

**Documentation of statistics for  
Manufacturers' Sales of Goods 2015 Quarter 4**

## 1 Introduction

The purpose of the statistics is to describe the Danish industrial production by detailed type of goods. Manufacturers' sales of goods is the source for Danish Prodcom statistics, regulated by and submitted to Eurostat.

## 2 Statistical presentation

The statistics describe manufacturers' sales of goods measured in volume and value by detailed types of goods according to the international classifications CN and SITC. In addition to this, total sales (turnover) are distributed by industries (NACE groups).

### 2.1 Data description

The statistics describe manufacturers' sales of goods measured in volume and value by detailed types of goods. In addition to this, sales are distributed by industries (NACE groups).

### 2.2 Classification system

Goods are classified according to the [CN, the Combined Nomenclature](#) and to SITC, [Standard International Trade Classification](#).

For submission to Eurostat, data is converted from CN to Prodcom codes using the key between the two lists of commodities.

Industrial activity is classified according to [Dansk Branchekode 2007](#), which is the Danish national classification based on NACE rev. 2.

### 2.3 Sector coverage

Mining and quarrying (NACE B) and manufacturing (NACE C). Exempt are units in 10.71.20 (national DB07 activity code for bakeries, these are instead included in retail trade statistics) and in 32.11.00 (NACE 32.11, striking of coins).

## **2.4 Statistical concepts and definitions**

**Other turnover:** Other turnover is for turnover not related to activities in manufacturing or mining and quarrying. This can be from construction, research and development or renting.

**Own goods:** The statistics measures sales of own goods, that is goods extracted, produced, processed or assembled by the reporting enterprise. Own goods are also products manufactured by a subcontractor, if the reporting enterprises owns the inputs for the subcontracted manufacturing. Traded goods are not included.

**Commercial (resale) turnover:** Commercial (resale) turnover is turnover from sales of goods that are bought and sold with any processing. Repackaging does not constitute processing.

**Contract work for other enterprises:** Contract work for other enterprises is work done for another enterprise, which owns the input for the manufacturing work.

**Sales:** Sales are in current prices, excluding VAT. All sales are included, domestic and export markets.

## **2.5 Statistical unit**

The unit for the tables by commodity code is the good/product/commodity.

The reporting unit is the kind of activity unit. This is also the unit of statistical observation for the tables by activity. A kind of activity unit consists of all local units belonging to the same enterprise and having the same activity code.

## **2.6 Statistical population**

The population for the statistics are all kind of activity units (KAU's) with main activity in mining and quarrying or in manufacturing and having at least 10 employees. The population is selected annually, based on the employment registered for 3rd quarter of the year before the reference year. Information on activity codes are from the Statistical Business Register as of the beginning of the reference year.

## **2.7 Reference area**

The statistics cover enterprises in Denmark. In some cases, goods physically produced outside Denmark will be covered, if they are produced under subcontracting for a Danish enterprise.

## **2.8 Time coverage**

1995-

## **2.9 Base period**

Not relevant for this statistics.

## **2.10 Unit of measure**

Values of sales are collected and published as '1000 DKK' in the StatBank. Quantities are collected and published in units linked to different commodity codes. An overview of quantity units is available [here](#).

## **2.11 Reference period**

The responding unit report sales from the calendar quarter.

## **2.12 Frequency of dissemination**

Quarterly national publication. Prodcop are submitted annually to Eurostat and published annually.

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

Section 8 of the Act on Statistics Denmark.

The Council Regulation (EEC) No 3924/91 of 19 December 1991 (PRODCOM).

## **2.14 Cost and burden**

The response burden has been calculated to 3.569.000 DKK in 2005.

## **2.15 Comment**

The statistics has a [subject page](#).

## **3 Statistical processing**

Data are collected through a quarterly survey of all enterprises in manufacturing (incl. mining and quarrying) with at least 10 employees, approx. 3,000 units. Reported data are validated, by checking against previous reports as well as against other sources. Data are then aggregated by industrial groupings as well as commodity groups. Series with seasonality are seasonally adjusted.

### **3.1 Source data**

The statistics are survey-based. Approx. 3000 unit are part of the survey, selected by a general cut-off (10 employees).

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

Quarterly.

### 3.3 Data collection

Electronic survey form through Virk.dk. From 3rd quarter 2014 also electronic reporting through idep.web.

Instructions for respondents at [dst.dk/varer](http://dst.dk/varer) (in Danish).

### 3.4 Data validation

The web-questionnaire contains automatic validation of reported data. If data are very different from those reported by the same company for the last period, the respondent will be prompted to check data again and to provide an explanation for the change.

In Statistics Denmark the data are validated through a number of controls that check against last period as well as against other companies reporting under the same codes (unit price control). Reporting under product codes that are not typical for the NACE (activity) of the reporting unit are also controlled for.

Data are also checked against other sources, especially the Industrial Turnover Index (part of STS) and the VAT-based statistics on enterprises' sales - both at micro (enterprise) and macro (NACE) level. These checks are especially useful for finding underreporting.

### 3.5 Data compilation

After validation, missing reports are imputed. Imputations re-use the latest reports from the units, that have not yet reported. For new units in the statistics, that have not previously reported, no imputations are made.

