

**Documentation of statistics for  
Turnover in construction 2017**

## **1 Introduction**

The purpose of the statistic is to show the turnover in construction and its distribution. The statistic is established due to recommendations from the Productivity Commission and is used for calculations of productivity in the National Accounts. The statistic is comparable from 2015 and onwards.

## **2 Statistical presentation**

The statistic provides quarterly and annual information on turnover construction in million DKK. Turnover is divided by work categories, including new buildings, repair and maintenance of buildings, civil engineering and other construction.

### **2.1 Data description**

The statistic shows the distribution of turnover in the private construction sector divided in work types. The turnover is categorized in 8 construction industries and 4 categories of construction work. The yearly turnover is divided on 10 subcategories of work. The statistic is based on data from questionnaires. All major construction companies, and a sample of the rest of the construction companies, are asked about the distribution of their turnover on work categories. The statistics only includes turnover related to construction.

## 2.2 Classification system

The division of industries in the statistic is based on the [Danish Industrial Classifications DBO7](#), The industry groups are:

- 41000 Construction of buildings: 411000, 412000
- 42000 Civil engineering:
- 43201 Electrical installation etc.: 432100,432900
- 432200 Plumbing, heat and air-conditioning installation: 432200
- 43301 Joinery installation etc.: 433100,433200,433300
- 43302 Painting and Glazing etc: 433410,433420,433900
- 439910 Bricklayers: 439910
- 43003 Other specialized construction activities: 431100,431200,431300,439100,439990

In the statistics the turnover are categorized in a group corresponding to the type of work. The categories of work are:

- New buildings and extensions
- Repair and maintenance
- Civil engineering
- Other occupation

The yearly turnover is further divided in to the following subcategories:

- New buildings and extensions, housing
- New buildings and extensions, other buildings
- Repair and maintenance, major repair, housing
- Repair and maintenance, major repair, other buildings
- Repair and maintenance, maintenance, housing
- Repair and maintenance, maintenance, other buildings
- Civil engineering, new construction
- Civil engineering, major repair
- Civil engineering, maintenance
- Other activities

## 2.3 Sector coverage

The construction sector.

## 2.4 Statistical concepts and definitions

Revenue: The sales value of products and services, etc. less price reductions, value added tax and other taxes directly related to the amount of the sale.

## 2.5 Statistical unit

The units in the statistic employment in the construction industry are kind of activity units. A kind of activity unit consists of work places in the same company, that are in the same construction industry.

## **2.6 Statistical population**

These statistics measure the turnover in construction. The target population are kind of activity units (KAU), for which the main industry is in construction.

## **2.7 Reference area**

The population, that the statistic covers, are kind of activity units, for which the main industry is in construction.

## **2.8 Time coverage**

The statistic covers the period of 2015 and onward.

## **2.9 Base period**

Not relevant for this statistics.

## **2.10 Unit of measure**

Million DKK.

## **2.11 Reference period**

Turnover is reported for quarters and years.

## **2.12 Frequency of dissemination**

Quarterly.

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

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

## **2.14 Cost and burden**

The burden for the respondents have been estimated to 750,000 DKK.

## **2.15 Comment**

Further information can be obtained by contacting Statistics Denmark

### **3 Statistical processing**

The reported data is scaled to the total population of professional units with main activity in construction. No numbers are imputed.

#### **3.1 Source data**

The statistic is based on a questionnaire among construction companies. The sample is approximately 1,500 professional units. The professional units are chosen with the aid of registry information. In the sample all professional units with at least 39 registry employees have been chosen. The rest of the sample is based on random stratified sampling. There are 4 size groups, defined by the intervals 5-9 employees, 10-19 employees, 20-39 employees and at least 39 employees. The limit of 5 employees, under which no professional units are selected, has been set to reduce the burden placed on small companies.

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

Data is collected each quarter.

#### **3.3 Data collection**

The figures for turnover are gathered by online reporting from the professional units in the sample. The survey is mandatory.

#### **3.4 Data validation**

The reported numbers are controlled for errors. They are compared to reported numbers from earlier periods. If the reported turnover are substantially different from what is expected, the company is contacted to confirm the numbers. It is likely that not all errors are discovered. Therefore the statistic has some uncertainty connected to wrong reports. However, the magnitude of this problem is believed to be small.

#### **3.5 Data compilation**

The reported data is scaled to the total population of professional units with main activity in construction. The population, to which we scale, include professional units with less than 5 employees, even though these are not in the sample. For scaling a method called ratio estimation is used. The method uses turnover information from the Danish Business Register from the preceding 4 quarters.

#### **3.6 Adjustment**

No adjustments are made beyond what has been described under data validation and data compilation.

### **4 Relevance**

The statistics are used for calculations of productivity in the national accounts.

#### **4.1 User Needs**

The statistic is established based on a recommendation from the commission on productivity. Their analysis concludes that information is needed on the turnover within different categories of construction (ie. repair and new construction).

#### **4.2 User Satisfaction**

There is continuous feedback from the National Accounts on the statistics. Other users participate in the contact board for construction and housing statistics which meets on biannual basis.

#### **4.3 Data completeness rate**

Numbers are published in all construction industries and types of construction work.

### **5 Accuracy and reliability**

There are no quantitative measures of the total uncertainty. The sample uncertainty for the total turnover is estimated to be approximately 1.5 pct. The uncertainty that results from non-response, wrong reported numbers and misunderstandings has little effect on the numbers.

