

Industrial production and new orders statistics (Base year 2000, 1985-2006)

0 Administrative Information about the Statistical Product

0.1 Name

Industrial production and new orders statistics (Base year 2000, 1985-2006)

0.2 Subject Area

Manufacturing industry

0.3 Responsible Authority, Office, Person, etc.

Manufacturing and Construction

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0.4 Purpose and History

The main purpose of the monthly industrial production and new orders statistics is to provide up-to date short-term information on the business cycle.

Until end 2004 the name of the statistics was Industrial sales and orders statistics.

The statistics were established in 1974 and form part of the harmonised European Union system of short-term business statistics.

The statistics presented in base year 2000 is changed for a number of characteristics compared with the presentation in base year 1995, where times series ends in December 2002. For further information on the statistics presented in base year 1995 please see the declaration of contents for "Industrial sales and orders statistics (Base year 1995, -2002)".

0.5 Users and Application

The main users of the statistics are various industry confederations, the financial sector, politicians, public authorities, private organisations and the news media. The indicators are used for business cycle analysis in industry. The information on new orders received can be used as an early indicator for production and turnover. For such analysis the statistics also provide specific information regarding the domestic market and the export market

0.6 Sources

The main source for the production and new orders statistics is a questionnaire-based survey.

Source for the grossing up procedure is the quarterly data on turnover in varestatistik for industri (manufacturers' sales of commodities).

Monthly industrial output price indices are calculated by use of a subset of price series in the systemet for prisindeks i producent- og importleddet (system for price indices on the producer- and import level).

Data for extraction of crude petroleum and natural gas, which is part of mining and quarrying, and energy supply, both included in the production and output price index originate from the Danish Energy Authority, the net price index and foreign trade statistics.

The Central Business Register forms the basis for the up-date and revision of the sample of enterprises.

0.7 Legal Authority to Collect Data

The Act on Statistics Denmark.

Latest update

November 26 2014

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www.dst.dk/declarations/91515

0.8 Response burden

The burden has been calculated to 9323 hours in 2004 corresponding to 4012000 DKK.

0.9 EU Regulation

Council Regulation (EC) No 1158/2005 amending CR 1165/98 of 19 May 1998 concerning short-term statistics.

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1 Contents**1.1 Description of Contents**

The statistics gives mainly a monthly description of industrial production. Furthermore it includes turnover, new orders received and stocks of orders, by domestic market and by export market. Finally it also includes a monthly output price index.

The statistics were established in 1974 and form part of the harmonised European Union system of short-term business statistics.

1.2 Statistical Concepts

The basic information is collected from a representative sample of enterprises employing at least 20 persons. The information is grossed-up to represent the full-scale population of enterprises employing at least 20 persons. The sample is based on Kind of Activity Units (KAU's) as the observation units. A KAU is a group of local units with identical activity code belonging to the same enterprise.

Turnover, new orders received and stocks of orders are valued in current prices. Defined as invoiced values excluding value added tax and indirect taxes, but including subsidies such as e.g. price subsidies from FEOGA in Brussels. Invoiced rebates are deducted.

Turnover includes sales of manufactured goods, hours worked to third parties and mounting, installations and repairs. Sales of goods purchased for resale in the same condition as received is not included. Neither is secondary income such as e.g. sales of know-how and leases for own production units and machines if used by third parties.

Domestic turnover is defined as deliveries to recipients in Danish Customs area and the drilling platforms in The North Sea. Export turnover is defined as deliveries to recipients outside the Danish Customs area and the Faroe Islands and Greenland.

New orders received are the total of the sales or invoice values calculated in advance by the enterprises for orders, which have come in during the month, including incoming orders, which are filled immediately. Any orders cancelled during the month are deducted from the current month's figures. If the stocks of orders are re-valued upwards or downwards it is recorded as an increase respectively a decrease in new the orders received. If enterprises fill all orders directly from stock, or where production is on a day-to-day basis, turnover and new orders received follow each other in terms of time and thus also in terms of amounts.

Stock of orders is the total of the sales or invoice values calculated in advance for all unfilled orders at the end of the month. If all orders are filled directly from stock without delay, stocks of orders are recorded as 0 (zero). Where turnover is lagging new orders received by less than a month often a constant stock of orders is recorded.

Data on turnover and new orders received for *extraction of crude petroleum and natural gas* is included in the statistics from 2000 in mining and quarrying. Data is not collected in the system mentioned above, but originate from the Danish Energy Authority and foreign trade statistics.

The purpose of the *output price index* is to show the trend in industrial sales prices. The primary source is the monthly system for prisindeks i producent- og importleddet (system for price indices on the producer- and import level). Prices are defined excluding VAT and indirect taxes, but including price subsidies. There are no prices available for shipbuilding and the aggregate index excludes this activity.

