Documentation of statistics for
Producer and Import Price Index for Commodities 2014

1 Introduction

The purpose of the Producer- and import price index for commodities, is to analyze trends in prices relating to the first commercial transaction of each commodity, i.e. producers' selling prices and importers' purchase prices exclusive of VAT and excise duties.

The Producer- and import price index for commodities share data with price index for domestic supply. Common term for the indices is producer and import price index for commodities. Statistics Denmark have calculated monthly price indices for variations of this index since 1925.

The Producer- and import price index for commodities are divided by Industry, unlike price index for domestic supply, that are divided by commodity groups. Statistic Denmark have made producer price index by Industry since 2000, and import price index by Industry since 2005.

2 Statistical presentation

The Producer- and import price index for commodities share data with Price index for domestic supply.

The total producer and import price index contains price information on:

1. Imported commodities
2. Commodities produced for domestic markets
3. Commodities produced for export

Producer price index for commodities indicates trends in prices relating to the first commercial transaction. The calculation is based on 2. and 3. A range of sub-indices show distributions by Industry.

Import price index for commodities indicates trends in price relating to the first commercial transaction. The calculation is based on 2. A range of sub-indices show distributions by Industry.

2.1 Data description

The Producer- and import price index for commodities share data with Price index for domestic supply.

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Import price index for commodities indicates trends in price relating to the first commercial transaction. The calculation is based on 2. A range of sub-indices show distributions by Industry.

2.2 Classification system

Nomenclature. The producer- and import price index for commodities is divided by Industry following Danish Industrial Classifications 2007 (DB07). DB07 is based on NACE rev. 2.

The Price index for domestic supply is divided by commodities following the Combined Nomenclature (CN) and The Harmonized Commodity Description and Coding System (HS). HS is the international tariff classification and developed by the World Customs Organization (WCO). HS is a 6-digit hierarchically structured commodity classification. CN is the EU classification of tariffs and foreign trade statistics. CN is a subdivision of HS.

2.3 Sector coverage

Not relevant for this statistics.

2.4 Statistical concepts and definitions

Producer Price: The prices used for the index are actual prices, which means that the prices must include all possible discounts. Therefore list prices do not apply unless the prices never include discounts. A distinction is made between the prices of imported commodities and the prices of commodities for the domestic market;

1. Imported commodities: Actual transaction prices (in some cases transfer prices) c.i.f. excluding all duties and taxes on the goods as far as possible on the 15th of the month.
2. Danish commodities for the domestic marked: Actual transaction price (in some cases transfer prices) ex producer excluding VAT and excise duties as far as possible on the 15th of the month.

Domestic market price: Price of Danish produced commodity sold for the domestic market.

Non-domestic market price: Price of Danish produced commodity sold for export.

Import price: Price of imported commodity.

2.5 Statistical unit

Not relevant for this statistics.

2.6 Statistical population

The population covers all commodities that are imported or produced in Denmark for the domestic market for the various industries and commodity groups.

2.7 Reference area

Denmark.

2.8 Time coverage

The Producer price index from January 2000-

2.9 Base period

2010=100

2.10 Unit of measure

Indices.

2.11 Reference period

The firms are to report the prices, which were in force as far as possible on the 15th of the month.

2.12 Frequency of dissemination

Monthly.

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 22nd June, 2000).

Council Regulation (EC) No 1165/98 of 19 May 1998 concerning short-term statistics (EFT L 162 05.06.98) covers price indices for Danish industrial goods.

2.14 Cost and burden

The response burden is 4080 hours, 1,1 millions DKK.

2.15 Comment

For more information please contact Statistics Denmark at Producer- and Import price index for commodities.

3 Statistical processing

The Producer- and import price index for commodities is calculated on the basis of about 6000 prices, reported by selected producers and importers in Denmark. Of these, about 3300 prices are used for calculating the producer price index and about 2700 prices are used for calculating the import price index. The prices are collected every month through an electronic reporting form.