#### **5.1 Overall accuracy**

No quantitative measures of uncertainty have been calculated besides the sample uncertainty, which is 1.5 pct. for the total turnover. For the construction industry totals the sample uncertainty is under 11 pct., while the totals for the types of construction work are under 9 pct. For the cross between industry and type of work, the sample uncertainty can be as high as 90 pct., but generally lies in the range 5-15 pct. The uncertainty of the quarterly changes, however, is far smaller, since the professional units in the sample are not replaced each quarter. The over coverage is estimated to be under 1 pct., un-weighted. The number has been estimated from the number of respondents that point attention to the fact that they have been placed in the wrong industry. The uncertainty that results from non-response, wrong reported numbers and misunderstandings has been sought minimized by control and re-contact with the companies. The variable that the companies are asked about is well defined, so misunderstandings are estimated to be few. The response rate is high.

#### **5.2 Sampling error**

Sample uncertainties for the scaled turnover have been calculated. For the total turnover the sample uncertainty is approximately 1.5 pct. For the construction industry totals the sample uncertainty is under 11 pct, while the totals for the types of construction work are under 9 pct. For the cross between industry and type of work, the sample uncertainty can be as high as 90 pct, but generally lies in the range 5-15 pct. The uncertainty of quarterly changes are lower than the sample uncertainty as the sample is only changed partly every 4 quarters.

### **5.3 Non-sampling error**

The statistic has a number of sources of systematic errors. The systematic errors are estimated to be small. The over coverage is estimated to be under 1 pct., un-weighted. The number has been estimated from the number of respondents that point attention to the fact that they have been placed in the wrong industry. The uncertainty that results from non-response, wrong reported numbers and misunderstandings has been sought minimized by control and re-contact with the companies. The variable that the companies are asked about is well defined, so misunderstandings are estimated to be few. The response rate is high.

### **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**

For the total employment the sample uncertainty is approximately 1.5 pct. For the construction industry totals the sample uncertainty is under 11 pct, while the totals for the types of construction work are under 9 pct. For some crosses between industry and type of work (which totals less than 50 million DKK), the sample uncertainty can be as high as 50 pct, but generally lies in the range 5-15 pct. The over coverage is estimated to be under 1 pct., un-weighted. The number has been estimated from the number of respondents that point attention to the fact that they have been placed in the wrong industry. The uncertainty that results from non-response, wrong reported numbers and misunderstandings has been sought minimized by control and re-contact with the companies. The variable that the companies are asked about is well defined, so misunderstandings are estimated to be few. The response rate is high. By publication, around 90 pct. of the professional units have answered.

### **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**

Only final numbers are reported. In case of changes in the statistical methods, revisions of earlier numbers are performed.

## **6 Timeliness and punctuality**

The statistic is published four times a year, media January, April, July and October. Time from the end of the reference period to publication is about 15 weeks. The statistic is normally published at the announced time.

### **6.1 Timeliness and time lag - final results**

The statistic is published four times a year, media January, April, July and October. Time from the reference period to publication is about 15 weeks.

### **6.2 Punctuality**

The statistic is normally published at the announced time.

## **7 Comparability**

There are no statistics of turnover in construction divided on work categories before 2015. The trends in turnover within construction can be compared to figures from Purchases and sales. Turnover in the construction industry supplement the other short-term statistics relating to this area.

### **7.1 Comparability - geographical**

No numbers are reported to the EU.

### **7.2 Comparability over time**

There are no statistics of turnover in construction divided on work categories before 2015.

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

"Turnover, total" is comparable to "sales total" in the statistics on Purchases and sales. There is however some differences: - purchases and sales are based on legal unit while turnover in construction is based on kind of activity units - purchases and sales are based on register data while turnover in construction is based on questionnaires - purchases and sales include all turnover of the legal unit while turnover in construction only include turnover from construction activities - turnover in construction is divided in 8 industry groupings while purchases and sales (FIKS33) only provide a division on 5 industry groupings within construction.



#### **7.4 Coherence - internal**

The estimation of total turnover and turnover divided on categories is done separately. The published figures for turnover in categories has been adjusted to ensure that the sum of the categories equals the total turnover. In the yearly statistic the turnover in subcategories is adjusted to ensure that the sum equals the turnover in categories. To minimize the burden on respondents only yearly turnover is reported on subcategories.

### **8 Accessibility and clarity**

The figures are published in Statbank Denmark under the subject [Construction](#).

#### **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**

There is no separate news article for this statistics.

#### **8.5 Publications**

Not relevant for this statistic.

#### **8.6 On-line database**

The statistics are published in the StatBank under [Turnover in construction](#) in the following tables:

- [BYGOMS1](#): Turnover in construction by industry (DB07) and type of work (Quarterly)
- [BYGOMS2](#): Turnover in construction by industry (DB07) and type of work (Yearly)

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

Micro-data is not available from this statistic.

#### **8.8 Other**

Not relevant for this statistic.

## **8.9 Confidentiality - policy**

[Policies on confidentiality](#) i Danmarks Statistik.

## **8.10 Confidentiality - data treatment**

In the process of making the statistic Construction in the construction industry, The Danish Statistics data confidentiality policy is followed. In praxis this means that no numbers, based on fewer than 3 workplaces, are published.

## **8.11 Documentation on methodology**

There are no publically available method documents.

## **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 Thomas Eisler, tel. + 45 39 17 32 49, e-mail: [tme@dst.dk](mailto:tme@dst.dk)

### **9.1 Contact organisation**

Statistics Denmark

### **9.2 Contact organisation unit**

Short term statistics, Business statistics

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Responsible for the statistics

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