STATISTICS DENMARK

Documentation of statistics for Turnover in construction 2022

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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 DKK million. 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 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 DB07, 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

Construction.

2.4 Statistical concepts and definitions

Turnover: Revenue from the sale of products and services arising from the company's primary operations. Revenue is calculated after discounts and is excl. taxes, etc., directly related to the sale. Also includes work performed at own expense and entered under assets, e.g. manufacture of own machines.

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

DKK millions.

2.11 Reference period

Turnover is reported for quarters and years.

2.12 Frequency of dissemination

Quarterly.

2.13 Legal acts and other agreements

The legal authority to collect data is provided by the Act on Statistics Denmark, section 8, as subsequently amended (most recently by Act no. 610 of may 30th, 2018).

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

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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 bases 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.

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4 Relevance

The statistics are used for calculations of productivity in the national accounts. In addition, the statistics are used by organizations and businesses in the industry as well as news media.

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 selected users in Danish industries and relevant authorities participate in the Expert Committee for Construction and Civil Engineering Statistics.

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 published. 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

Statistics Denmark have not produced 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 by enterprises. There are however some differences:

- Purchases and sales by enterprises are based on legal unit while Turnover in construction is based on kind of activity units (KAU).
- Purchases and sales by enterprises are based on register data while Turnover in construction is based on questionnaires
- Purchases and sales by enterprises include all turnover of the legal unit while Turnover in construction only include turnover from construction activities
- Turnover in construction is divided into 8 industry groupings while Purchases and sales by enterprises 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 Turnover in construction.

8.1 Release calendar

The publication date appears in the release calendar. The date is confirmed in the weeks before.

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.

8.2 Release calendar access

The Release Calender can be accessed on our English website: Release Calender.

8.4 News release

These statistics feature in a Danish press release on Employment in the construction industry.

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.

8.8 Other

Not relevant for this statistic.

8.9 Confidentiality - policy

Data Confidentiality Policy for Statistics Denmark.

8.10 Confidentiality - data treatment

In the process of making these statistics, the Data Confidentiality Policy is applied. In praxis this means that no figures, based on fewer than three respondents, are published.

8.11 Documentation on methodology

There are no separate documentation on methodology for these statistics.

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 is in the division of Short Term Statistics, Business Statistics. The contact person is Kasper Emil Dueholm Freiman, tel.: + 45 2345 4732, and e-mail: KFR@dst.dk.