

## Number of persons employed in the construction industry (2003)

### 0 Administrative Information about the Statistical Product

#### 0.1 Name

Number of persons employed in the construction industry (2003)

#### 0.2 Subject Area

Construction and housing

#### 0.3 Responsible Authority, Office, Person, etc.

*Short Term Statistics*

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#### 0.4 Purpose and History

The purpose of the quarterly survey of employment in the construction industry is to show trends in the number of employed within the private construction industry by kind of activity and type of work (new buildings, repair and maintenance of buildings, civil engineering, etc.). The first sample survey of employment in the construction industry was conducted in 1961.

#### 0.5 Users and Application

Users of the statistics are trade associations, banks, politicians, public authorities, international organisations, private business enterprises and the news media. The statistics are a supplement to the other short-term statistics relating to this area. The statistics are also to be used in the national accounts statistics.

#### 0.6 Sources

The statistics are compiled from data collected via questionnaires.

The Central Business Register is used in updating the sample survey of business enterprises.

#### 0.7 Legal Authority to Collect Data

Data is collected in accordance with the Act on Statistics Denmark.

#### 0.8 Response burden

In 2002 the response burden was estimated to 3.760 man hours, equevalent of 925.000 Dkr.

#### 0.9 EU Regulation

EU Regulation on Short-Term Statistics: RF 1165-98.

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### 1 Contents

#### 1.1 Description of Contents

The quarterly employment survey provides information on trends in the number of employed within the private construction industry. Employment is analysed by kind of activity and type of work (new buildings, repair and maintenance of buildings, and other).

#### 1.2 Statistical Concepts

Changes in relation to the previous statistics:

From Qt2 2012 a new method has been introduced, entailing that E-income, received from the Danish Tax authorities, is used to scale survey data to the entire

#### Latest update

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population. E-income is the system for electronic registration of all payments to employees.

On the same occasion companies with concession agreements were removed from the survey, since the municipalities are outsourcing projects more often.

The data series have been recalculated back to 2000 using the new methods, and the data can be accessed in STATBANK in the folder BYG1.

2009 saw a number of changes:

The data is, generally speaking, statistics on the total number of construction activities that are compiled, unlike the previous statistics where statistical data on activities performed by business enterprises within the construction industry were primarily compiled.

Also:

- The sample size is reduced from 3,000 to 2,500 business units
- The method of raising figures has been changed so that the latest information from the Central Business Register is taken into account
- The sampling unit is the kind of economic activity units which are workplaces within the same industry
- Data on other construction works have been added to the industry

The statistics on the number of employees at workplaces engaged in construction activities are compiled from data collected on the basis of a sample. A new sample of private business enterprises engaged in construction activities is used from May 2003. The sample is constructed from data extracted from the Central Business Register, where employment data are derived relating to workplaces at the end of November 2001. The latest selection of business enterprises for the sample makes up about 2,500 units.

As part of the objective of Statistics Denmark to reduce the response burden imposed on business enterprises, the construction industry no longer have to submit employment data broken down by wage earners and salary earners, etc. The category salary earners, etc. is thus excluded from the statistics, but the questionnaire transmitted to business enterprises now contain one question about the number of employees engaged in office work. In connection with changing the questionnaire, the number of questions was reduced from 12 to 7 questions.

The statistics now cover the Division 41, 42 and 43 in the Danish Industrial Classification of All Economic Activities 2007. The previous statistics on construction employment did not cover roofing contractors, paving contractors, sewerage contractors, scaffolding contractors and other construction activities where specialization is required, insulating work activities, stucco work activities, flooring and wall covering activities and other building completion and renting of construction equipment with operator. These activities are now included in the industry group other construction activities.

The sampling unit is changed to the kind of economic activity units comprising workplaces within the same industry. The kind of economic activity units are constructed from data on the workplaces for the economic units. This implies that the survey now also includes all business units engaged in construction activities, whose main industry is outside the construction industry. Previously, information was collected for SE units.

