

# Documentation of statistics for Producer price index for construction of dwellings 2018



#### 1 Introduction

The purpose of this statistic is to show trends in prices in the first stage of commercial transactions for the construction sector, i.e. producers' selling price, ex VAT for single family houses. This statistic have been compiled since 2019.

#### 2 Statistical presentation

The Producer Price Index for Construction of Dwellings is a quarterly measurement of prices related to the construction of new dwellings relating to the first commercial transaction. The price of the land is not included in this price and neither are taxes (VAT). At this time only an index for one-family houses is produced.

#### 2.1 Data description

The Producer Price Index for Construction of Dwellings is at this time only produced for one-family houses. The index is published every quarter and is based on collected prices from Danish companies engaged in construction of standard house constructions.

# 2.2 Classification system

The statistics covers construction companies (specializing in construction of one-family houses) belonging to the construction division in the Danish Industrial Classifications 2007 (DB07). DB07 is a subdivision of the European industry nomenclature, the four-digit NACE rev. 2.

#### 2.3 Sector coverage

Construction sector entities engaged in construction of one-family-houses.

# 2.4 Statistical concepts and definitions

Producer price: The price a household or investor pays for the construction of a dwelling.

#### 2.5 Statistical unit

The index is produced on the basis on information from construction companies engaged in construction of one-family houses.

# 2.6 Statistical population

Construction companies specializing in one-family houses.

#### 2.7 Reference area

Denmark.



# 2.8 Time coverage

The Producer Price Index for Construction of dwellings cover the time period from 2015 and onwards.

# 2.9 Base period

2015=100.

#### 2.10 Unit of measure

Index and percentages.

# 2.11 Reference period

The respondents report prices for all finalized dwellings within a quarter.

## 2.12 Frequency of dissemination

Quarterly.

# 2.13 Legal acts and other agreements

The legal authority to collect data is provided by the Act on Statistics Denmark, section 8, as subsequently amended (most recently by Act no. 610 of 30 May 2018).

# 2.14 Cost and burden

The response burden has not yet been calculated for this statistics.

#### 2.15 Comment

For more information please see (https://www.dst.dk/en/Statistik/emner/priser-og-forbrug/erhvervslivets-priser/producentprisindeks-for-byggeri-og-anlaeg).

# 3 Statistical processing

Every quarter approximately 350 prices are collected from a sample of relevant construction companies in Denmark. Prices are collected through an electronic reporting form. The collected prices are merged with relevant information from the the administrative register BBR which contains information on every building in Denmark. The index is calculated by use of a hedonic regression where different information (characteristics of the single dwelling) is used.



#### 3.1 Source data

The Producer Price Index for Construction of Dwellings is calculated on the basis of prices, reported by selected companies engaged in construction of one-family houses.

#### 3.2 Frequency of data collection

Quarterly.

#### 3.3 Data collection

The prices are collected though an electronic reporting form, which is sent to the relevant contact within the selected companies.

#### 3.4 Data validation

The first validation of the price data happens when prices arrive to Statistics Denmark. Here they are tested for unusual developments and lacking information. Following this data is merged with administrative data. Non-matched data is treated manually and relevant information is applied to these observations. Also prices in relation to size of dwellings are checked.

# 3.5 Data compilation

The Producer Price Index for Construction of Dwellings is compiled by merging price information from construction companies specializing in constructions of one-family houses with administrative information (size, number of rooms, number of bathrooms, roofing materials etc.).

## 3.6 Adjustment

No adjustments are made.

#### 4 Relevance

The Producer Price Index for Construction of Dwellings is a business cycle indicator which is used to analyze economic developments. Furthermore, the index is used a deflator in the Danish National Accounts for constant price calculations.

#### 4.1 User Needs

The Producer Price Index for Construction of Dwellings is a business cycle indicator which is used to analyze economic developments. Furthermore, the index is used a deflator in the Danish National Accounts for constant price calculations.



#### 4.2 User Satisfaction

The Producer Price Index for Construction of Dwellings is on the agenda at all the meetings in the committee for statistics on buildings and construction with the aim to continuous improvement of the statistics.

