

**Documentation of statistics for  
Manufacturers' Sales of Goods 2018 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 terms of 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 terms of 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 are 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). Exemptions are units in 10.71.20 (national DB07 activity code for bakeries, these are instead included in the 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 rent income.

**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 enterprise 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 tables with industrial classification are based on kind of activity unit. A kind of activity unit consists of all local units within an enterprise that has the same industrial classification. In most cases the enterprise is the same as the kind of activity unit, but for specially large enterprises with activities in several industries the kind of activity unit will be a subdivision of the enterprise. Due to this turnover is divided differently among industries than in statistics based on the enterprise (the economic unit).

## **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. The information on industrial classification is based on the Statistical Business Register as of the beginning of the reference year.

## **2.7 Reference area**

The statistics cover the turnover of enterprises in Denmark not including the Faroe Islands and Greenland. In some cases, especially for larger enterprises, goods physically produced outside Denmark will be covered. That is if the goods are produced under subcontracting for a Danish manufacturing enterprise.

## **2.8 Time coverage**

1995-

## **2.9 Base period**

Not relevant for these statistics.

## **2.10 Unit of measure**

Values of sales are collected and published as '1000 DKK' in StatBank Denmark. 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 units report sales during the calendar quarter.

## **2.12 Frequency of dissemination**

The statistics are released in quarterly national publications. Prodcop data 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 was calculated at 3.569.000 DKK in 2005.

## **2.15 Comment**

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

## **3 Statistical processing**

Data are collected through a quarterly survey of all enterprises in manufacturing (including 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 units are part of the survey, selected by a general cut-off (10 employees).

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

The data are collected quarterly.

### **3.3 Data collection**

Data collection is conducted by means of electronic survey forms at <http://www.Virk.dk>. From 3rd quarter 2014 also electronic reporting through [idep.web](http://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 the data reported by the same company for the last period, the respondent will be asked 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 units, are also subject to control.

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, which have not yet reported. No imputations are made for new units in the statistics, which have not previously reported data.

Missing quantity data are estimated based on reports on the same CN codes from other units in the same quarter. If there are not any other sufficient reported data from which to make estimates, 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 carried out using X-12 ARIMA from the Demetra software.

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

Some series have not been considered suitable for seasonal adjustment and are therefore not adjusted.

## 4 Relevance

The statistics are 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 on 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 on Danish industrial production
- Sales organisations, enterprises and journalists want to know about the Danish market for specific products. This is not shown directly by the statistics, but apparent consumption may be calculated by combining with data on exports and imports.
- The statistics are used for an annual control of the industrial classification of all responding units. This control improves the quality of the industrial classification 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 others do not answer, implying 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 these 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 others do not answer, implying 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 the data if significant errors are found. In practice, data are not revised indefinitely, but are revised in accordance with the following guidelines:

- Late data reports are always incorporated, but normally data are never reported 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 industrial classification for reporting units is carried out. Based on reported CN codes and other sources, some units are allocated with a different classification. This is implemented with the first release of the fourth quarter each year, but the three previous quarters are also revised with the altered classification. Normally, between 30 and 70 units change classification.

Data older than the 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 case of this type, in which turnover for manufacturing of pharmaceuticals was revised for the period 2005Q1-2014Q1, due to changed reporting's that improved the coverage.

Data on manufacturer's sales of goods are submitted to Eurostat annually for the previous reference year. If major revisions have been made since the last data submission, a revised version of previously reported data is also submitted.

## 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 StatBank Denmark, 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. The statistics can be compared 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. The tables with sales by industry are consistent from 2000 following the DBo7 classification.

### 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 date back to 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 the statistics no longer measured production, but sales instead. From 1968, the survey has been conducted quarterly, before it became an annual survey. 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 the 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 in 1st quarter 2009. For the period 2000-2008, the statistics were 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: The statistics is a monthly index based on a sample. The statistical unit used is the Kind of Activity unit, which is also used in the manufacturer's sales statistics. The industrial production and turnover statistics does however not include commercial resale turnover.
- External trades in goods: Exports and imports data are available according to the same commodity codes as manufacturer's sales, so data can be combined. One should be aware that the enterprise is used as the statistical unit in the external trade statistics. Another difference between the two statistics is that the manufacturers sales of goods includes goods produced abroad under subcontracting for Danish enterprises, while the external trade statistics only includes goods that cross the Danish border. On the other hand, commercial resale turnover is divided on commodity codes in the external trade statistics, which is not the case in the manufacturer's sales statistics.
- Purchases and sales by firms: The statistics are based on the enterprises' VAT reporting to the Danish tax authorities. The variable Total sales consists of domestic sales added export sales, and is comparable with the total turnover in the manufacturer's sales. Inconsistencies between the two statistics is typically due to the fact that the Purchases and sales statistics has the enterprise as the statistical unit and that the two statistics have different definitions on turnover. Another reasons for inconsistencies is that the main purpose of the purchases and sales statistics is to collect information on VAT payments, while the statistical use of the data is secondary. Furthermore, sales that are subject to VAT in another EU country, is exempt from VAT in Denmark and will not be included in Purchases and sales by firms.

-Accounts statistics: The statistics provides key economic figures, also for manufacturing industries. The accounts statistics is based on the enterprise as the statistical unit.

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 carried out indirectly, so there is full consistency.

## 8 Accessibility and clarity

Once a year, the statistics are published in aggregate form in News from Statistics Denmark and updated data made available through Eurostat (Prodcom). Every quarter the statistics are updated in StatBank Denmark on both aggregated and detailed levels.

### **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**

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**

The statistics are published in the StatBank under the subjects in the following tables:

- [VARER2S](#): Manufacturers' sales, SITC (quarter) by main SITC groups, seasonal adjustment and time
- [VARER3](#): Manufacturers' sales, SITC (annual) by main SITC groups and time
- [VARER1](#): Industrial commodity statistics (annual) by commodity group, unit and time
- [VARER](#): Industrial commodity statistics (quarterly) by commodity group, unit and time
- [OMS5](#): Manufacturers' sales (quarters) by industry (DB07), type of turnover, seasonal adjustment and time
- [OMS6](#): Manufacturers' sales (annual) by industry (DB07), type of turnover and time

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

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

## 8.8 Other

Annual submission of data to Eurostat (Prodcop), 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 at 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. Prodcop codes are often aggregates of CN codes - so if a Prodcop code contains one CN code flagged as confidential, it will be flagged as confidential as well.

In tables on turnover in each industry group, confidentiality is obtained by aggregation of industry groupings if it is necessary in order to avoid that information on individual enterprises could be attained.

## 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 statistics are placed in the Division for Short Term-Statistics. The person responsible is Thomas Eisler, tel. +45 39 17 32 49, email: [tme@dst.dk](mailto:tme@dst.dk)

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