

**Documentation of statistics for
Producer price index for renovation and maintenance 2016**

1 Introduction

The purpose of these statistics is to show trends in prices in the first stage of commercial transactions for the construction sector, i.e. producers' selling price, ex VAT. These statistics have been compiled since 2017.

2 Statistical presentation

The producer price index for construction shows the yearly trends in the prices related to construction in Denmark. The prices are related to the first commercial transaction excluding VAT. At this time only statistics within the area of civil engineering are produced, that is index for refurbishment and maintenance.

2.1 Data description

So far only producer price index for refurbishment and maintenance is being produced. The statistics are produced on a yearly basis and are based on prices from approximately 300 firms in Denmark. At the publication both the index and the yearly trend in percent are shown.

2.2 Classification system

The index covers refurbishment and maintenance work by firms in NACE Rev. 2 Section F (construction). The activities are grouped into so-called CPA-groups, in accordance with the Statistical Classification of Products by Activity in the European Economic Community, 2008 version. For the producer price index for refurbishment and maintenance the following groupings are published: - Electrical installation - Plumbing, heat and air-conditioning installation - Carpentry - Building completion - Roofing - Bricklaying

2.3 Sector coverage

So far this statistics covers activities related to refurbishment and maintenance in Denmark.

2.4 Statistical concepts and definitions

Producer price: The price paid by a contractor or household for a refurbishment or maintenance job.

2.5 Statistical unit

The statistical units in the producer price index for construction are companies, where each company is determined by a legal entity number. In the Statistical Business Register at Statistics Denmark, legal entities are determined by their VAT number.

2.6 Statistical population

The Producer Price Index for refurbishment and maintenance consists of a number of industry indices. This means that the population includes all companies in the industry for which prices are collected. Each industry therefore has each individual population and sample.

2.7 Reference area

Denmark.

2.8 Time coverage

The statistics cover the time period from 2014 and onwards.

2.9 Base period

2015 = 100.

2.10 Unit of measure

Index and percentage.

2.11 Reference period

The firms report prices observed in the period of May - August.

2.12 Frequency of dissemination

Yearly.

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. 599 of 22 June, 2000).

2.14 Cost and burden

The response burden is estimated to around DKK 25,000.

2.15 Comment

Further information is available at

3 Statistical processing

For the producer price index for refurbishment and maintenance approximately 3,000 prices are collected from selected companies in Denmark. Prices are collected through an electronic reporting form. The producer price index for refurbishment and maintenance are calculated in a hierarchical system, where the first calculation is made on the most detailed level, i.e. elementary indices. These elementary indices are calculated by use of a number of prices, as geometric Jevons Indices. The elementary indices are subsequently weighted together as aggregated price indices. These are calculated as arithmetic Laspeyres indices.

3.1 Source data

The producer price index for refurbishment and maintenance are calculated on the basis of prices reported by selected companies within the area of civil engineering.

3.2 Frequency of data collection

Yearly.

3.3 Data collection

For the producer price index for refurbishment and maintenance the prices are collected through an electronic reporting form, which is sent to relevant contacts within the selected companies.

3.4 Data validation

The first validation of the reported prices takes place when data arrive to Statistics Denmark. Here they are auto tested for unusual developments. If the change in prices is greater than a predetermined threshold value, then these prices will be checked manually by the staff and will only be accepted if the reporting company can verify the change. When all prices are in the system, a validation report will be generated. This report includes information on all price changes and measures the effect of these on the elementary aggregates. The final validation is a qualitative inspection of the calculated index tables.

3.5 Data compilation

The producer price index for refurbishment and maintenance are calculated in a hierarchical system, where the collected prices are divided into groups identified by kind of activity. These groups are then aggregated into so-called elementary aggregates for which basic prices can be calculated as geometric Jevons Indices. Elementary indices are calculated on the basis of basic prices between two or more periods. The developments of the basic prices are therefore equal to the total price change for a given group of activity. Following this the elementary indices are weighted together as aggregated price indices. These are calculated as arithmetic Laspeyres indices.

Weights: Weights are assigned to every elementary index and are used for weighting the elementary indices together to aggregated indices. The current weights are based on information from Teknologisk Institut.

Estimates for non-response: Non-response is negligible.

3.6 Adjustment

No corrections are made beyond what has already been described.

4 Relevance

Producer price index for refurbishment and maintenance is used in the Danish national accounts as deflator for the constant price calculations.