Missing quantity data are estimated based on reports on the same CN codes from other units in the same quarter. If there are not sufficient other reportings to estimate from, quantity is not estimated for these codes and will be missing in published tables.

For the annual Prodcom submission to Eurostat, all missing quantities are estimated using supplementary sources (Trade in goods, Prodcom data from other countries). Also for Prodcom, data for 'total production' (T-codes in the Prodcom list) are estimated as being equal to 'sold production'. Companies are not required to report total production. Data are also estimated for 'z-components', which are Prodcom codes that are more detailed than CN. This estimation is based on the distribution within the corresponding z-aggregate code in EU.

There is no grossing up.

### 3.6 Adjustment

Seasonal adjustment is done using X-12 ARIMA from the Demetra software.

For aggregated series, indirect seasonal adjustment is done. This means that seasonal adjustment is carried out only at the lowest level of detail published. Aggregate seasonally adjusted series are created by summing of underlying seasonally adjusted series.

Some series have not been found suited for seasonal adjustment and are therefore not adjusted.

## 4 Relevance

The statistics is in high demand from many different users, including the National Accounts, ministries, trade associations, market analysts, researchers, consultants and businesses.

### 4.1 User Needs

There are many users of the statistics on manufacturers' sales (Prodcom):

- National accounts make use of industrial commodity statistics, for the quarterly as well as the annual national accounts.
- Trade associations and many others use information about the development of the sales of products from the manufacturing industry.
- The public authorities need knowledge about, for instance, the sales of commodities potentially harmful to the environment.
- Researchers and analysts investigate the developments in the industrial structure and the sales of goods, e.g. focussing on 'green products', medico-products etc.
- International organisations, like EU and UN, need internationally comparable figures in Danish industrial production
- Sales organisations, enterprises and journalists want to know about the Danish market for specific products. The statistics do not show this directly, but apparent consumption may be calculated by combining data on exports and imports.
- The statistics is used for an annual control of the activity codes of all responding units. This control improves the quality of activity codes in the Statistical Business Register, used also by all other business statistics.

### 4.2 User Satisfaction

Important large users of the statistics participate in bi-annual meetings of the [Contact Group for Manufacturing Statistics \(link in Danish only\)](#).

### 4.3 Data completeness rate

All codes for goods of the Prodcom-regulation are covered, but not all codes for services. This is because data are collected according to the Combined Nomenclature, which does not cover services.

## 5 Accuracy and reliability

The main non-sampling error is the measurement error concerning classification at the most detailed CN level, as respondents do not always report sales according to the correct codes. Furthermore, data on quantities are generally less reliable than those on values, as some respondents estimate quantities and other do not answer, so that estimations must be made in the statistical production process.

### 5.1 Overall accuracy

No quantitative assessment of the overall precision of the statistics exists.

## **5.2 Sampling error**

Not relevant for this statistics.

## **5.3 Non-sampling error**

The main non-sampling error is the measurement error concerning classification at the most detailed CN level, as respondents do not always report sales according to the correct codes. Furthermore, data on quantities are generally less reliable than those on values, as some respondents estimate quantities and other do not answer, so that estimations must be made in the statistical production process.

## **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**

The main non-sampling error is the measurement error concerning classification at the most detailed CN level, as respondents do not always report sales according to the correct codes. Furthermore, data on quantities are generally less reliable than those on values, as some respondents estimate quantities and other do not answer, so that estimations must be made in the statistical production process.

## **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

With each release of data for a new quarter, data for previous quarters are also released in revised form. Data are always provisional at the first release.

In theory, data for *Manufacturers' sales* are never final. This means that it is always possible to revise them, if significant errors are found. In practice, data are not revised indefinitely, but after the following guidelines:

- Data reported late are always incorporated, but normally data are never more than one year late
- When Statistics Denmark finds errors in reported data, they are corrected. Errors are not always detected before the first release, especially errors regarding the detailed distribution according to CN codes and the data on quantities. Errors are normally corrected in all quarters of the year when they are found, plus in all quarters of the three previous years.
- Once a year, a revision of activity codes for reporting units is carried out. Based on reported CN codes and other sources, some units get a new activity code. This is implemented with the first release of the fourth quarter each year, but the three previous quarters are also revised with the new activity codes. Normally, between 30 and 70 units change activity code.

Data older than current year plus three previous years are thus only revised in very special cases. The release of 2nd quarter 2014 has been the only recent such case, in which turnover for manufacturing of pharmaceuticals was revised for the period 2005Q1-2014Q1, due to changed reporting's that improved the coverage.

## 6 Timeliness and punctuality

The statistics are published two months after the end of the reference quarter with very high punctuality.

### 6.1 Timeliness and time lag - final results

The industrial commodity statistics are always published two months after the end of the reference quarter.

### 6.2 Punctuality

Over the latest 3 years, 100 pct. of announced publication dates have been met. All deadlines for submission to Eurostat have also been fulfilled in this period.

