

**Documentation of statistics for
Employment in Businesses 2017**

1 Introduction

The purpose of the Employment in Businesses (EiB) statistic is to analyze the number of establishments and their employment at the end of November by industries, sectors and municipalities.

The statistic has been compiled since 1990. It replaced the register based workplace statistic, which had been compiled for the period 1980-1989.

2 Statistical presentation

The Employment in Businesses (EiB) statistic is published annually. The EiB provides information about the number of establishments and the number of jobs at the end of November plus figures for employment in full-time equivalents and annual wages.

The jobs can be filled by self-employed persons, assisting spouses or employees.

The statistic can be distributed on municipalities, industries and size of the work place.

2.1 Data description

The EiB statistic is published annually. It provides information about the number of establishments and the number of jobs at the end of November plus figures for employment in full-time equivalents and annual wages.

The establishments are defined on the basis of Statistics Denmark's central business register. The number of establishments at the end of November are all workplaces connected with real active enterprises with jobs.

The jobs can be filled by self-employed persons, working spouses or employees.

Data is distributed by municipalities, industries and the size of the establishments.

The statistic is published in *Nyt fra Danmarks Statistik* (News from Statistics Denmark), *Statbank Denmark* and *Statistical Yearbook*.

2.2 Classification system

The statistic follows the Danish Industrial Classification of all Economic Activities 2007. A description of the classification is available [here](#).

2.3 Sector coverage

The statistics include all sectors.

2.4 Statistical concepts and definitions

Establishment: An establishment is defined as an organizational unit of an enterprise, which is located at a specific address. The EiB comprises all establishments with jobs at the end of November. Only workplaces linked to real active companies are included in the EiB.

Full-time employees: The number of employees in full-time equivalents at the workplace during the year. The number of employees in full-time equivalents is calculated by setting the hours paid in proportion to the maximum number of hours of paid work during the year with a weekly employment of 37 hours (1,924 hours).

Job: The number of jobs corresponds to all jobs at each establishment at the end of November.

Payroll : Compensation for employees include A-income from which labour market contribution are paid. Compensation of employees also include ATP-contributions (Danish Labour Market Supplementary Pension Scheme) and the taxable value of fringe benefits. Also included are the total actual contributions to pension schemes from the Central Pensions System operated by the Danish tax authorities. Reimbursement of maternity and sickness benefits for the employer are not part of compensation of employees.

2.5 Statistical unit

The statistical unit is establishments.

The establishments covered by the EiB statistic are all workplaces connected with real active enterprises according to the information recorded in the central business register, where there can be referred jobs to at the end of November.

2.6 Statistical population

The population in the EiB comprises all establishments with jobs at the end of November. Only workplaces linked to real active companies are included in the EiB.

2.7 Reference area

Denmark and few register technical units in the group "Outside Denmark" (mainly sailors on long voyages).

2.8 Time coverage

The statistic has been published since 1990, but with data breaks during this period (see the section "Comparability over time").

With the present method the statistic covers the period 2008 and forward.

2.9 Base period

Not relevant for these statistics.

2.10 Unit of measure

Establishments.

2.11 Reference period

01-01-2017 - 31-12-2017

2.12 Frequency of dissemination

The statistic is published on a yearly basis.

2.13 Legal acts and other agreements

§6 in Law about Statistics Denmark (Lov om Danmarks Statistik). The main input of the EiB is information from eIncome, which is collected by the tax authorities and delivered to Statistics Denmark.

2.14 Cost and burden

There is no directly reporting burden associated with the statistic.

2.15 Comment

You can read more about the EiB [here](#).

3 Statistical processing

During the production of the labour market account a register called AMR-UN (labour market account without hour standardization) is made. The EiB statistical register is produced from this register.

3.1 Source data

The data source are various registers among others the e-income register, the central business register, the register with information about persons receiving public benefits and the population register.

3.2 Frequency of data collection

The EiB is an yearly statistic.

3.3 Data collection

The data collection consists of collecting data from public authorities' registers.

During the production of the labour market account a register called AMR-UN (labour market account without hour standardization) is made. The EiB statistical register is produced from this register.

You can read more about the labour market account and AMR-UN [here](#).