The Producer and import price indices are calculated in a hierarchical system where the first calculation is made for the most detailed groups of commodities, i.e. the elementary aggregates. These indices are calculated as geometric Jevons indices. The detailed elementary aggregates are subsequently weighted together for sub-indices and in the end for the total producer and import price indices. These are calculated as aritmetic Laspeyres indices.

3.1 Source data

The Producer- and import price index for commodities is calculated on the basis of about 6000 prices, reported by selected producers and importers in Denmark. Of these, about 3300 prices are used for calculating the producer price index and about 2700 prices are used for calculating the import price index.

The weights are based on national accounts estimates of Danish companies' turnover values.

3.2 Frequency of data collection

Monthly.

3.3 Data collection

Prices are collected through an electronic reporting form, which is sent to the selected companies.

3.4 Data validation

The first validation of price data happens when prices arrive. Here they are tested for unusual changes. The prices that do not pass the threshold value will be checked manually by the staff and accepted only if the firms can verify the change.

When all prices are received, the system generates a list that includes all price changes and a measure of how these affects the elementary aggregates. The last validation is a visual inspection of all index tables.

3.5 Data compilation

Estimates for non-response: Non-response is negligible. If it should happen for any significant goods, imputation techniques are used. In other cases the prices are regarded as unchanged.

Estimates for grossing-up: There is no grossing up.

Type of index: The different goods are first grouped in elementary aggregates for which elementary aggregate indices are calculated. The elementary aggregate indices are calculated as geometric indices. The elementary aggregate indices are weighted together into sub-indices and then aggregated into the total industrial import price index. Both sub-indices and total indices are calculated as Laspeyres indices.

Method of weighting and chaining: The weights are based on the supply and use tables from national account for 2010.

Weights: Weights are assigned to every detailed group of commodities and used for weighting the base indices together for sub-indicies and for the total Price index for domestic supply. The weights, which are based on the supply and use tables from national accounts for 2005, are equal to the sum of the import values and production values for the home market excluding VAT and excise duties. This ensures that the sample reflects the population.

Calculation: The Producer and import price indices are calculated in a hierarchical system where the first calculation is made for the most detailed group of commodities, i.e. the elementary aggregates. These indices are calculated as geometric Jevons indices. The detailed elementary aggregates are subsequently weighted together for sub-indices and in the end for the total producer and import price indices. These are calculated as aritmetic Laspeyres indices.

3.6 Adjustment

There are no corrections of data beyond what has already been described during data validation and data processing.

4 Relevance

The *Producer and import price index* is a key business cycle indicator which is used by public and private decision-makers to analyze the socioeconomic development.

4.1 User Needs

The Producer- and Import price index for commodities is a key business cycle indicator which is used by public and private decision-makers to analyze the socioeconomic development.

Deflator The index is used to adjust other economic time series for price changes:

- Fixed price calculations in the national accounts statistics, i.e. calculation of the actual economic development in Denmark.
- Fixed price calculations in the industry statistics.

Contract adjustment The index is also used by businesses to adjust contracts.

4.2 User Satisfaction

Not relevant for this statistics.

4.3 Data completeness rate

Not relevant for this statistics.

5 Accuracy and reliability

Sampling error. The most important enterprises within selected areas are requested to report prices. The sample is therefore not a random sample and it is not possible to estimate the size of the sampling error.

Non-response. The monthly non-response is less than one percent.

Model assumptions. The price development in the sample represents the price development in the population.

5.1 Overall accuracy

Prices are collected for approximately 1050 groups of commodities covered by approximately 6000 price series. From this material the producer- and import price index for commodities and the price index for domestic supply and several sub-indices are calculated.

5.2 Sampling error

The most important enterprises within selected areas are requested to report prices. The sample is therefore not a random sample and it is not possible to estimate the size of the sampling error.

5.3 Non-sampling error

Inaccuracy in weights. The weights, which are based on the supply and use tables from national accounts for the year 2005, are equal to the sum of the import- and production values for the home marked. There is some uncertainty in these calculations.