Price data for extraction of crude petroleum and natural gas and energy supply are included in the statistics from 2000.

The *production index*, measured in fixed prices, shows the trend in industrial production and provide an up-to date short-term information on the industrial activity. It is calculated on the basis of current turnover, taking into account changes in stocks. There are two categories of stocks involved, stocks of finished goods and stocks of work in progress. Both the turnover in current prices and the corresponding stocks values are deflated by the output price index. For shipbuilding the calculation is based on hours worked instead.

For extraction of crude petroleum and natural gas and energy supply, which are included in the statistics from 2000, calculations are not based on turnover figures, but directly on production in volume collected by the Danish Energy Authority. The production indices are calculated simply by comparing the monthly volume to the average monthly volume in the year 2000.

The variables are published in the form of indices. For turnover, new orders received as value indices with base in average monthly values in the base year (2000). For stock of orders though it is the value end of December in the base year. Output price indices and production indices are Laspeyres indices, the weights being respectively turnover and value added in the base year. Normally, there is a change of the base year every 5th year.

Data is published for approximately 30 industry groupings covering manufacturing and mining and quarrying (including extraction of crude petroleum and natural gas as from 2000). For the production- and the price index also figures are available for Energy supply. The industry grouping is based on the harmonised 4-digit classification of economic activities of The European Union (NACE Revision 1.1) and is chosen so that the statistics describe the most important sectors in Danish industry. Also data is grouped according to the main use of the output, *capital goods, durable consumers goods, non-durable consumers goods, intermediate goods and energy products*. Furthermore regarding the production index and the output price index *energy products* exists in an extended version, *energy products and energy supply*. The grouping is defined by the European Union (Main Industrial Groupings).

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2 Time

2.1 Reference Period

Turnover and new orders received are flows of sales or invoiced values during the month.

Stock of orders is the stock of unfilled orders by the end of the month.

The stocks values, which are used in the production index calculations, are measured by the end of the month.

Output prices are recorded at the 15th of the month.

2.2 Date of Publication

Data is collected by questionnaires 10 days after the end of the month and the statistics published around 35-40 days after the end of the month.

2.3 Punctuality

The statistics are published monthly.

The statistics are usually published without delay in relation to the scheduled date. The release date for the next month is published in *Nyt fra Danmarks Statistik* (News from Statistics Denmark) and also a three-month release calendar is part of the IMF DSBB system.

2.4 Frequency

Monthly.

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3 Accuracy**3.1 Overall accuracy**

No precise quantitative measure has been calculated regarding the overall accuracy, cf. 3.2.

The survey is mainly based on a sample of enterprises. Reporting is mandatory in respect to the Act on Statistics Denmark. The response rate is very close to 100 percent.

3.2 Sources of inaccuracy

The basic information is collected from a representative sample of enterprises employing at least 20 persons. The information is grossed-up to represent the full-scale population of enterprises employing at least 20 persons.

The sample is stratified by activity (approximately 70) and size class (4). Enterprises employing at least 200 persons in industry activities, approximately 350, are surveyed exhaustively. A sample is drawn for units employing between 20 and 199 persons. Enterprises employing fewer persons in the size classes 100-199, 50-99 and 20-49 are progressively less likely to be included in the sample, but the percentages for each strata also depends on the structure of the industrial branch. The percentage varies between 20 and 60. 1300 enterprises are surveyed, which represents a universe of 3000 enterprises with at least 20 persons employed. The sample covers about 85 percent of the turnover in this universe.

The grossing up is based on the latest completed total quarterly returns showing industrial sales of own goods and services (varestatistik for industri) covering enterprises with a minimum of 20 persons employed. The ratio of the total reported turnover value for own goods and services within a given stratum to the corresponding value of the sample gives the grossing-up factor for the stratum. The same grossing up factors are used for the calculation of the turnover, new orders received, stock of orders and stocks values and also for the calculation of both the domestic and the non-domestic values.

The collected information is subject to various practical and computerised editing. The practical editing is primarily related to the formal content of the information in the questionnaire, e.g. changes in the name or adress of the enterprise. The computerised part of the editing contains a number of logical and plausibility checks. There is a specific internal plausibility check regarding turnover, new orders and stocks of orders: $\text{Stock of orders (end of month } t-1) + \text{new orders received (month } t) - \text{cancelled orders (month } t) = \text{turnover (month } t) = \text{Stock of orders (end of month } t)$.