3.4 Data validation

When the number of working hours is missing or the number is considered not valid or plausible the working hours are imputed.

Employers with more than one activity unit (workplace) are obliged to report the activity unit of which the employee is linked. However, there are many employers (especially in the public sector), where reports are incomplete or inadequate. On the basis of the Statistics Denmark's central business register the reported workplace is debugged and a statistical unit for the workplace of the job is imputed.

Persons, who are full-time unemployed at the reference time, cannot at the same time have a job in the EiB. These jobs are not included in the EiB.

3.5 Data compilation

During the production of the labour market account a register called AMR-UN (labour market account without hour standardization) is made. The EiB statistical register is produced from this register.

As the EiB provides detailed information on the number of workplaces as well as the number of jobs, distributed by geographic areas and industries; updated information is required on all business units as detailed as the level of workplace. This is regularly conducted in connection with classifying workplaces.

With regard to employee jobs, the classification of workplaces is based on the data reports, which the employers are obliged to submit monthly to the e-income register maintained by the Danish tax authorities for each individual employee.

The e-income register contains information on identification of the employee (person number) as well as the employer (employer's number). With respect to employers with more than one workplace, it must also be marked by means of a production-unit number the workplace to which the data submitted relate.

If a business enterprise has several workplaces, information on which of the workplaces the individual job is to be enumerated is, in some cases, missing. If it is not possible in connection with the general error-editing to obtain this information, the job is allocated to the most probable workplace, which is carried out by e.g. weighing the information on the workplaces' size and distance from the municipality of residence.

The gross stock of employees is made up of persons who fulfill the three following conditions:

Firstly, the employees must have more than zero hours of paid work if the employee is employed for up to one week, more than one hour of paid work if the employee is employed for up to two weeks, more than two hours of paid work if the employee is employed for up to three weeks, and more than three hours of paid work if the employee is employed for more than three weeks

Secondly, the employees are not included in the gross stock of unemployed persons.

Thirdly, the employees are characterized by being in employment by the end of November in accordance with the e-income register.

In some cases, the employee is not in employment by the end of November in accordance with the e-income register, but there are other information, which together render it probable that the person is in employment by the end of November. In such cases, the person is nevertheless enumerated as a person in employment.

A person may have several jobs as employee by the end of November. In order to determine the person's most important job by the end of November, the jobs held by the person in question must be ranked in accordance with criteria stating how important the job is considered to be for the employee at this point-in-time.

The jobs are ranked in accordance with the number of paid hours worked in November (taking into account the length of employment in the job in November), alternatively in accordance with earnings paid out in November (in relation to the length of employment in the job in November). The first job in this ranking is selected as the most important job.

3.6 Adjustment

No further adjustment is made beyond what is mentioned in "Data validation" and "Data compilation".

4 Relevance

The statistic is used in planning and analysis etc., but has relatively little attention in the media in connection with the annual publication.

4.1 User Needs

Users: Municipalities, regions, ministries, organizations, private firms and private individuals.

Applications: Public and private planning, analysis and research etc.

4.2 User Satisfaction

The statistic has relatively little attention in the media in connection with the annual publication.

There has been no request for changes in the statistic or expressed dissatisfaction with the statistic.

4.3 Data completeness rate

Not relevant for these statistics.

5 Accuracy and reliability

The main input for the EiB is the e-income register and therefore the accuracy and reliability of the EiB dependent on the quality of this register.

E-income is a register based on information, which the employers report to the tax authorities. Since this is information (e.g. about wages), which employees are taxed on the basis of the quality of this information is relatively high.

The statistic is simultaneously a census and hence there is not the same uncertainty as statistics based on random sampling.

Against this background, the statistic is considered to have a relatively high quality. Despite this there are a number of uncertainties associated with the statistic.

5.1 Overall accuracy

The main input for the EiB is the e-income register, which is based on information the employers report to the tax authorities. Since this is information (e.g. about wages), which employees are taxed on the basis of the quality of this information is relatively high. The statistic is therefore considered to have a relatively high accuracy. However, there are uncertainties associated with the statistic. See the section "Quality assessment".

5.2 Sampling error

Not relevant because the statistic is based on a census.

5.3 Non-sampling error

There is uncertainty about parts of the reports.

