# **STATISTICS DENMARK** Industrial production and turnover (base year 2005, 2000 - )

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Person, etc.	Contact info
Short-term statistics	Short-term statistics
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0.4 Purpose and History	Shortcut to this page
The main purpose of the monthly	
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industrial production and new orders	

statistics is to provide up-to date short-term information on the business cycle.Until the end of 2012 the name of the statistic was Industrial production and new orders. Before 2005 it was called the 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.

### 0.5 Users and Application

The primary users of the statistics are various industrial organisations, the financial sector, politicians, public authorities, private organisations and the news media. The indicators are used for business cycle analysis. The statistic also provide specific information regarding the domestic market and the export market

#### 0.6 Sources

The primary source for the production and new orders statistics is a questionnairebased survey. The source for the grossing up procedure is the quarterly data on turnover in manufacturers' sales of commodities (the Danish Prodcom Statistic).Monthly industrial output price indices are calculated by use of a subset of price series in the system for price indices on the producer- and import level.Data for the 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 § 8, 1.

#### 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 19 May 1998 concerning short-term statistics.

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1 Contents

#### **1.1 Description of Contents**

The statistic provides a monthly estimate of industrial production and turnover and by domestic market and by export market. Finally it also includes a monthly output price index. The statistic was 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 fullscale population of enterprises employing at least 20 persons. The sample is based on Kind of Activity Units (KAU's) as the observation unit. A KAU is a group of local units with identical activity code belonging to the same enterprise.

Turnover is 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 placeCityBrussels. 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, the Faroe Islands and Greenland.

Data on turnover for the 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 price indices on the producer- and import level. Prices excludes VAT and indirect taxes, but includes 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 indcluded 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 2005.

The variables are published in the form of indices. The turnover index is a value index with 2005'as 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 following the standard groupings defined by Statistics Denmark. For the production- and the price index also figures are available for Energy supply. 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 place Union (Main Industrial Groupings).

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2 Time

#### 2.1 Reference Period

Turnover is measured as flows of sales or invoiced values during 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

The deadline for submission of data is 14 days after the end of the reference month and the statistics published around 35-40 days after the end of the reference month.

## 2.3 Punctuality

The statistic is published monthly. The statistic is 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).

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 fullscale population of enterprises employing at least 20 persons.

The sample is stratified by activity (approximately 50). Enterprises employing at least 200 persons in industry activities are all included in the survey. A sample is drawn for units employing between 20 and 199 persons. Enterprises employing fewer employees 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. 1200 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 (The danish prodcom statistic) 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, 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.

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%.

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 were 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.

Nace rev. 2 has been implemented from January 2009 and the base year has been shifted to 2005. To create a sufficiently long time series data has been backcast to the year 2000.

The results are also published as seasonally adjusted index series. Tramo/Seats is used for seasonal adjustment.

# 4.2 Comparability with other Statistics

With the reservation that there are differences in the statistical concepts, the turnover index is comparable to various other sources in business statistics, notably turnover by activity in the prodcom statistic (quarterly), turnover statistics (VAT) in the purchases and sales statistic (monthly), foreign trade statistics (monthly) and accounts statistics (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), and Statistics Denmarks online database - the Statbank.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) placeCityEnterprise identification no. placeCityEnterprise employment Local units Address information Activity code Grossing up activity code Grossing-up size class Grossing-up size class Grossing-up factor Month Year Turnover, domestic Turnover, 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 the comparison with other statistical sources.

In the statistics register (approximately 50 activity groupings):

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

Variables marked with \* are based on 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

Comprehensive documentation is available. 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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