4.1 User Needs

The producer price index for refurbishment and maintenance is used in the Danish national account statistics as deflators for constant price calculations, i.e. calculation of the actual economic development in Denmark within the construction sector.

4.2 User Satisfaction

The statistics was published for the first time in November 2017, so no measures to determine user satisfaction has been developed yet.

4.3 Data completeness rate

The statistics fulfill the current requirements.

5 Accuracy and reliability

The producer price index for refurbishment and maintenance is based on 3,000 prices from six activity groups (electrical installation, plumbing, heat and air-conditioning installation, carpentry, building completion, roofing and bricklaying). Each industry is treated individually with its own sample. The samples are selected to achieve as high turnover coverage as possible. It is not possible to estimate the size of the sampling error, but it is assumed that the price developments in the sample represent the price development in the population. The yearly non-response rate is less than one percent and is not considered to be a significant source of error.

5.1 Overall accuracy

The sample for each industry for the producer price index for refurbishment and maintenance are collected to achieve as high turnover coverage as possible. Therefore it is expected that the trend for the sample reflects the trend in the population.

5.2 Sampling error

The sample for each industry for the producer price index for refurbishment and maintenance are collected to achieve as high turnover coverage as possible. The collected prices represents the prices on unique activities which are used in a weighted aggregation of the index. The sample error is therefore only related to the possibility that the sample population experience a different trend in the price development than the total population. This issue is not expected to be a significant problem.

5.3 Non-sampling error

Inaccuracy in weights: The weights are based on information from Danish Technological Institute. They publish information on the size of the different refurbishment and maintenance activities. These information are not updated on a yearly basis thus there is a lag in the weights.

Response and recording errors: Errors may occur when an enterprise report incorrect prices. The reason for this is normally misunderstandings. Errors may also occur when questionnaires are recorded at Statistics Denmark. Such errors are normally spotted by our error checking procedures. Recording errors are not regarded to be important.

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

A comprehensive quality assessment is therefore based on a combination of assessing turnover coverage, the number of companies and prices in the sample and the quality of the collected prices, including the pricing methods used. The quality of the statistic is being continually monitored and improvements are made where it is assessed that the quality can be levered. Conducting quality work therefore includes making replacements within- and increasing the sample with more respondents. Asking existing respondents to report more prices, or use better pricing methods to define and calculate prices.

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

No revision. The figures are final when published.

6 Timeliness and punctuality

The statistics are published yearly, approximately four month after the end of the reference period. Publications are released on time, as stated in the release calendar.

6.1 Timeliness and time lag - final results

The statistics are published yearly, approximately four month after the end of the reference period.

6.2 Punctuality

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

7 Comparability

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

7.1 Comparability - geographical

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

7.2 Comparability over time

The statistics has been produced in its current form since 2017.

7.3 Coherence - cross domain

The statistics are related to the statistics on construction cost index.

7.4 Coherence - internal

Not relevant for this statistics.

8 Accessibility and clarity

These statistics can be found in the StatBank, under the subject producer price index for construction. Find out more under: <http://dst.dk/en/Statistik/emner/priser-og-forbrug/erhvervslivets-priser/producentprisindeks-for-byggeri-og-anlaeg>

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

Not relevant for these statistics.

8.5 Publications

None.

8.6 On-line database

The statistics are published in the StatBank under the subjects [Producer price index for construction](#) in the following tables:

- [PRIS91](#): Producer price index for renovation and maintenance by type of work, unit and time

8.7 Micro-data access

Microdata are not disseminated.

8.8 Other

None.

8.9 Confidentiality - policy

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

8.10 Confidentiality - data treatment

Producer price index is only published on an aggregated level, thus discretion does not apply for this statistics.

8.11 Documentation on methodology

There is no methodological documents available.

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 person responsible is Martin Ausker, tel.: + 45 3917 3419, e-mail: mau@dst.dk.

9.1 Contact organisation

Statistics Denmark

9.2 Contact organisation unit

Prices and Consumption, Economic Statistics

9.3 Contact name

Martin Ausker

9.4 Contact person function

Responsible for the statistics

9.5 Contact mail address

Sejrøgade 11, 2100 Copenhagen

9.6 Contact email address

mau@dst.dk

9.7 Contact phone number

+45 3917 3419

9.8 Contact fax number

+45 39 17 39 99