There is uncertainty about the reporting of working hours and thus the calculation of full-time employees. This uncertainty is partly because some working hours are imputed due to e.g. missing, not valid or plausible reported hours.

There is also uncertainty regarding reporting of establishment and thus the linking of employees to the correct workplace. This can affect the distribution of the figures on the geographical areas and industries and sectors, especially in the public sector.

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

The source data, which the statistic is based on, are regarded as being of high quality. The statistic is simultaneously a census and hence there is not the same uncertainty as statistics based on random sampling.

From 2008 monthly data from Statistic Denmark's e-income register is used in the statistic. It means that the quality of the information about whether the employee is working at the end of November is significantly higher than previously.

Against this background, the statistic is considered to have a relatively high quality. Despite this there is a number of uncertainties associated with the statistic:

Reporting of working hours

There may be uncertainty about whether the reported hours are taken supplement and deduction into account compared to the normal number of working hours (e.g. paid overtime or unpaid leave) and whether the hours are properly periodised.

There is used a fixed full-time norm for all employees, namely 37 hours per week (160.33 hours per month). This is equivalent to the full-time norm for most tenured functionaries. However, there may be groups having another full-time norm. This could be hourly-paid employees or newly hired functionaries, who have a full-time norm less than 160.33 hours per month, because these groups typically will not be paid for having e.g. holiday.

This has implications for the levels and the interpretation of the number of full-time employees. However, it is not possible on the basis of e-income register to divide the population in different groups of employees with different full-time norms. One advantage with the fixed full-time norm for all employees is that it is simple to convert the number of full-time employees to hours paid, providing an indicator of trends in employment volume for employees. This enables users to easily develop alternative splits (with varying full-time norms) based on their needs and the groups they want to compare.

Imputation of working hours

When the number of working hours is missing or the number is considered not valid or plausible the working hours are imputed. The total number of imputed working hours can vary over time and between industries and sectors.

Reporting of workplace

Employers with more than one workplace are obliged to report the activity unit of which the employee is linked. However, there are a number of employers, particularly in the public sector, where the reporting of establishment is incomplete or inadequate. Therefore the reported establishment is debugged on the basis of the central business register and a statistical unit for the establishment of the job is imputed. This is done to make it possible to produce figures on geographical areas and detailed level of industries.

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

Normally the published figures are not revised.

However, if errors are detected in the published figures these will be corrected.

6 Timeliness and punctuality

The statistic was until 2016 published 16-18 months after the reference date. From 2017 the statistic is published 10 months after the reference date.

The statistic is usually published on the scheduled date without delay.

6.1 Timeliness and time lag - final results

The average time from the reference date 31 December until publishing date is 299 days:

- Publishing time 2017: 299 days
- Publishing time 2016: 424 days
- Publishing time 2015: 514 days
- Publishing time 2014: 417 days
- Publishing time 2013: 478 days
- Publishing time 2012: 548 days
- Publishing time 2011: 601 days
- Publishing time 2010: 525 days

The longer publishing time in 2010-2012 was due to the transition to e-income register.

6.2 Punctuality

The EiB is usually published without delay compared to the scheduled date.

7 Comparability

The statistic has been published since 1990, but with data breaks during this period.

From 2008 there is no data breaks in the statistic and the figures are thus comparable in this period.

7.1 Comparability - geographical

So far as it is known, no other countries have developed a similar workplace statistic.

7.2 Comparability over time

The EiB statistic have been compiled since the reference year 1990.

It replaced the register-based workplace statistics, which had been compiled for the reference years 1980-1989, and which covered only establishments with employees. The methodology had remained largely unchanged from 1980 to 1989, so for that period comparability is good.

The introduction of the EiB statistic completed the coverage by adding information about self-employed and working spouses. Thus, establishments without employees also became part of the register basis from the reference year 1990. Furthermore, information about socio-economic status was included in the EiB. However, this improved coverage cannot be added to the data before 1990.

In 1993, the DB93 replaced the DSE77 as the official Danish classification of activities, and a break in the time series occurred. DB93 is fully implemented in the EiB statistic 1994.

From 2002 the EiB include only establishments connected with enterprises, which have a certain activity.