The timeliness of the statistics implies that not all enterprises have reported figures by the time of the first publication. To compensate for non-replies imputation technique is used. The estimation is done by using growth rates of the known average of a given industry multiplied with the value of the previous month. When results are first published, the response rate is normally around 95%. In 2004 it was 98.4%.

One month later a major part of the imputed values are replaced by reported data and revised results are published. One month later only a negligible number of imputed values are left. The questionnaire is furthermore constructed in a way, which gives the participating enterprises the option to revise the reported figures for the two preceding months. As a principal rule, final figures are published two months following the current month.

3.3 Measures on accuracy

The statistical uncertainty is not calculated.

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4 Comparability

4.1 Comparability over Time

The survey was established in 1974. Until December 1993 results were published according to the UN classification of economic activities, ISIC Revision 2. From January 1994 Dansk Branchekode 1993 (DB93), which is based on the EU classification NACE Revision 1, was implemented. Coherent retrospective time series in this classification are available from January 1985. From 2003 a number of minor revisions in DB93 is introduced in DB03 as a consequence of a revised version of the EU classification, NACE Revision 1.1. The revisions are of no direct importance for the survey.

From January 2003 the reference year has been changed so that the indices are based on values and weights for 2000. Indices in the new base year have been calculated back to January 1985.

With the introduction of the base year 2000 a number of changes are implemented. The turnover in volume index is replaced by a production index. Furthermore the coverage of activities is changed from 2000. This is the case for Mining and quarrying, which now includes extraction of crude oil and natural gas, and Energy supply (electricity, gas, steam and hot water and water supply). The latter mentioned are only covered by the output price- and production index. The production index though is not covering steam and hot water and water supply.

The results are also published as seasonally adjusted index series. The seasonal adjustment procedures are run by X-12.

4.2 Comparability with other Statistics

Considering differences in statistical concepts turnover is comparable with various other sources in business statistics, notably turnover by activity in varestatistik for industri (quarterly), turnover statistics (VAT) in firmaernes køb og salg (moms) (monthly), foreign trade statistics in udenrigshandel(monthly) and accounts statistics in regnskabsstatistik (annual).

The statistics comply with obligations defined the European Union. However at European level turnover, new orders received and the output price index are published by Eurostat including indirect taxes and excluding price subsidies.

4.3 Coherence between provisional and final statistics

The output price index is final in the first publication of results. For the other variables the difference between provisional figures and final figures is normally less than 1 percent. In some cases, however, revisions to information formerly reported by enterprises may lead to differences larger than that.

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5 Accessibility

5.1 Forms of dissemination

Nyt fra Danmarks Statistik (News from Statistics Denmark), *Konjunkturstatistik* (Main indicators), *Industri* (Manufacturing Industry) in *Statistiske Efterretninger* (Statistical News) and *Danmarks Statistikbank* (Statbank Denmark).

Annual publications: *Statistisk årbog* (Statistical Yearbook) and *Statistisk tiårsoversigt* (Statistical Ten-Year Review).

5.2 Basic material: Storage and usability

The basic information in the survey is stored at the level of statistical unit (KAU) and in a statistics register (grossed-up values by activity)

The following information is stored at statistical unit level:

Identification no. (KAU)
 Enterprise identification no.
 Enterprise employment
 Local units
 Address information
 Activity code
 Grossing up activity code
 Grossing-up size class
 Grossing-up factor
 Month
 Year
 Turnover, domestic
 Turnover, export
 New orders received, domestic
 New orders received, export
 Stock of orders, domestic
 Stock of orders, export
 Value of stocks, finished goods
 Value of stocks, work in progress

The stored information at this level is used for internal purposes in Statistics Denmark notably annual statistics on the response burden and for confrontation with other statistical sources.

In the statistics register (approximately 70 activity groupings):

Activity group
 Year
 Month
 Turnover, domestic*
 Base value, -
 Turnover, export*
 Base value, -
 New orders received, domestic*
 Base value, -
 New orders received, export*
 Base value, -
 Stock of orders, domestic*
 Base value, -
 Stock of orders, export*
 Base value, -
 Production index
 Weights, production index
 Value added in base year
 Output price index
 Weights, output price index

Information marked with * is grossed-up values. For the production index and the output price index furthermore activity groups in Energy supply are covered.

The information stored in the statistics register is primarily used in relation to the calculations made when a change in the base year is implemented. Only to a very

limited extent they are used for alternative activity groupings than those published.
The extent is defined taking into account the rules regarding confidentiality.

5.3 Documentation

There is a full written documentation. Information is included in TIMES.

5.4 Other Information

Industristatistik (Manufacturing Industry) in *Statistiske Efterretninger* (Statistical News), 2003:9 includes a description of the methodology.

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