## 7 Comparability

In its present form and as available in the StatBank, the statistics are comparable since 1995, but the statistics have been produced in some form since 1905. The Prodcom-version of the statistics can be compared to Prodcom statistics of other EU countries. Many users compare the statistics to Foreign Trade in Goods to create statistics on apparent consumption - for this, it is important to note the difference in coverage and the potential quality issues at the most detailed CN code level.



## 7.1 Comparability - geographical

All EU member states produce Prodcom statistics. *Manufacturers' sales of goods* is the Danish Prodcom statistics and can be compared to those of other EU member states. *Manufacturers' sales of goods* differ in a few aspects from the Prodcom statistics as described in the regulation and commonly implemented. Firstly, industrial services are not covered in the detail prescribed by the Prodcom list. Secondly, coverage is not defined as production on the physical territory of Denmark, but by the economic ownership of goods sold and produced by Danish enterprises (cf. Geographical coverage).

## 7.2 Comparability over time

Historically, the statistics started in 1905 as a survey measuring the industrial production. In 1944, the name was changed to Industrial Production Statistics. In 1967, the name became 'Product statistics for industry', and it no longer measured production, but sales instead. From 1968, the survey has been quarterly, before it was annual. The present name, 'Manufacturers' sales of goods' was introduced in 2007.

The statistics use two sets of classifications: one for products and one for economic activities. Changes in the classifications affect comparability over time.

The classification of products is the 8-digit Combined Nomenclature (CN). The CN is changed every year, which normally only affects 100-600 of the groups. Years with major CN revision typically affect up to 2,000 groups. The latest major revision was in 2012.

CN codes have 8 digits and are regulated by EU. Prior to 2008, the CN codes were, for selected product categories (e.g. wind mills), further divided as Danish national codes using a 9th and 10th digit. This was discontinued to reduce response burden.

The codes for classification of economic activities are not changed each year, but only with long intervals. The present classification, Dansk Branchekode 2007, was introduced in the statistics 1st quarter 2009. For the period 2000-2008, the statistics has been converted to Dansk Branchekode 2007 to create a consistent time series. Prior to 2000, data are available according to Dansk Branchekode 2003, and older classifications.

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

The statistics may be compared to a number of other statistics that describe the manufacturing industry. In all cases there are however differences in units, definitions and/or coverage, which need to be considered when comparing. The main related statistics are:

- Industrial production and turnover (monthly index)
- Purchases and sales by firms (based on VAT data from administrative source)
- External trade in goods (exports and imports data are available according to the same commodity codes as manufacturers' sales, so data can be combined)
- Accounts statistics (provides key economic figures, also for manufacturing industries)

In addition, for mining and quarrying, it is possible to compare to the annual statistics on [mining and quarrying \(volumes, not values\)](#)

The difference between manufacturers' sales and production as measured in the National Accounts is mainly different definitions and calculations in the National Accounts to ensure full coverage (for units with less than 10 employees) and consistency.

### **7.4 Coherence - internal**

Seasonal adjustment of aggregate series is done indirectly, so there is full consistency.

## **8 Accessibility and clarity**

The statistics is published in aggregate form in News from Statistics Denmark. More detailed tables are available in the StatBank as well as through the Eurostat webpage for Prodcop.

### **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**

The figures are published in a monthly news release, Nyt fra Danmarks Statistik (News from Statistics Denmark).

## 8.5 Publications

Tables in [Statistical Yearbook](#).

## 8.6 On-line database

Tables in the [StatBank](#).

## 8.7 Micro-data access

Micro-data from the statistics are made available through Statistics Denmark's [Research Services](#).

## 8.8 Other

Annual submission of data to Eurostat (Prodcod), Published by [Eurostat](#). Annual submission of data to UN (Industrial Commodity Statistics).

Quarterly internal submission of data within Statistics Denmark to National Accounts, Prices and consumption, Customer Centre and Research Services.

It is possible to subscribe to special deliveries' from the statistics, combined with statistics on external trade in goods (apparent consumption). Contact Customer Centre in Statistics Denmark or read more [here](#).

## 8.9 Confidentiality - policy

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

## 8.10 Confidentiality - data treatment

Confidential codes are defined on the CN level according to our confidentiality policy. Data on these specific codes are never published, nor are aggregates which would make it possible to calculate the values of confidential codes. Prodcod codes are often aggregates of CN codes - so if a Prodcod code contains one CN code flagged as confidential, it will be flagged as confidential as well.

## 8.11 Documentation on methodology

The variables are documented in [TIMES](#).

## 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 are in the division of Short Term Statistics. The person responsible is Kathrine Paulsen, tel. +45 39 17 30 86, email: [kap@dst.dk](mailto:kap@dst.dk)

### **9.1 Contact organisation**

Statistics Denmark

### **9.2 Contact organisation unit**

Short Term Statistics, Business Statistics

### **9.3 Contact name**

Kathrine Paulsen

### **9.4 Contact person function**

Responsible for the statistics

### **9.5 Contact mail address**

Sejrøgade 11, 2100 Copenhagen

### **9.6 Contact email address**

kap@dst.dk

### **9.7 Contact phone number**

+45 39 17 30 86

### **9.8 Contact fax number**

+45 39 17 39 99