In 2003 the classification of activities changes to DB03 and in 2008 the classification of activities changed to DB07.

From 2005 also secondary jobs as self-employed is included in the EiB.

In 2008 the e-income register became the main data source to the EiB. The transition to the e-income register as the new data source means that there is a data break in the EiB from 2007 to 2008. The number of jobs at the end of November declined by around 71,000 as a result of the transition.

From 2008 all active jobs at the end of November are included. Earlier only the primary and secondary job was counted. At the same time jobs where the person is on maternity or sicknes leave were excluded. Before 2008 only jobs where the person was on labour market leave were excluded.

With the publication of the EiB for 2013 at the end of May 2015 the AMR-UN (labour market account without hour standardization) is used as data basis. AMR-UN is made in the production of the labour market account and or among other things based on the e-income register. You can read more about the labour market account and AMR-UN [here](#).

At the same time changes in the calculation of full-time employment is made, which means that job at the end of November, where the employee is temporarily absence, isn't included in the calculation of full-time employment. So far, wage hours over 1924 hours (equivalent to a weekly employment of 37 hours) are not counted in the full-time employment. With the publication of the EiB for 2013 these hours will be included in the calculation of full-time employment. All in all, will these changes reduce the level of full-time employment. Furthermore, the calculation of job now includes all job in Denmark regardless the persons are resident in Denmark or not.

The transition to AMR-UN and the changed calculation of full-time employment and number of jobs give a data break in the statistic. Therefore, new tables (ERHV1 to ERHV5) in Statbank Denmark is made covering the period 2008 to 2013. During this period the figures are thus comparable.

7.3 Coherence - cross domain

The EiB is based on the same data material as the register-based labour force statistic (RAS). However, some major conceptual differences should be noted.

RAS calculates only the primary employment, whereas EiB also includes information about other employee jobs.

Persons, who according to the work classification modul (AKM) have their primary income in the year as self-employed, are only included in RAS.

Also persons on leave from employment at the end of November are included in RAS, but not in EiB.

Furthermore job on establishments connected to enterprises with low activity are included in RAS, but not in EiB

7.4 Coherence - internal

There is full consistency. All establishments contain the same types of basic information.

8 Accessibility and clarity

The statistic is published in *Nyt fra Danmarks Statistik* (News from Statistics Denmark), *Statbank Denmark* and *Statistical Yearbook*.

More detailed data can be purchased in Statistics Denmark's Customer Centre.

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. Theme publications etc. may be published at other times of the day. The National Statistician can decide that such publications may be released before their official publication time, e.g. to the media and other stakeholders.

8.4 News release

New statistics is published in an yearly article *Nyt fra Danmarks Statistik* (News from Statistics Denmark). You can see the latest version [here](#).

8.5 Publications

The data are published in [Statistical Yearbook](#).

8.6 On-line database

The statistics are published in the StatBank under the subject in the following tables:

- [ERHV1](#): Workplaces, job, full-time employment, wage and salary cost by industry (DB07), unit and time
- [ERHV2](#): Workplaces and job by region, industry (DB07 10-grouping), unit and time
- [ERHV4](#): Workplaces by industry (DB07 127-grouping), size of workplace and time
- [ERHV5](#): Workplaces by region, sector and time
- [ERHV3](#): Workplaces and job by industry (DB07 10-grouping), unit, size of workplace and time
- [ERHV6](#): Workplaces by region, industry (DB07 10-grouping), size of workplace and time

8.7 Micro-data access

Micro-data can be made available through Statistics Denmark's Researcher service (Forskningsservice). Special needs services can be delivered from Statistics Denmark's Customer Centre.

8.8 Other

The statistical register is delivered yearly to Statistics Denmark's Customer Centre.

8.9 Confidentiality - policy

[Data Confidentiality Policy](#) at Statistics Denmark.

8.10 Confidentiality - data treatment

In table ERHV1 in Statbank Denmark a discretion of job, full-time employment and payroll is made if there is fewer than three establishments in each cell.

8.11 Documentation on methodology

Not relevant 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 are in the division of Labour Market. The person responsible is Pernille Stender, tel. +45 39 17 34 04, e-mail: psd@dst.dk

9.1 Contact organisation

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