Quality change bias. In calculating a price index it is assumed that the baskets of goods that are compared are identical, also with respect to the quality of the goods. Consequently, in the case of changes in quality the prices should, in principle, be adjusted for this. As the value of the actual changes in quality is not known, it is of course difficult to calculate estimates for bias, due to lack of quality adjustment.

Maintenance of the basket of goods. There might be a tendency towards keeping commodities that are out of fashion too long in the sample. The enterprises are regularly asked to update the basked of goods.

Response errors. Errors may occur when an enterprise report prices for other commodities than expected. The reason for this is normally misunderstandings e.g. change in staff.

Recording errors. Errors may occur when questionnaires are recorded in Statistics Denmark. Our error checking procedures normally spot such errors. 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

Not relevant for this statistics.

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 figures are published.

6 Timeliness and punctuality

The statistics are published every month. For a specific month it will be published on the 15th of the following month or the first business day thereafter.

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

6.1 Timeliness and time lag - final results

The statistics are published every month. For a specific month it will be published on the 15th of the following month or the first business day thereafter.

6.2 Punctuality

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

7 Comparability

Producer and import price index for commodities can be found as a complete time series from 2005 until today. The statistics follows international standards and can therefore be compared with similar statistics from other European countries.

7.1 Comparability - geographical

Not relevant for this statistics.

7.2 Comparability over time

The producer- and import price index for commodities has over the years seen many changes. Below, a schematic summary is shown of changes in the year of comparison, the base year and the industry classification.

- **Period:** 2005-2008 **Year of comparison:** 2000=100. **Weight year:** 2000 **Industry classification:** DB03
- **Period:** 2009-2013 **Year of comparison:** 2005=100. **Weight year:** 2005 **Industry classification:** DB07
- **Period:** 2014- **Year of comparison:** 2010=100. **Weight year:** 2010 **Industry classification:** DB07

To enable comparisons with earlier periods it is, in principle, possible to interlink old and new indices by comparing indices with new and old year of comparison for the same period.

7.3 Coherence - cross domain

Those representative commodities, which comprise Danish industrial commodities, are used in constructing price indices for:

1. Producer price index for commodities by Industry and market
2. Producer price index for commodities by Industry standard industrial groupings
3. Import price index for commodities by Industry
4. Price index for Domestic Supply by commodity group

7.4 Coherence - internal

Not relevant for this statistics.

8 Accessibility and clarity

These statistics are published monthly in a Danish press release. In the StatBank, these statistics can be found under Producer and Import Price Index for Commodities. For more information visit the subject page on Business Prices.

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

Nyt fra Danmarks Statistik Producer- and import price index for commodities.

8.5 Publications

The Producer- and import price index for commodities are published in Statistical Ten-Year review and Statistical Yearbook.

8.6 On-line database

Publishing:

- Producer price index for commodities.
- Import price index for commodities.

Statistics Denmark
Sejrøgade 11
DK 2100 København Ø

8.7 Micro-data access

Questionnaires Questionnaires are stored for the current year and for the previous two years.

Information at the level of individuals is stored in computer readable form Information dates back to 2010.

8.8 Other

Not relevant for this statistics.

8.9 Confidentiality - policy

The compilation of price index for domestic supply resulting from Statistics Denmark Data confidentiality policy. In practice this means that there is no published figures which individual companies can be identified, unless there are public figures available.

8.10 Confidentiality - data treatment

Confidentiality - Policy. The compilation of price index for domestic supply resulting from Statistics Denmark Data confidentiality policy. In practice this means that there is no published figures which individual companies can be identified, unless there are public figures available.

Confidentiality – Data Treatment. The Statute of Statistics Denmark and a letter explaining terms and conditions, including the confidentiality of individual responses, are sent out to all enterprises participating in the survey.

Treatment of confidential data: Confidential data are treated by suppression.

8.11 Documentation on methodology

None.

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 Prices and Consumption. The person responsible is Janni Stavad, tel. +45 3917 3441, e-mail: sta@dst.dk

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