. In 2012 and 2013 there was a problem obtaining correct ownership on dwellings especially those owned by non-profit building societies and housing societies. This was caused by the Land Registration being digitized. These errors are corrected in the 2014-data. There is still too few dwellings owned by non-profit building societies in some municipalities, while there is far too many in the Municipality of Frederiksberg.

Until 1992, persons under 26 years living with their parents, were counted as children. From 1992 to 2006 this age limit has been 18. Since 2007 youngsters under 25 years living with their parents/parent are counted as part of their family. At the beginning of 1980, the municipal administration made frequent changes to the road codes. This caused some problems, following the same dwelling address back to 1981 and resulted, to some extent, in double counting. A changed road code made it look like a migration of the households though this of course was not the case.

Until 2005 dwellings were split in 'proper dwellings' and 'other dwellings'. Proper dwellings are dwellings intended for permanent residence. Other dwellings consists of cottages and residential buildings for communities. After 2005 a dwelling is defined as part of one or more buildings, which has a separate address and is intended for permanent residence or is used as residence for at least one person according to CPR at the time of reference. Cottages which are occupied at the reference time is counted as occupied dwelling, while unoccupied cottages are not part of the census between 2005 and 2009/2010.

In the period 2005-2010 the BBR-amendment register was used for collecting information on not yet completed dwellings, where persons according to the CPR already had their address.

From 2010 the input data from BBR has another architecture and a new way of matching addresses between BBR and the CPR is introduced to reduce the number of households without dwellings. Data for the year 2010 is provided in both series for comparison. Closer description of the changes is found under 'External Materials' (In Danish only). In summary the most important changes are:

1. Number of unoccupied dwellings is reduced by almost 23.000 dwellings of which 3.900 were unoccupied residential buildings for communities that are not considered as dwellings.
2. Data for cottages not used for permanent living is now included.
3. More people are placed in dwellings. This is partly because there in some dwellings are placed more than one household.
4. Ownership of owner-occupied flats are now available. This category is not part of the ownership variable anymore and the numbers in the other categories therefore increases. To compare the ownership data before and after 2010 in the Statbank it is necessary to use the variable 'owner-occupied flat'.

### 7.3 Coherence - cross domain

Because the housing census uses the Central Population Register as a data source, there is a nearly complete consistency with statistics on population and statistics on households.

However, the consistency with the statistic on constructions is, for several reasons, somewhat lower:

- The housing census counts the number of dwellings on January 1, indicating the construction year of the dwellings. The difference in the number of dwellings between two years is a net figure (registration and deregistration). The statistics on constructions give a gross figure for the number of new dwellings.
- Because of the municipal administration, it is not possible to make figures for combined, divided and demolished dwellings.
- Changes in information, e.g. between occupations for residence or non-residence is undertaken directly in that part of the Central Register of Buildings and Dwellings keeping the existing buildings and dwellings.-
- One major problem involved in compiling the statistics on constructions concerns delays.
- The definition of a dwelling differs between the two statistics. In the construction statistics a dwelling is a unit reported as a dwelling by the administrative authorities. In the dwelling statistics a dwelling can also be a unit not reported as a dwelling by the administrative authorities. In this case, the criterion is that the address of a unit matches an address of a household.

### 7.4 Coherence - internal

Inconsistencies are eliminated.

## 8 Accessibility and clarity

- Continuous publications: The statistics are published in *Nyt fra Danmarks Statistik* (News from Statistics Denmark), in *Byggeri og boligforhold* (Construction and housing) appearing in the series *Statistiske Efterretninger* (Statistical News).
- Yearbooks: the Statistical Yearbook and the Statistical Ten-Year Review.
- Website: [www.statbank.dk](http://www.statbank.dk)

### 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 9:00 a.m. at the day announced in the release calendar. No one outside of Statistics Denmark can access the statistics before they are published. Theme publications etc. may be published at other times of the day. The National Statistician can decide that such publications may be released before their official publication time, e.g. to the media and other stakeholders.

#### **8.4 News release**

[News](#)

#### **8.5 Publications**

Yearbooks: the Statistical Yearbook and the Statistical Ten-Year Review.

#### **8.6 On-line database**

- [Dwellings](#)
- [Residents in dwellings](#)

#### **8.7 Micro-data access**

None at the moment.

#### **8.8 Other**

Customer center uses the Census of Housings for many tailor made products.

#### **8.9 Confidentiality - policy**

See [Data Confidentiality Policy at Statistics Denmark](#).

#### **8.10 Confidentiality - data treatment**

None in register.

#### **8.11 Documentation on methodology**

Documentation for each dwelling variable is given in a Danish manual, "BBR instruks" (only available in Danish) prepared by the National Survey and Cadastreen. The manual can be found on the following website [www.bbr.dk](http://www.bbr.dk).

BBR-data can be found on [www.ois.dk](http://www.ois.dk)

#### **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 this statistics is in the division of Population and Education. The person responsible is Annika Klintefelt, tel. +45 3917 3678, e-mail: [akf@dst.dk](mailto:akf@dst.dk)

## **9.1 Contact organisation**

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