# 4.3 Data completeness rate

The Producer Price Index fulfills the related obligations.

# 5 Accuracy and reliability

The quarterly non-response rate is o and more than 99 percent of the reported prices are used for the calculation of the index. This, together with the coverage (approx. 30 percent of all newly build one-family houses are covered by the sample) should result in a rather goo accuracy.

# 5.1 Overall accuracy

The Producer Price Index for Construction of Dwellings is based on approx. 1400 reported prices every year, which amounts to approx. 30 percent of the total construction of one-family houses i a year.

The characteristic of dwellings are very heterogeneous and it is different to compare to houses because of this. This could have an impact on the accuracy of the computed index but Statistics Denmark tries to minimize this possible problem by asking only units which are specialized in the construction of one-family houses (standard types) to report prices and by using of a hedonic regression model where many characteristics of the single house is taking into account when computing the index.

# 5.2 Sampling error

The sample is selected top-down to achieve as high turnover coverage as possible, but it is only companies specializing in construction of one-family houses which are selected. The sample is therefore not a random sample and it is not possible to estimate the overall size of the sampling error.

#### 5.3 Non-sampling error

The Producer Price Index for Construction of Dwellings is computed using a hedonic regression. In the regression model some characteristics with an impact on the prices - but not all - are included (information on size, number of rooms and bathrooms, type of roofing, geography etc.).

#### 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

In the period 2015-2018 approx. 4600 new one-family houses where built in Denmark every year. Since this statistics is based on prices for approx. 1400 of these new dwellings every year there is a sufficient coverage. The model used for computation (hedonic regression) is recommended by Eurostat.

#### 5.7 Data revision - policy

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

#### 5.8 Data revision practice

No revision.

#### 6 Timeliness and punctuality

These statistics are published quarterly, approx. 3-4 month after the end of the reference period.

# 6.1 Timeliness and time lag - final results

Production time is approx. 90-100 days. 3-4 month after the reference period the statistic is published.

#### 6.2 Punctuality

No delays recorded.

# 7 Comparability

The statistic follows international standards and is therefore comparable with similar statistics from other countries.

# 7.1 Comparability - geographical

The statistic follows international standards and is therefore comparable with similar statistics from other countries.



# 7.2 Comparability over time

The statistic is comparable over time.

#### 7.3 Coherence - cross domain

Other statistics on one-family houses are published by Statistics Denmark - that is number of one-family houses (existing and new).

#### 7.4 Coherence - internal

The index is produced used reported prices and connected addresses for newly constructed one-family houses. To ensure that only one-family houses is included in the calculation the reported addresses are merged with information from the administrative register on dwellings (BBR).

# 8 Accessibility and clarity

The statistics is published in News from Statistics Denmark and is available from Statbank Denmark (table PRIS90).

#### 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

Once a year (in April) this statistics is published in News from Statistics Denmark together with figures for Producer Price Index for Refurbishment and Maintenance.

## 8.5 Publications

None.

# 8.6 On-line database

The statistics are published in the StatBank in the following table:

• PRIS90: Producer price index for construction of dwellings by type of dwelling, unit and time



#### 8.7 Micro-data access

Access to micro data is not possible.

#### 8.8 Other

None.

# 8.9 Confidentiality - policy

The confidentiality policy of Statistics Denmark

(http://www.dst.dk/ext/292786082/0/formid/Datafortrolighedspolitik-i-Danmarks-Statistik--pdf) stipulated the rules and procedures which Statistics Denmark apply when working with reported information from companies to be used in the production of statistics.

# 8.10 Confidentiality - data treatment

All data are handled confidential. For the Producer Price Index for Construction of Dwellings only aggregated index is published, thus discretion does not apply to this statistics.

# 8.11 Documentation on methodology

There is no separate documentation on methodology for this 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 this statistics are in the division of Prices and Consumption. The person responsible is Martin Ausker, tel. +45 39 17 34 19, e-mail mau@dst.dk.

#### 9.1 Contact organisation

Statistics Denmark

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