The described changes imply that there is an increase in the level of employment by about 14 pct. in relation to the previous statistics, when new and former statistics for the 2nd quarter of 2003 are compared. The increase in the level of employment is primarily due to the circumstance that the statistics now cover the entire construction industry (Division 41, 42 and 43 in the Danish Industrial

Classification of All Economic Activities 2007) and that the statistics now also cover all business units engaged in construction activities, whose main industry is outside the construction industry.

The new statistics have formed the basis for revising retrospectively the previously published employment figure covering the period February 1999 to May 2003. The retrospective revision was conducted on the basis of changes in the previous statistics. Figures for total employment in the construction industry, including other construction activities are revised retrospectively on the basis of changes in total employment, excluding other construction activities. It is thus assumed that changes in other construction activities are similar to those in other sections of the construction industry. Figures for other construction activities before May 2003 are obtained as a residual by subtracting the total figure for the other industry groups from the new total figure for employment within construction activities. Figures on persons engaged in office work are revised retrospectively on the basis of changes in salary earners from previous statistics.

The statistics on employment relate to a specific day, which is the Wednesday in the middle of the quarter under survey. The sample unit is calculated in such a way that data are shown on total employment in the trades covered by the statistics.

The data on construction employment are seasonally adjusted by means of the method X-12 ARIMA from Statistics Canada. The seasonally adjusted employment data for total construction activities are constructed on the basis of the total figure covering the selected trades.

The group of private enterprises mainly comprises business units registered for VAT with a workplace within the construction industry (Division 41, 42 and 43 in the Danish Industrial Classification of All Economic Activities 2007).

The sample survey covers the following trades: General contractors, bricklayers, electricians, plumbers, carpenters, joiners, painters, glaziers and other construction activities.

The statistics are compiled from data on business enterprises, which have been selected according to their size in terms of employees. The business enterprises are classified to three size groups comprising: 0-4 employees, 5-35 employees and 36 employees and over. Enterprises employing 4 employees or under are excluded from the sample, whereas all enterprises in the size group 35 employees and over are represented in the sample.

Enterprises for the size group 5-35 employees were selected on the basis of a stratified sample. This implies that the size group is divided into sub-populations based on a random selection. The stratification is undertaken within each kind of activity, thereby achieving a better composition of each kind of activity within the size group. In the size group 5-35 about 20 pct. of the enterprises are drawn for the sample.

The sample results are raised so as to show the total number of employment in the trades represented in the samples. In the figures raised for the quarterly statistics, the latest updated information on construction enterprises is extracted from the Central Business Register. In this way, registration of new units and de-registration of units are taken into account.

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## 2 Time

### 2.1 Reference Period

Employment in the construction industry is compiled 4 times every year on a specific day. The date of compilation is called the census date. The census date is as far as possible scheduled for a Wednesday in the middle of the quarter. The

scheduled census dates are:

15 February 2012

16 May 2012

15 August 2012

14 November 2012

## 2.2 Date of Publication

The statistics are published 4 times annually. Medio January, April, July and October. The statistics are published about 9 weeks after the census date.

## 2.3 Punctuality

The statistics are generally published as closely as possible to the scheduled publication date.

## 2.4 Frequency

The statistics are published 4 times annually. Medio January, April, July and October. The statistics are published about 9 weeks after the census date.

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## 3 Accuracy

### 3.1 Overall accuracy

Figures on the statistical reliability are not estimated.

The statistics on employment in the construction industry are compiled from a sample survey of business enterprises engaged in the construction industry. The enterprises are obliged to report data according to the Act on Statistics Denmark and the response rate is very close to 100 pct.

### 3.2 Sources of inaccuracy

The data for the statistics are obtained from a representative sample of business enterprises with 5 employees or more within the construction industry (see section 1.2).

The data reported are subjected to a variety of computerized and manual checks. The computerized checks consist in a number of logical checks and probability checks. Special checks are performed to ensure that the total sum reported corresponds to the input data on employment figures. The manual checks concern the concrete employment data, which are compared to the previously reported data. Furthermore, the formal contents of the questionnaires are also checked, including data on addresses.

### 3.3 Measures on accuracy

Figures on statistical errors are not available.

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## 4 Comparability

### 4.1 Comparability over Time

The first sample survey was conducted in 1961. The census date was 14 June.

The sample units have been changed 9 times since 1970.

In 1972 Statistics Denmark started to use a sample based on a full-scale census in 1971.

In 1975 Statistics Denmark started to use a sample based on a full-scale census in 1974.

In 1978 Statistics Denmark started to use a sample based on a full-scale census in 1977.

In 1982 Statistics Denmark started to use a sample based on a full-scale census in 1980.

In 1985 Statistics Denmark started to use a sample based on a full-scale census in 1984.

In 1990 Statistics Denmark started to use a sample based on a full-scale census in 1988.

In 1994 Statistics Denmark started to use a sample based on a registered-based full-scale census in 1993.

In 1997 Statistics Denmark started to use a sample based on a registered-based full-scale census in 1996.

In 2000 Statistics Denmark started to use a sample based on a registered-based full-scale census in 1999.

In 2003 a sample was drawn from the Central Business Register.

Since 1964 the employment censuses have been based on full-scale censuses of all business enterprises engaged in the construction industry. After 1988 the full-scale censuses are based on data extracts from the Central Business Register. From 2003 samples are based on information from the Central Business Register.

The statistics before 2003 are comparable over time, although the manner in which the sample survey is selected has changed. However, changes in the classification of business enterprises by their main kind of activity must be taken into account, when the new nomenclature Danish Industrial Classification of All Economic Activities, DB93 is used.

2003 statistics are not directly comparable with previous statistics. However, figures have been revised back to the first quarter of 1999.

#### 4.2 Comparability with other Statistics

The statistics on employment in the construction industry supplement the other short-term statistics relating to this area.

#### 4.3 Coherence between provisional and final statistics

Provisional figures are not produced.

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## 5 Accessibility

### 5.1 Forms of dissemination

The statistics appear in *Nyt fra Danmarks Statistik* (News from Statistics Denmark), in *Byggeri og boligforhold* (Construction and housing) appearing in the series *Statistiske Efterretninger* (Statistical News) and in *Konjunkturstatistik* (Main Indicators).

Annual publications: Statistical Yearbook and Statistical Ten-Year Review.

Statbank Denmark ([www.statbank.dk](http://www.statbank.dk)): BYG

### 5.2 Basic material: Storage and usability

The primary data are stored at the level of business establishment (workplace).

The following data are available:

File no. (workplace)

ID of the business establishment

Data on addresses

Wage earners and working masters analysed by:

new buildings

repair

civil engineering

other work

absent from work due to:

- bad weather, holidays, supplementary education, etc.

Employment, total

The following data are available at the level of kind of activity:

Kind of activity

Stratum

New buildings \*  
Repair \*  
Civil engineering \*  
Other work \*  
Absent from work due to bad weather, holidays, supplementary education, etc. \*  
Employment, total \*

Information marked by an asterisk \* indicates that figures are raised.

### 5.3 Documentation

The publication *Byggeri og boligforhold 2003:34* (Construction and housing 2003:34) appearing in the series *Statistiske Efterretninger* (Statistical News) contains a detailed methodological description.

Further information can be obtained from the publication "Sample Surveys at Statistics Denmark (1989)".

### 5.4 Other Information

The publication *Byggeri og boligforhold 2003:34* (Construction and housing 2003:34) appearing in the series *Statistiske Efterretninger* (Statistical News) contains a detailed methodological description.

Further information can be obtained from the publication "Sample Surveys at Statistics Denmark (1989)".

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